

INTRODUCTION

Valley County, Nebraska is the 59th largest county by population of the 93 counties in the State of Nebraska, but it has been experiencing declines in population during the past 30 years and declines in employment opportunities during the last 10 years. These declines foretell a number of challenges that the residents in the County will face in the foreseeable future.

This Comprehensive Plan has been formulated to specifically identify the challenges that the residents of the County will face and identify goals, objectives and public policies that will allow the County to effectively address such challenges in a manner preferred by its citizens.

ROLE OF THIS PLAN

A Comprehensive Plan has two fundamental purposes. The first is to define a “vision” for the future county to give guidance to local public officials on how to achieve the goals and objectives established by the citizens of Valley County. The second is to provide a sound legal basis for land use regulations, including zoning and subdivision control which are instrumental in achieving the physical vision of the future County.

Nebraska State Statutes enable counties to adopt zoning and subdivision regulations to promote “the health, safety, morals, convenience, order, prosperity and welfare of the present and future citizens of the County.

However, these same Statutes indicate that a County may not adopt land use regulations without first formulating and adopting a Comprehensive Plan. This limitation is based upon the premise that decisions regarding future land uses should not be arbitrary, but instead should be based upon an overall plan for the future development of the County which has been formulated by local citizens and officially adopted by the County Board of Commissioners or Supervisors.

To ensure that such a Plan is reasonably comprehensive, these same Statutes also specify that, at a minimum, a Comprehensive Plan must include the following elements:

- A land use element which designates the proposed general distribution, general location and extent of the uses of land for agriculture, housing, commerce, industry, recreation, education, public buildings and lands and other categories of public and private use of land.
- The general location, character and extent of existing and proposed major streets, roads and highways, and air and other transportation routes and facilities.
- The general location, type, capacity and area served by present and projected or needed community facilities, including recreation facilities, schools, libraries, other public buildings and public utilities and services.
- An energy element which evaluates energy use within the County and provides recommendations regarding methods and projects that can be implemented to reduce overall energy use.
- The Comprehensive Plan shall be designed to accommodate anticipated long-range future growth which shall be based upon documented population and economic projections.

COUNTY VISION

A comprehensive plan is important, if not critical to the future development of the County because it is typically the only plan that addresses the future economic and physical development of the County.

The plan establishes a “picture” or “vision” of the County’s future, based on a consensus of the desires of residents of the County. This picture or vision will become crucial as the citizens of the County face the impacts associated with a declining population, declining employment opportunities and a stabilizing tax base.

Beyond defining a vision, this Plan presents public policies and actions that will need to be taken to achieve the vision of the future.

THE PLANNING PERIOD

Due to the comprehensiveness of this Plan and the need to address a variety of issues, it is not possible to make reasonably accurate projections of future needs or results for an infinite period of time. This

comprehensive plan limits the time period for defining the vision for the County to ten years. At that point the Plan should be reviewed to determine what has changed and what changes are needed to deal with any changes that are identified.

WHO DOES THE PLANNING?

Ideally, every citizen in the County would participate in the formulation of a Comprehensive Plan. Unfortunately, not all citizens will choose to participate for a variety of reasons regardless of the efforts and the associated monetary costs expended to seek participation at various meetings and public forums used to formulate the Plan.

Nebraska Statutes enabling county planning recognize this problem of citizen participation, but still require that the Comprehensive Plan be formulated by citizen volunteers. The law requires that a group of local citizens be appointed by the governing body to lead the formulation of such Plan. This group of citizens is known as the Valley County Planning Commission.

The citizens who serve on the Planning Commission are people who serve as unpaid volunteers. This requirement that the Comprehensive Plan be formulated by such unpaid citizen volunteers is designed to assure that the Plan will reflect the views and desires of the people of the County and not solely those of local politicians or interest groups.

This requirement places a substantial burden on such citizen volunteers in that it takes considerable time and effort to understand the issues that the County will face during the Planning Period, to seek the opinions of other citizens in formulating the Plan and to identify goals, plans, public policies and actions which will be needed to achieve the vision of the future County that is desired by the majority of its citizens.

ECONOMIC, POPULATION, HOUSING ANALYSIS AND PROJECTIONS

In order to formulate effective plans for the economic enhancement and the physical development of Valley County, which are properly scaled to meet the needs of the present and future County, it is necessary to establish a forecast of the future population. Historic population data and trends assist in developing projections of population, which in turn assist in determining future housing, educational, public services demands and future public facility and land use needs within the County.

Population growth or decline in any geographic area is dependent on the levels of and trends in the regional and local economies. A strong, expanding economy generates employment opportunities within a given geographic area, which in turn attracts more people to the area to obtain employment. A declining economy, on the other hand, results in decreasing employment opportunities and the outflow of people from a given geographic area in search of employment opportunities elsewhere.

The following analysis relates the historic economic trends of Valley County with past population changes in the urban communities in the County and the overall County. Future economic activity assumptions can be derived from past economic patterns and trends to provide supporting data for forecasting future population levels.

HISTORIC ECONOMIC TRENDS

One of the critical components in the analysis of economic trends in Valley County is an analysis of employment levels, types of employment and changes in employment over time. As indicated in Table 1, the local County economy experienced several estimated changes in employment characteristics since 2000. Since 2000 the number of persons employed in agriculture, forestry, fisheries and mining, which in the case of Valley County is primarily agricultural employment, has declined by 189 persons (range of -261 to -117) or just over 41%. This decline is consistent with the nationwide trend toward larger, but fewer, farming and ranching operations.

The County has also experienced notable estimated declines in employment in the construction, wholesale trade transportation, warehousing and utilities and arts and entertainment and food services categories. Combined, estimated employment declines in these categories totaled 92 jobs lost since 2000.

TABLE 1 EMPLOYMENT BY INDUSTRY
VALLEY COUNTY, NEBRASKA

Industry Category	2000		2012*		Employment Gain or Loss 2000 - 2012	% Change 2000 - 2012	2012 Estimate Error Range
	Count	%	Count	%			
Agriculture, Forestry, Fisheries & Mining	457	20.4%	268	11.9%	- 189	- 41.4%	+/- 72
Construction	147	6.6%	154	6.8%	+ 7	+ 4.8%	+/- 49
Manufacturing	60	2.7%	152	6.7%	+ 92	+153.3%	+/- 52
Wholesale Trade	86	3.8%	46	2.0%	- 40	- 46.5%	+/- 27
Retail Trade	277	12.4%	288	12.8%	+ 11	+ 3.8%	+/- 63
Transportation, Warehouse & Utilities	158	7.1%	137	6.1%	- 21	- 13.3%	+/- 52
Finance, Insurance & Real Estate	114	5.1%	144	6.4%	+ 30	+26.3%	+/- 48
Education and Health Services	522	23.3%	522	23.1%	0	0.0%	+/- 75
Professional, Scientific Management, Admin. & Waste Management	83	3.7%	123	5.4%	+ 40	+48.2%	+/- 72
Arts, Entertainment, Recreation, Accomd. and Food Services	118	5.3%	87	3.8%	- 31	- 26.3%	+/- 36
Other Services (except public admin.)	117	5.2%	193	8.5%	+ 76	+65.0%	+/- 63
Public Administration	102	4.6%	148	6.5%	+ 46	+45.1%	+/- 45
TOTAL	2,241	100.0%	2,262	100.0%	+ 21	+ 0.9%	+/- 131

Source: U. S. Bureau of Census, Census of Population, 2000 - 2010. * 2012 data are estimates by Census Bureau.

Due primarily to declines population of the County and, in particular, in the number of school age children in the County, the level of employment in the health and education sector of the economy has remained steady instead of experiencing notable growth as has occurred in other Nebraska counties. The number of persons employed in this sector remained virtually the same since 2000.

The substantial declines in agricultural employment during the last 20 years has resulted in a notable shift in overall employment in the County as employment is currently more centered in the urban areas of the County and has become more diversified and generally more service oriented. This shift is verified by the fact that the County has experienced modest increases in employment in all other sectors of the County economy since 2000. The gains in these employment categories have been sufficient to make up for the loss of the 189 jobs in the agricultural and other sectors. The net gain of 21 jobs in the County since 2000, many of which were in the manufacturing sector indicates limited economic growth in the County.

As noted above, the County also experienced employment declines in the public sector of the economy. This employment, consisting of employment in municipal, county, state and federal public administration decreased by 46 jobs or by nearly 50% since 2000. This trend is positive from the standpoint of the overall economic strength of the County economy, but it is negative from the standpoint of it results in an increase in the amount of taxes required to support the employees in this sector.

ECONOMIC ANALYSIS

The importance of agricultural production and certain other sectors of the economy in Valley County can be examined further through an analysis of basic and non-basic employment in the County.

Basic employment components of the local economy include business activities that provide services and products via sales primarily to entities outside of the County where the money generated by such sales is brought from outside of the County and is directed to the local area (the County) in the form of wages and payments to local suppliers.

Non-basic employment components of the local economy include the sale of goods and services to people and entities within the County where a portion of the money generated by such sales is re-circulated locally in the form of wages and payments, but the balance of the money goes to an entrepreneur or corporate entity that may not be located in the County. In these instances money is drained from the local economy.

An analysis of basic and non-basic employment is used to better understand which employment categories are exporting goods and services outside of the County and importing dollars into the local economy.

The data in Table 2 indicates the employment category, the percentage of basic employment, the percentage of non-basic employment and the percentage of the State of Nebraska workforce in each employment category. Subtraction of the State's workforce percentage in a particular employment category from the Valley County workforce percentage for the same category determines which categories are basic or non-basic. With the exception of manufacturing employment, if a County economy indicates a lower proportion of people employed in an employment category than the State as a whole, that employment category is considered to be non-basic.

If the proportion for the County is higher than the State as a whole, that portion of the higher percentage which is above that as the State as a whole is considered to be basic employment, because it is these

categories of employment which are exporting goods and services outside of the County resulting in generating an infusion of money into the local economy.

All other employment categories are “non-basic” and the levels of employment in these categories is dependent on expansion of the “basic” employment sectors.

From the data presented in Table 2, the importance of agricultural production and the impacts of the manufacturing employment in the local economy are obvious. The agricultural and manufacturing sectors employment represents the foremost drivers of the local economy and accounts for nearly 2/3rds of all basic employment in the County.

TABLE 2 BASIC / NON-BASIC EMPLOYMENT - 2010
VALLEY COUNTY, NEBRASKA

Employment Sector	Basic	Non-Basic	% of Valley County Workforce	% of State of Nebraska Workforce
Agriculture, Forestry and Mining	7.0%	4.8%	11.8%	4.8%
Construction	0.3%	6.5%	6.8%	6.5%
Manufacturing	6.7%	0.0%	6.7%	10.7%
Wholesale Trade	0.0%	2.0%	2.0%	3.0%
Retail Trade	1.2%	11.6%	12.8%	11.6%
Transportation, Warehousing & Utilities	0.1%	6.0%	6.1%	6.0%
Finance, Insurance, Real Estate	0.0%	6.4%	6.4%	7.6%
Professional, Scientific, Management	0.0%	5.4%	5.4%	8.1%
Educational, Health, Social Services	0.0%	23.1%	23.1%	23.3%
Arts, Entertainment, Recreation, Accommodations and Food Services	0.0%	3.8%	3.8%	7.6%
Other Services (except public administration)	4.0%	4.5%	8.5%	4.5%
Public Administration	0.0%	6.5%	6.5%	4.1%
TOTALS	19.3%	80.7%	100.0%	100.0%

Source: U. S. Census Bureau, Census of Population and Housing, 2010

Manufacturing employment in the County is the second most important component in the Valley County economy. The manufacturing sector comprises nearly 1/3 of basic employment in the County.

The Other Services sector of the local economy is a notable basic employment sector. Other employment consists of non-governmental businesses including equipment and machine repair, administration of religious activities, personal care and death care services, dry cleaning and laundry services, marine equipment sales and service, storage and similar businesses. This sector comprises slightly over 18% of basic employment in the County.

Interestingly, the retail trade sector of the local economy also is considered a notable basic employment sector comprising 6% of such employment. The level of employment in the retail sector can generally be attributed to the geographic location of the City of Ord which draws people into the community, resulting in higher levels of retail sales and services.

Wholesale trade in the County comprises less than 1% of the basic employment in the County. The majority of employment in this category consists of those persons employed in the merchandising of grain and livestock produced in the County.

ECONOMIC BASE MULTIPLIER

The economic base multiplier is a ratio between the level of employment in “basic” employment categories and the level of employment in the “non-basic” categories. In the case of Valley County, the economic base multiplier is 3.8, meaning that for each new job added to one of the basic employment categories 3.8 new additional jobs in the non-basic employment categories will result. Similarly, the loss of a job in any of the basic employment categories would result in a loss of 3.8 jobs elsewhere in the non-basic local economy.

The future impact of continuing the historic trend of declining agricultural employment cannot be understated. Either employment in the agricultural sector of the County economy must be expanded or employment in the other basic employment categories, specifically the manufacturing sector must be expanded if the County is to have an expanding economy through the planning period.

If there is to be any growth in the agricultural production employment in the future in the County, such growth will probably have to occur in the area of expanded livestock and poultry production as there will only be a limited amount of additional land which can be converted to crop production. The importance of expanded livestock and poultry production and expansion in the manufacturing sector should not be

understated. Expansion in the levels of employment in these components of the local economy is the best and perhaps only way to expand the total overall economy in the County.

AGRICULTURAL TRENDS

Agricultural crop and livestock production is the backbone of the economy of Valley County. It is therefore imperative to evaluate the historic trends in the agricultural sector of the County economy to provide insight into the economic future of the County as well as future land use and infrastructure needs.

The latest data that is comparable with prior year data is that which is available through the 2012 Census of Agriculture. As indicated in Table 3, the number of farms and ranches in Valley County declined by 17 farms in the 10 years between 2002 and 2012. This represents nearly a 4% decline in just one decade. During this time period there has been a 16% increase in the average size of farms and ranches with the average size of the average farm or ranch expanding from 751 acres in 2002 to 869 acres in 2012. The decline in the number of farms is the primary reason for the previously noted decline in agricultural employment in the County.

TABLE 3 AGRICULTURAL PRODUCTION TRENDS
VALLEY COUNTY, NEBRASKA

PRODUCTION FACTOR	2002	2012
Number of Farms and Ranches	419	402
Land in Farms and Ranches (acres)	314,661	349,404
Average Size of Farms and Ranches (acres)	751	869
Total Cropland (acres)	151,997	150,695
Total Irrigated Cropland (acres)	77,861	93,080
Total Pastureland / Pastured Cropland (acres)	162,664	198,709
Cattle Inventory	67,925	76,326
Hog Inventory	20,971	1,617
Market Value of Crops Sold (\$1,000)	\$ 21,317,000	\$ 95,415,000
Market Value of Livestock & Poultry Sold (\$1,000)	\$ 49,302,000	\$109,677,000
Average Net Cash Income (per farm)	\$ 24,519	\$81,520

Source: Nebraska Department of Agriculture, Census of Agriculture, 2002 - 2012

The 16% increase in the size of farms and ranches can also be partially attributed to the unprecedented increases in the capacity of agricultural machinery, another reason for the previously noted decline in agricultural employment in the County.

The amount of land in the County that is irrigated has increased slightly since 2002 when slightly less than 78,000 acres in the County were irrigated. By 2012, the amount of irrigated land had increased by 20% to just over 93,000 acres.

The increase in irrigated land, enhancements in crop productivity and increases in commodity prices resulted in substantial increases in the value of crops marketed over the last 25 years. The value of all crops marketed in the County, primarily corn, exceeded \$95,000,000 in 2012, a 347% increase in crop sales in 2002.

Valley County is not noted for its irrigation and crop production, but is noted for livestock production which remains a major component in the local agricultural economy. Based upon the value of agricultural products sold, livestock production in the County has always exceeded the value of crops sold. In 2002, the sale of livestock produced in the County exceeded \$49,000,000 or over 133% of the value of crop sales. By 2012, due primarily to increased corn and soybean prices, the value of livestock sold was only 15% greater than the value of crops sold. However, it is important to note that the value of livestock sold increased by 122% since 2002, reaching a value of over \$109,000,000.

Cattle and calf inventories in Valley County have increased since 2002. The number of cattle and calves in inventory in 2012 was some 76,326 head or 12% greater than in 2002.

There has been a very substantial decline in hog production in the County. Hogs and pigs in inventories in 2002 were in excess of 20,000 head while in 2012 the inventory had declined to under 2000 head.

AGRICULTURE AND THE ECONOMY

Given the reality that agricultural production in Valley County is the most important component of the local economy, it is reasonable to assume that expansion of agricultural production and employment in the County would be an excellent, if not the best, way to enhance to local economy.

As noted previously, if there is to be any growth in agricultural production employment in the future in the County, such growth will probably have to occur in the area of expanded livestock and possibly poultry production as there will only be a limited amount of additional land which can be converted to

crop production. The importance of expanded livestock and possibly poultry production and employment should not be understated.

A comparison of Valley County's economy to the economies of other counties provides considerable insight into the impacts of expansion of the livestock production component of the agricultural sector. The data presented in Table 4, is a summary of various components of the economies in Valley County, Cuming County, Nebraska, which is known for livestock production and Sioux County, Iowa, which is well known for its extensive livestock production.

TABLE 4 COMPARISONS OF COMPONENTS OF COUNTY ECONOMIES

ECONOMIC COMPONENT	VALLEY COUNTY, NEBRASKA	CUMING COUNTY, NEBRASKA	SIOUX COUNTY, IOWA
Demographic Data:			
Total Population, 2010	4,260	9,139	33,704
Total Population Change, 2000-2010	-(387)	-(878)	3,801
Farm Population, 2010	1,489	3,858	3,033
Total Non-Farm Population, 2010	2,771	5,281	30,671
Geographic Data:			
Total Land Area (square miles)	568.1	570.6	768.3
Employment Data:			
Total Employment (over age 16), 2010	2,262	4,716	18,621
Total Agricultural Employment, 2010	268	770	1,968
Total Non-Agricultural Employment, 2010	1,994	3,946	16,653
Total Manufacturing Employment, 2010	152	563	2,926
Total Other Employment, 2010	1,842	3,383	13,729
Agricultural Data:			
Number of Farms	402	918	1,618
Land in Farms (acres)	349,404	362,926	484,491
Cattle and Calf Inventory	76,326	297,672	393,665
Hogs and Pigs Inventory	1,617	590,239	1,176,751
Market Value of Farm Production, 2012	\$ 205,092,000	\$1,081,302,000	\$1,613,087,000
Market Value of Crops Sold, 2012	\$ 95,415,000	\$ 140,001,000	\$ 317,798,000
Market Value of Livestock Sold, 2012	\$ 109,677,000	\$ 941,300,000	\$1,295,289,000
Income Data:			
Average Net Cash Income (per farm), 2012	\$ 81,520	\$ 93,037	\$ 229,080
Median Household Income, 2010	\$ 44,762	\$ 46,847	\$ 55,252
Economic Activity Data:			
Total Retail Sales, 2012	\$ 66,843,000	\$ 174,641,000	\$ 394,422,000
Number of Non-Farm Businesses, 2010	175	851	3,659

Source: Nebraska Department of Agriculture, Census of Agriculture, 2002– 2012, U.S. Census Bureau, Census of Population, 2000-2010

Due to its local geology and topography, crop production in Valley County is somewhat limited, but the County is blessed with large quantities of hilly land best suited for livestock production. This fact is readily apparent when examining the value of agricultural products produced in the County. As indicated in Table 3, 53% of the total value of agricultural products sold in 2012 was from the sale of livestock, almost exclusively cattle.

One of the most striking differences in the local economy of Valley County versus Cuming County, Nebraska and Sioux County, Iowa is the value of livestock sold. In Cuming County the value of livestock sold in 2012 exceeded the value of livestock sold in Valley County by a factor of 9. Similarly, in Sioux County, Iowa the value of livestock sold in 2012 was nearly 12 times that of Valley County.

The substantial difference in the value of livestock sales in these counties is reflected in levels of employment in the agricultural sector. In Cuming County the level of agricultural employment is 3 times greater. In Sioux County, Iowa, the difference is even more apparent as agricultural employment in Sioux County is over 7 times greater.

Livestock production also has a very substantial impact on farm income and overall household incomes in each county. In 2012, the average net cash income per farm in Valley County was \$81,520 while in Cuming County and Sioux County, Iowa the average net cash incomes per farm were \$93,037 and \$229,080 respectively. Similarly, the median household incomes in each county are affected by the overall strength of the agricultural economy. In 2012, the median household incomes for all households in Valley County was \$44,762 while in Cuming County and Sioux County, the median household incomes were \$46,487 and \$55,252 respectively.

This higher level of agricultural employment is translated into a stronger local economy as reflected by the number of non-farm businesses that exist in each county. Cuming County has nearly 5 times the number of businesses than Valley County. Sioux County, Iowa has 21 times the number of non-farm businesses than in Valley County.

INCOME TRENDS

An important economic trend is that critical to the evaluation of the strength of the local County economy is income. As indicated in Table 5, household incomes in Valley County have increased substantially over the last 10 years. In 2000 nearly one-fourth of all households in the County had incomes of under \$25,000 while in 2010 only 16% of households had limited incomes of \$25,000 or less. The number of households in the County with incomes between \$25,000 and \$50,000 annually also decreased slightly

from 673 households in 2000 to 531 in 2010. Further, the number of households with incomes above \$50,000 annually increased a very notable 104% from 2000 to 2010. This increase in the number of higher income households, from 413 in 2000 to 844 in 2010 is an indication of a stronger local economy due in part to higher agricultural commodity prices.

A comparison of growth in household income between Valley County and the State as a whole indicates that household income levels in the County increased at a rate slightly greater than the State during this time period. Median household income in Valley County increased at a rate nearly double that of the State of Nebraska which is an indication that the economy of the County expanded faster than that of the State. Again, this increase can be attributed mainly to increased incomes in the agricultural sector of the economy.

TABLE 5 HOUSEHOLD INCOME TRENDS
VALLEY COUNTY, NEBRASKA

Household Income	2000				2010			
	Valley County	% of Total	State of Nebraska	% of Total	Valley County	% of Total	State of Nebraska	% of Total
Less than \$10,000	281	14.3%	55,340	8.3%	132	7.1%	43,365	6.0%
\$10,000 - \$14,999	180	9.2%	43,915	6.6%	163	8.7%	39,604	5.5%
\$15,000 - \$24,999	414	21.1%	98,163	14.7%	196	10.5%	79,912	11.1%
\$25,000 - \$34,999	307	15.7%	97,932	14.7%	209	11.2%	81,256	11.3%
\$35,000 - \$49,999	366	18.7%	122,654	18.4%	322	17.3%	106,931	14.8%
\$50,000 - \$74,999	300	15.3%	136,141	20.4%	421	22.6%	145,596	20.2%
\$75,000 - \$99,999	49	2.5%	58,361	8.8%	249	13.3%	95,772	13.3%
\$100,000 and above	64	3.2%	53,989	8.1%	174	9.3%	128,590	17.8%
Number of Households	1,961	100.0%	666,595	100.0%	1,866	100.0%	721,026	100.0%
Median Household Income	\$ 27,926		\$ 39,250		\$ 44,762		\$ 51,318	

Source: U. S. Bureau of the Census, Census of Population, 1990 - 2010

An important factor to consider when analyzing income growth is whether the income levels are keeping pace with inflation. The Consumer Price Index (CPI), a measure of inflation, indicates that from 2000 to 2010 the CPI was 27%. In Valley County the median household income increased by 60.3% during this time period. This indicates that the majority of household incomes in the County increased at a rate more than double the rate of inflation which, in turn, indicates that the typical households in Valley County were earning substantially more in real dollars in 2010 than in 2000.

HISTORIC POPULATION TRENDS

In order to establish a population forecast, it is necessary to evaluate historic population levels and trends and to analyze and understand the various economic and demographic factors which have and will influence population levels in the community. Historic population levels of Valley County, the incorporated municipalities in the County and the rural, unincorporated area of the County are presented on Table 6.

TABLE 6 1990 - 2010 POPULATION TRENDS
VALLEY COUNTY, NEBRASKA & MUNICIPALITIES

County and Municipality	1990	2000	2010	% Change 1990 - 2010	% Change 2000 - 2010
City of Ord	2,481	2,269	2,112	-14.9%	- 6.9%
Village of Arcadia	385	359	311	-19.2%	-13.4%
Village of Elyria	61	54	51	-16.4%	- 5.6%
Village of North Loup	361	339	297	-17.7%	-12.4%
Rural Unincorporated	1,881	1,626	1,489	-20.8%	- 8.4%
Valley County	5,169	4,647	4,260	-17.6%	- 8.3%

Source: U. S. Census Bureau, Census of Population and Housing, 1990 - 2010

As indicated in Table 6, during the 20 years from 1990 to 2010 the population Valley County decreased by 17.6% or 909 persons. This nearly 18% decline in population can again be linked declines in the population in the agricultural sector. From 1990 to 2010 the population of the rural, unincorporated areas of the County declined by some 392 persons or nearly 21%.

The urban populations of the City of Ord and the Villages of Arcadia, Elyria and North Loup, have also decreased in population since 1990. This decrease of 517 persons in the urban areas of the County since 1990 is a result of the declining agricultural employment and lack of employment opportunities in the County.

POPULATION MIGRATION ANALYSIS

An analysis of the migration of the population over time allows an understanding of a specific demographic factor that influences the overall population of the County and its municipalities. Migration indicates the portion of the population that has either moved into the County or has moved out of the County. Population migration is the remaining portion of the population after natural change, births minus

deaths, is subtracted from the total change in the population. A negative number in the Total Migration column indicates the number of persons moving out of the County while a positive number indicates that people are moving into the County to live.

TABLE 7 POPULATION MIGRATION ANALYSES
VALLEY COUNTY, NEBRASKA

Decade	Valley County Population Change	Total Births 2001 - 2010	Total Deaths 2001 - 2010	Natural Change (Births minus Deaths)	Total Migration
2000 - 2010	-387	514	652	-138	-249

Source: U. S. Census Bureau, Census of Population and Housing, 2000 – 2010
 Nebraska Department of Health and Human Services, Vital Statistics, 2001 - 2010

In Table 7, the total change in population in Valley County together with the natural increase or decrease (births minus deaths) is indicated for the period from 2000 through 2010. As indicated, during this period the total population of the County decreased by 387 persons and the number of deaths in the County exceeded the number of births in the County by 138 persons, thus the data indicate that since 2001 a total of 249 persons migrated out of the County to seek higher education, employment or for retirement.

The majority of those persons migrating out the County are most likely younger people who are seeking higher education and persons seeking employment. To verify this assumption and to determine if a “brain drain” trend is occurring, analyses of employee commuting patterns and an analysis of age composition of the population are necessary.

TABLE 8 EMPLOYEE COMMUTING PATTERNS - 2012
VALLEY COUNTY, NEBRASKA

Place of Work	Number of Employees	% of Total Employment
Total Employment	2,011	
With Valley County	1,713	85.2%
Outside Valley County	298	14.6%
Travel Time to Work		
Less than 10 minutes	1,168	58.1%
10 - 19 minutes	360	17.9%
20 - 29 minutes	233	11.6%
30 – 59 minutes	209	10.4%
60 minutes or more	41	2.0%

Source: U. S. Bureau of the Census, Census of Population, 2012

As indicated in Table 8, the out-migration of the population of Valley County for employment is verified by employee commuting patterns. Of the total workforce of 2,011 persons over 85% are employed within the County. In 2012, a total of 298 residents of the County were commuting to work outside of the County. This data indicates that there is a lack of employment opportunities in the County, but it also implies that there is a sizable workforce which could be retained in the County if employment opportunities were available in the County.

By analyzing the age structure of the population, it can be determined which age groups (cohorts) within the County are being affected.

POPULATION AGE ANALYSIS

The age composition of the population is an important component of this population analysis. By analyzing the age characteristics of the population, it can be determined which age groups (cohorts) within the County are being affected by the changes in the population.

An increase or decrease in each cohort affects the population in different ways. For example, an increase of the 20 - 44 cohort would indicate that the present population will have a greater ability to sustain population growth due to a higher number of females of childbearing age. An analysis of the changes in the population age cohorts also permits a detailed analysis of which age groups are moving out of Valley County. Detailed data regarding the population cohorts for the County is presented in Table 9.

**TABLE 9 ANALYSIS OF POPULATION AGE
VALLEY COUNTY, NEBRASKA**

AGE GROUP (Cohort)	2000		2010		2000 – 2010	
	Male & Female	% of Total	Male & Female	% of Total	Net Change	% Change
0 - 4	258	5.6%	249	5.8%	- 9	- 3.5%
5 - 17	815	17.5%	647	15.2%	- 168	-20.6%
18 - 19	159	3.4%	119	2.8%	- 40	-25.2%
20 - 24	140	3.0%	154	3.6%	+14	+10.0%
25 - 34	431	9.3%	408	9.6%	- 23	- 5.3%
35 - 44	620	13.3%	443	10.4%	- 177	-28.5%
45 - 54	631	13.6%	616	14.5%	- 15	- 2.4%
55 - 64	478	10.3%	618	14.5%	+ 140	+29.3%
65 - 74	526	11.3%	463	10.9%	- 63	-12.0%
75+	589	12.7%	543	12.7%	- 46	-7.8%
TOTAL	4,647	100.0%	4,260	100.0%	- 387	-8.3%
MEDIAN AGE	43.5	-	46.9	-	+3.4	+ 7.8%

Source: U. S. Census Bureau, Census of Population and Housing, 2000 – 2010

The data indicate that since 2000, the County has experienced decreases in all age groups except for the 20-24 and 55-64 age groups. The County has experienced a “brain drain” from persons who are old enough to have graduated from high school. The number of persons in the 18-19 age group experienced a 25% decline. However, the number of persons who are of college age, the 20-24 age group increased slightly. This indicates that a portion of the younger population in the County are staying in the County and seeking employment after graduation from high school.

There has been a notable decline in the number of youth of school age. The decline of 168 young people, represents a loss of slightly more than 1/5 of the school age youth.

The substantial decline in the number of persons in the 35-44 age groups is very notable as this decline represents a loss of slightly over 25% of persons of prime working age. This decline occurred as a result of lack of employment opportunities with higher incomes in the County. This loss also implies that if employment opportunities were to become available in the County, there would be an opportunity to retain a significant portion of those persons in these age cohorts in the local labor force.

The County has experienced a significant increase in the 55-64 age group. The number of persons in this age group increased by nearly 30%. This increase is a result of the natural aging of population in the County, particularly the rural population.

Over all the County population is continuing to age. As indicated in Table 9, the median age of the total County population increased from 43.5 years in 2000 to 46.9 years in 2010, representing nearly an 8% increase in the median age of the County population. This aging will have implications for additional housing for those of retirement age in future years.

POPULATION FORECASTS

For counties with smaller populations, one of the more accurate ways of forecasting future population levels is known as a trend line projection. This type of projection utilizes historic trends in population change to predict the future. This method of projection is utilized over other forecasting methods because in counties, such as Valley County, the potential for major changes in the local economy and thus major population changes are less likely than counties with larger urban centers and larger populations.

As indicated in Table 10, utilizing the mid-range projection, the Valley County population is forecasted to continue to decrease slightly over the next 11 years declining to a total of 3,748 persons by 2025. This would represent a population decrease of 12% over the year 2010.

Should the rate of population decline increase due decreased employment opportunities, the total Valley County population could drop to fewer than 3,600 by 2025.

Should economic development in the County occur and additional employment opportunities be made available, the Valley County population decline would slow resulting in a population of slightly over 3,835 by 2025.

TABLE 10 POPULATION FORECASTS
VALLEY COUNTY, NEBRASKA

Valley County	1980	1990	2000	2010	Projection Level	2015	2020	2025
Valley County	5,633	5,166	4,647	4,260	High	4,075	3,951	3,835
					Mid-Range	4,053	3,919	3,748
					Low	4,030	3,800	3,570

Source: Stahr & Associates, Inc., 2014

Based upon the 3.8 economic base multiplier discussed previously, stabilization of the population of the County would require the addition of just slightly over 135 jobs in one or more of the “base” economic sectors of the local economy over the next 11 years.

IMPLICATIONS OF POPULATION AND ECONOMIC TRENDS AND FORECASTS

The analysis of the changes in the components of the Valley County population and the resulting forecast indicates that the population of the County will continue to increase slightly over the 11 year planning period. The population of the County will also continue to age slowly as the working age group today, those persons ages 35 to 64 which constitute the majority of the population of the County, will age an additional 11 years.

The only avenue available to enhance the increase in the population levels will be to increase employment opportunities in the County, particularly in the private sector. As noted in the previously presented analysis of the local economy, the most effective method of adding employment opportunities will be to expand employment in the “base” sectors of the local economy, primarily the agricultural and manufacturing sectors.

If declines in private sector employment opportunities and population were to occur, it will have implications on the physical development of the County including, but not limited to the following:

- Further declines in population, particularly the population of the rural areas of the County, will result in lessening the demand for additional housing and, potentially, an overall reduction in overall housing density as existing farm dwellings are removed to generate additional crop land.
- Without additional expansion of employment opportunities in the County, the demand for land for additional commercial and industrial use will also be limited.
- Losses of the segment of the population of school age will result in reduction in enrollment in the school districts serving the County, which may result in higher costs of education and less efficient use of facilities.

HOUSING ANALYSIS

This housing analysis component of the Valley County, Nebraska Comprehensive Plan identifies and evaluates the existing housing characteristics of the community and provides a forecast of future housing needs in the County.

A primary goal of the County should be to provide safe, sanitary and affordable housing for every family and individual now residing in the County or who may wish to in the future.

In order to project future housing needs with reasonable accuracy a number of factors must be considered. Among these are population change, household incomes, employment characteristics, age of people, land use, the age, condition, cost and availability of housing in the County and attitudes of persons residing in or may wish to reside in the county in the future.

EXISTING HOUSING

An important characteristic with regard to housing in any community is its quality and desirability in the marketplace. One of the factors that determines the overall quality and desirability of the existing housing units is the age of the existing residential structures regardless of whether such housing units are located in one of the municipalities in the County or in the rural area.

A summary of the age of residential structures in Valley County is presented in Table 11. As indicated, 925 or just over 40% of the total 2,273 residential structures were constructed prior to 1940. These structures are now in excess of 70 years old.

Conversely, the number of residential structures constructed since 2000 comprises a respectable 153 units, or almost 6% of the total housing stock in the County. Given the population declines in the County and its municipalities, the majority of this newer housing is “replacement” housing being constructed by persons residing in the County who are wanting to reside in a more up-to-date home.

TABLE 11 AGE OF EXISTING HOUSING STOCK - 2010
VALLEY COUNTY, NEBRASKA

YEAR OF CONSTRUCTION	NO. OF HOUSING UNITS	% OF TOTAL HOUSING UNITS
2010 or Later	14	0.6%
2000 - 2009	121	5.3%
1990 - 1999	126	5.5%
1980 - 1989	176	7.7%
1970 - 1979	333	14.7%
1960 - 1969	230	10.1%
1950 - 1959	199	8.8%
1940 - 1949	149	6.6%
1939 or earlier	925	40.7%
TOTAL	2,273	100.0%

Source: U. S. Census Bureau, Census of Housing, 2010

Although many of the older residential structures have been remodeled and renovated during the last 70 years, the size, number of rooms, energy efficiency and type of design of these older homes often do not meet what persons in the housing market are looking for.

In addition, the fact that over one-third of the residential structures in the County are over 70 years old also implies that a number of such homes are in need of rehabilitation.

Another characteristic of the existing housing stock which is important to determining the ability of such housing stock to provide adequate housing for the future population of the County is the type of housing.

As indicated in Table 12, there is a variety of housing types available in the County. As indicated, the net change in the occupied housing stock in the last decade has been a decrease in the occupancy of 387 housing units since 2000.

This data implies that the primary housing demand since 2000 has been for apartment rentals for elderly persons requiring at least some assistance in their living environment and for moderate income working households who may not have sufficient income to purchase of home. This is verified in that the only increase in the number of housing unit type was in the housing facilities that contained 5 or more housing units.

The overall net decrease of 17% in the total occupied housing stock is consistent with the decrease in population of the County during the last decade.

TABLE 12 TRENDS IN HOUSING STOCK BY TYPE
VALLEY COUNTY, NEBRASKA

Housing Units in Residential Structures	2000 Number of Structures	2010 Number of Structures	Percent Change 2000 – 2010
Single unit (detached)	1,925	1,671	-13.2%
Single unit (attached)	35	11	-68.6%
2 - 4 unit structures	81	58	-28.4%
5-9 unit structures	32	38	+18.6%
10 or more unit structures	62	77	+24.2%
Mobile / Manufactured Home	138	30	-78.3%
TOTAL	2,273	1,886	-17.0%

Source: U. S. Census Bureau, Census of Housing, 2000 – 2010

In addition to housing type, another factor to consider in determining future housing demand is what is and should be the mix between owner-occupied housing and rental housing.

As indicated, in the year 2010, of the total 1,992 occupied housing units in Valley County, 1,404 or 70% of all occupied housing units are owner-occupied. This percentage is 5% less than the percentage of owner-occupied housing in 2000. The number of rented housing units has increased notably since 2000 with an increase of 40 units, representing an increase of 8%.

The 5% increase in the number of owner-occupied housing units since 2000 combined with the 8% increase in occupied rental units, implies that a majority of the future housing demand will be for renter-occupied dwellings. The increase in rental housing and the declining vacancy rate in rental housing in

2010 tend to verify this trend. Based on the total 518 rental units, over 54 were vacant, indicating a reasonable number of rental housing opportunities and choices remain available.

TABLE 13 HOUSING OCCUPANCY - 2000 AND 2010
VALLEY COUNTY, NEBRASKA

n

Housing Characteristic	2000	2010
Total Housing Units	2,273	2,273
Total Occupied Units	1,965	1,922
Owner Occupied:	1,487	1,404
Renter Occupied:	478	518
Homeowner Vacancy Rate	3.4%	1.3%
Rental Vacancy Rate	17.2%	10.6%
Total Vacant Units	308	351

Source: U. S. Census Bureau, Census of Housing, 2000 and 2010.

Overall, the number of occupied housing units in the County has decreased since 2000. In 2010 there were 43 fewer occupied housing units than in 2000.

Another factor to consider when evaluating the existing housing stock is the affordability of the owner-occupied housing and the reasonableness of rent rates. The data presented in Tables 14 through 18 provide information on which to evaluate the cost of housing in Valley County.

As indicated in Table 14, the values of the owner-occupied housing units in Valley County are reasonable. In 2010, the median housing unit value was \$75,800 while the range of values extends from under \$50,000 to over \$300,000. Nearly 2/3rds of the housing units are valued at less than \$100,000.

Utilizing the median owner-occupied housing unit value, a current general ratio of 32% of income to annual mortgage costs which is used by the mortgage industry, an average mortgage interest of 4% and a typical 30 year mortgage term, the median housing value of \$75,800 would require a gross household income of less than \$25,000 per year. Given that the median household annual income in 2010 was \$44,762, the majority of the households in the County are capable of financing the purchase of a home.

TABLE 14 HOUSING VALUES - 2010
VALLEY COUNTY, NEBRASKA

Value of Owner-Occupied Housing Units	Number	Percent of Total
Less than \$50,000	403	30.6%
\$50,000 - \$99,999	465	33.1%
\$100,000 - \$149,999	236	16.8%
\$150,000 - \$199,000	109	7.8%
\$200,000 - \$299,999	84	6.0%
\$300,000 or higher	80	5.7%
Total	1,404	100.0%
Median Owner-Occupied Housing Unit Value	\$ 75,800	-

Source: U. S. Census Bureau, Census of Housing, 2010

An analysis of residential mortgages and related owner housing costs, as presented in Table 15, indicates two important factors related to owner-occupied housing in the County. First, nearly 53% of the owners of housing in the County have no mortgage. Second the median mortgage and owner costs in Valley County in 2010 were \$854 per month which converts to just over 22% of mean household income. This verifies the affordability of the housing in the County.

TABLE 15 MORTGAGE & SELECTED OWNER COSTS - 2010
VALLEY COUNTY, NEBRASKA

Mortgage and Selected Owner Costs / Month*	Number
Housing Units with No Mortgage	742
Housing Units with Mortgage	662
Less than \$300	2
\$300 - \$499	81
\$500 - \$699	139
\$700 - \$999	165
\$1,000 - \$1,499	201
\$1,500 - \$1,999	39
\$2000 or more	35
Median Mortgage & Selected Owner Costs	\$ 854
Median Selected Owner Cost with No Mortgage	\$ 367

Source: U. S. Census Bureau, Census of Housing, 2010

- Selected costs include mortgage, taxes and insurance

As indicated in Table 16, 77% of those homeowners with a mortgage have mortgage and owner cost which are less than 25% of household income. This data further verifies that housing and selected owner costs are quite affordable.

TABLE 16 MORTGAGE & SELECTED MONTHLY OWNER COST AS PERCENTAGE OF HOUSEHOLD INCOME - 2010
VALLEY COUNTY, NEBRASKA

Mortgage & Selected Monthly Owner Costs as % of Household Income *	Number
Less than 20%	385
20% - 24.9%	125
25% - 29.9%	59
30% - 39%	17
35% or more	76

Source: U. S. Census Bureau, Census of Housing, 2010
* Selected costs include mortgage, taxes and insurance

The cost of and affordability of rental housing is also an important factor in evaluating the existing housing situation in Valley County and in forecasting future rental housing needs. As indicated in Table 17, the contract rent rates for housing in the County range from no rent to over \$1,500 per month. The median monthly rent payment in 2010 was \$410.

TABLE 17 HOUSING CONTRACT RENT - 2010
VALLEY COUNTY, NEBRASKA

Contract Rent for Housing / Month	Number
No cash rent	60
Less than \$200	12
\$200 - \$299	75
\$300 - \$499	164
\$500 - \$749	76
\$750 - \$999	0
\$1,000 - \$1,499	3
\$1,500 or more	18
Total Renter-Occupied Housing Units	348
Median Contract Rent	\$410

Source: U. S. Census Bureau, Census of Housing, 2010

The data presented in Table 18 indicates that rent rates for 53% of the renters in Valley County are reasonable as 53% of the renters pay less than 30% of their household income on housing rent costs. This level of housing costs is considered reasonable for half of those households who rent a home.

It should be noted, however, that 48% of renters are paying in excess of 30% of their household incomes on housing. This level of income committed to housing is high, indicating that a portion of the rental housing is not affordable to nearly one-half of the rental market.

It must be understood that providing of new rental housing at lower rent rates will be very difficult in the future due to the cost of new housing construction. These higher rental rates again point to the need to maintain and rehabilitate the existing housing stock in order to maintain an adequate number of affordable rental units.

TABLE 18 RENT AS PERCENTAGE OF HOUSEHOLD INCOME - 2010
VALLEY COUNTY, NEBRASKA

Gross Rent As % of Household Income	Number
Less than 15%	59
15% - 19.9%	45
20% - 24.9%	42
25% - 29.9%	38
30% - 34.9%	58
35% or more	106
Not Computed	60
Total Renter-Occupied Housing Units	348

Source: U. S. Census Bureau, Census of Housing, 2010

Housing Needs Forecast

The forecast for the future population of Valley County is that the overall population will continue the trend of the past decade and thus continue to decrease slightly. The forecasted decrease is expected to be at a rate slightly less than that of the last decade and it is forecasted that the County's population will decrease by some 512 persons by the year 2025.

Based upon this forecast, the availability of over 351 housing units distributed throughout the municipalities and rural areas of the County which are currently vacant, and the current relatively high vacancy rate of rental housing in the County, it is anticipated that the relatively low level of housing development during the last decade will continue. Application of the ratio of new housing units to the change in population level over the last decade to the forecasted population change is the most accurate manner to project future housing need. Application of this ratio indicates that an estimated 10 to 20 additional housing units will be needed through the Planning Period.

As in the last decade, the majority of this additional housing will be single-family dwellings that will be replacement owner-occupied housing and additional retirement and moderate income rental housing. The aging of the population in the County also implies an increase in the demand for group housing in the form of independent or assisted living facilities to provide for these housing needs.

PUBLIC FACILITIES & SERVICES PLAN

A critical component in the development of any county is the availability of public and quasi-public facilities and services. Services and facilities such as law enforcement, fire protection, medical treatment, education, recreation and other quality of life services and facilities not only provide protection for life and property, but help establish the desirability of the area as a place to live and work.

In Valley County there is a wide variety of public and quasi-public facilities and services available to its residents. These facilities and services include the following:

GOVERNMENTAL OPERATIONS

The majority of the Valley County governmental offices are located in the County Courthouse located on the central town square in Ord, the County seat. The current courthouse is a multi-story structure, constructed in 1020, which provides officer space for the basic county governmental functions.

The courthouse building housing these governmental service offices has been updated and maintained and with normal maintenance and updating in the future, the building will remain adequate for the provision of governmental services through the planning period.

LAW ENFORCEMENT

Law enforcement in the County is provided by the Valley County Sheriff's Office and the municipal police department in the City of Ord.

The Sheriff's office is responsible for maintaining peace and enforcing the law throughout Valley County. The Sheriff's office also supports a police department in the City of Ord which provides 911 emergency call dispatch services.

The Sheriff's office investigates criminal offenses, traffic accidents; enforce traffic laws, and death investigations. Other duties include collecting delinquent property taxes, execution of court orders, serving civil process, serving warrants, extradition of prisoners from other states, transporting prisoners to and from the courts and providing security services to the courts.

FIRE PROTECTION AND RESCUE SERVICES

The population and property within Valley County are provided fire protection and rescue services through the facilities and services of the Ord Volunteer Fire Department, the Arcadia Volunteer Fire Department, the North Loup Fire District and the Burwell Volunteer Fire Department that serves the far northwest portion of Valley County. These fire districts provide well-trained volunteer fire fighters and

rescue who respond to all emergencies throughout the County. The districts have mutual aid agreements to provide for maximizing responses to emergencies and minimizing response time.

With continued recruiting and training of volunteer fire fighters and rescue personnel and continued upgrading of fire fighting and rescue equipment, the level of fire protection and emergency rescue services will remain adequate through the planning period.

MEDICAL AND HEALTH FACILITIES AND SERVICES

A wide variety of medical and health care services are available to all residents of the County.

The Valley County Health System, headquartered in Ord, Nebraska operates medical clinic in Ord and North Loup to serve the residents of Valley County. These clinics are full-service, family practice facilities. The physicians and staff members provide comprehensive care for patients of all ages.

Hospital and critical care services are provided to the residents of Valley County by the Valley County Health Care Systems which operates a newly constructed 16 bed critical access hospital in the City of Ord. Acute and skilled services are available as well as observation, respite care, obstetrics, surgery and 24-hour emergency room care and a wide variety of outpatient services. This newly constructed hospital has the capacity and skilled staffing to maintain a high level of health care for the residents of the County through the planning period.

The Health Care System also offers home and hospice care services to residents of the County.

EDUCATION

The residents of Valley County are served by 4 educational centers provided by the Ord public school district. These include the Ord Public Elementary and Junior and Senior High Schools, headquartered in the City of Ord and the Vinton Elementary School a rural school operated by the Ord School. Residents of the southeastern portion of the County, including the Village of North Loup are included in the recently created Central Valley school district headquartered in Greeley, Nebraska. All of the public schools have updated facilities.

Given the anticipated continued decline in the overall population levels of the County, it is anticipated that these facilities will provide excellent educational opportunities for the youth of Valley County through the planning period.

Supporting educational, research and informational services are also provided at the Ord Public Library, and the Arcadia Township and North Loup Township Libraries.

RECREATION

There are numerous recreation facilities and services available to the citizens of Valley County, particularly due to the location of the County near the North Loup River. Recreation facilities available to the residents of the County include:

Bussell Park in the City of Ord which offers:

- Tennis, Basketball, Volleyball and Baseball Facilities
- Camping and Picnic Facilities
- 9 hole golf course
- 9 hole disc golf course
- Municipal Swimming Pool
- Fishing

Kindergarten Park in the City of Ord which offers:

- Skate Park
- Playground
- Basketball facilities
- Picnicing

Other recreational facilities and opportunities in Valley County include:

Anderson Island located east of the City of Ord which offers:

- Swimming in the river
- Canoeing
- Tubing
- Camping

Davis Creek Reservoir located in the southeastern part of Valley County offers:

- Camping
- Fishing
- Boating

Valley County is bisected by the Loup Rivers Scenic Byway which is a highway route through the County that parallels the North Loup River. Travelers on the Byway enjoy many scenic views of the River along the route.

Given the anticipated limited increases in population in the County, the need for development of additional recreation facilities will also be limited during the planning period.

ENVIRONMENTAL ANALYSIS

In order to formulate a plan for determining the potential for future development of the County, to determine a proper plan for future land usage and to determine proper zoning districts and zoning regulations for Valley County, it is necessary to evaluate the environmental features and man-made conditions which exist in the County and determine any impacts that these features and conditions may have on encouraging or limiting of future land uses in the County.

This component of the Valley County Comprehensive Plan provides a summary of the environmental features and man-made conditions which are present in the County and identifies and qualifies the characteristics of each feature and condition which could impact future land usage in the County.

THE NATURAL ENVIRONMENT

Geology and Hydrology

Valley County is located in a transitional area of the Great Plains where loess plains meet the sand hills. The bedrock in a large majority of the County is comprised of Pierre Shale which is black to bluish gray. This shale yields no water as its upper surface is the base the aquifer underlying the County. This bedrock is overlain by sand in the northeast corner of the County and some of the terrace areas northwest of the Village of Arcadia. The balance of the bedrock in the County is overlain by loess (silty, windblown material). None of the bedrock is exposed anywhere in the County.

Material of the Ogallala Group overlays the shale throughout the County. This material consists of interbedded, consolidated and unconsolidated layers of sand, sandy gravel, silt and clay ranging in thickness from 200 feet along the eastern edge of the County to over 600 feet on the western edge.

Unconsolidated sand, gravel and silt of the Quarternary age overlie the Ogallala Group materials. The sand and gravel deposits range in thickness from approximately 4 feet to over 140 feet. Sand and gravel of this formation are mined in the valley floors of the North Loup River.

The geology of the County presents several implications for future development in the County including:

- The adequate supplies of groundwater will continue to encourage crop and livestock production and provide an economic incentive for future industrial development where high volumes of water or required for the manufacturing or processing operations.
- A primary negative regarding the geology of the County is that the same unconsolidated deposits which afford the large quantities of groundwater combined with sandy soils also allow such groundwater to be contaminated from seepage of contaminants from the surface. Contamination of the groundwater has and will continue to have implications for future development in the County. The evidence of high levels of nitrate in the water of the shallower Quarternary aquifer is indicative that contamination of the groundwater is occurring and that future land usage, both agricultural and non-agricultural, should be evaluated with regard to minimizing potential future groundwater contamination. At the present time various governmental entities have adopted regulations dealing with methods of minimizing further contamination of the groundwater. These include limitations for development near municipal wells which restrict the types of land uses within areas in and around the municipalities in the County.
- There are several areas in the County where the geology, hydrology and the soil characteristics present considerable potential for further groundwater contamination and thus land uses with higher levels of contamination potential should be avoided. These characteristics and the resulting land use limitations are discussed later in this section.

Soils

Another environmental factor, closely related to the geologic and hydrologic characteristics in the County is that of the type and characteristics of soils present in the County.

As indicated in Figure 1, the soils in Valley County are classified into 8 different soils associations. The soil types within each association exhibit different characteristics and limitations with regard farming and ranching practices, and land use as described below.

The largest occurring soil types are Coly-Uly soils which occupy 204,950 acres or just over 56% of land in the County. These soils are deep, strongly sloping to very steep, silty soils on upland areas. The primary agricultural use concerns are water erosion in areas that are cultivated and maintaining range condition and forage production on non-cultivated acres.

The second largest area of soils is the Holdrege-Uly-Cozad Association which extends from the southeast to the northwest in the central portion of the County. The soils in this association occupy some 56,200 acres or just over 15% of the land in the County. Soils in this association are deep, nearly level to moderately sloped, silty soils on uplands and shallow valleys. The majority of land in this association is used for crop production and water erosion is the primary agricultural production concern.

The Cozad-Hord Association of soils occupy the third largest area in the County. These soils, located along the North Loup River, occupy some 34,000 acres or just under 10% of the land in the County. These soils are deep, nearly level to gently sloping, well drained, silty soils on stream terraces. The majority of the land occupied by this soils association is irrigated and the primary cultivation concern is efficient application of irrigation water.

The fourth most common soil association in the County is the Hord-Hobbs association. These soils occupy over 23,200 acres or 6.4% of the land area in the County and occur on the terraces of creek and other drainageways. The soils are deep, nearly level to gently sloping, well drained silty soils stream terraces and bottom land. The majority of these soils are used for irrigated crop production and the primary cultivation concern is efficient application of irrigation water.

The soils in the Boel-Loup-Leshara Association are located along the North and Middle Loup Rivers. These soils occupy some 17,800 acres. These soils are deep, nearly level, poorly drained, loamy, sandy, silty soils on bottom lands. Proper management of irrigation and proper grazing use are the primary agricultural production concerns in areas where these soils occur.

Soils in the Valentine and Valentine-Hersch-Gates Associations occupy some 19,100 acres or nearly 5.3% of the land in the extreme northeastern and southwestern portions of the County. These soils are deep, nearly level to hilly, excessively drained, sandy soils on upland areas. Most of these soils are poorly suited for crop cultivation due to slope, low fertility and low available water capacity. The majority of the soils are thus used for range land where maintaining the range condition and forage production is the main agricultural concern.

Soils in the Holdrege-Hord-Uly Association occur in the central portions of the County. These soils are deep, nearly level to strongly sloping silty soils that occur on some 8,000 acres on upland tablelands. Water erosion is the primary agricultural production concern.

Prime Farmland

The preservation of soils which are the most productive in terms of crop production is an important issue in any County planning effort. In Nebraska and other states where the major component in the economy is agricultural production, the issue of preserving the most productive (prime) land for food production now and for future generations is a key component in planning for the future of any rural area.

In Valley County approximately one-third of the land area in the County is occupied by soils which are very productive and thus are classified as prime farmland. As indicated on Figure 2, these soils occupy some 117,000 acres, generally in the central portion of the County where the topography is relatively flat.

If these soils are to be preserved for agricultural production, it would indicate that loss of such prime productive areas through development of non-agricultural uses including commercial, industrial, residential uses and other non-agricultural developments should be avoided as much as possible. However, the problem in Valley County is that all of the urban communities, except the Village of Arcadia, are located in areas on which prime farmland soils present. As these communities expand physically, the loss of some prime farmland will be unavoidable. To minimize the loss of productive land those communities in the County which experience growth should be encouraged to maximize the density of such growth and avoid leap-frog urban and suburban developments.

Soils Limitations

As indicated on Figures 3 and 4, there are a number of soils in the County on which non-agricultural land uses and confined livestock feeding uses should be avoided due to the potential for damage to the use itself or local environmental damage. These soil characteristics combined with topographic limitations and flood hazards can result in wind and water erosion and pollution of surface and groundwater through seepage of contaminants generated by such uses as septic tank and tile fields and lagoons used for disposal of human and animal wastes.

These environmental hazards are presented by soils association to provide local planning and government officials with the ability to evaluate the appropriateness of future land development proposals in all parts of the County. Although every effort should be made to encourage additional development throughout the County thus enhancing the local economy, employment opportunities and the tax base, such developments should not be allowed to develop in areas where environmental damage is a real potential.

Water Supplies and Water Quality

All of Valley County is situated over the Ogallala and Quarternary formations and thus there is an abundant, but not unlimited supply of groundwater. Wells in both aquifers provide adequate supplies of water for domestic and livestock use as well as irrigation of crops. Additional irrigation water can be supplied by the network of irrigation canals serving the County and the region.

The 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 Quarternary aquifer is just slightly hard to hard, but is also high in nitrates resulting from local groundwater contamination, primarily from application of excess nitrogen from crop production.

The County also has extensive quantities of surface water in form the Middle and North Loup Rivers and the Davis Creek Reservoir. The surface waters add to the scenic beauty of the area and add to wildlife habitat and substantially expands recreational opportunities in the County.

Topography

As indicated on Figure 5, the topography of Valley County consists of three general land forms which have elevation changes from stream and river bottoms to hill tops which may rise to nearly 250 feet. These land forms include the loess uplands and tablelands, the river valleys and the sandhills.

The major characteristic of the uplands is that they are deeply dissected by drainageways resulting in slopes ranging from near 0% on the tablelands to over 60% on the land sloping to the drainageways.

The river valleys are characterized by long, relatively narrow and flat land with very limited slopes.

The sandhills area in the extreme northeastern corner of the County is characterized by irregular shaped, nearly level to hilly sand dunes. Slopes in the sandhills area range from nearly 0% to over 60%, but unlike the uplands, there is little defined relief in drainageways.

The topography in the County presents a variety of deterrents to agricultural use as well as non-agricultural land development. The foremost deterrent with regard to agricultural use is the relatively high percentage of land that has high degrees of slope and is therefore subject to severe water erosion. This same slope factor, combined with the shrink-swell characteristics of most of the soils in the sloped areas is also a major deterrent to development of non-agricultural uses the majority of the County.

From a topographic standpoint, the relatively flat river valleys, primarily the North Loup River valley, present few limitations for development of extensive irrigated crop production as well as non-agricultural land uses.

The Sandhills area, with its undulating hills and poorly defined drainage, presents severe limitations for both crop production, confined livestock uses and non-agricultural land uses.

The overall quantity of land in the County which, due to slope or other factor, is not suited to crop production indicates that such land is best suited for livestock pasturing and production. This is an attribute of the County that should be recognized and expanded as part of the County's overall economic development program.

Flood Hazard Areas

There are four primary areas in Valley County which are subject to flooding. As indicated on Figure 6, these areas include:

1. areas along the North Loup River which traverses the northeastern third of the County. These areas contain soils of the Boel-Loup-Leshara association near the river. Virtually all of the soils are subject to flooding during high flows on the River. Lower elevations in the areas occupied by soils in the Cozad-Hord association located elsewhere in the river valley are also subject to periodic flooding.
2. areas along the Middle Loup River which traverses the southwestern corner of the County. These are areas which contain soils in the Boel-Loup-Leshara association in the bottomlands along the River.

3. the lower elevations in and along the various streams and creeks which flow from the upland areas to the two rivers in County. These areas contain soils in the Hord-Hobbs association which are subject to flooding during periods of peak surface water runoff from the tableland and upland areas.
4. areas in the Sandhills in the northeastern corner of the County which are subject to temporary ponding and high water tables.

In combination, the areas in the County which are subject to periodic flooding comprise approximately 94,000 acres or nearly 20% of the total area of the County.

The current federal flood insurance program, in which Valley County participates, limits development in any area which is subject to recurrent flooding by requiring that any such development be at an elevation which is at least one foot above the 100 year flood elevation. A 100 year flood is defined as a flood that has a 1% chance of occurring at any given year.

These same regulations do allow for filling of land to elevate a development site, provided such filling does not result in increasing the flood elevation on other adjoining lands. This ability to fill flood prone areas helps to address an on-going demand, particularly for housing development, along or around surface water areas, which are typically also wooded, non-cropland areas.

This ability to fill development sites in areas subject to flooding reduces the quantity of land in the County where building development is prohibited. However, filling and development of flood prone sites for the purpose of development can create another potentially more serious problem, that of emergency access to such developments.

If development in flood prone portions of the County is permitted, such should be permitted only when roadway access to such areas is not subject to flooding. In this manner, vehicular access to such properties in times of health, fire or other emergencies is assured. Any subdivision regulations adopted by the County should effectively address this roadway access issue.

THE MAN-MADE ENVIRONMENT

The presence of man-made features has and will continue to influence land use development within Valley County. Historically, although the location of the North and Middle Loup Rivers was the primary factor in the settlement of the urban areas in the County, the development of the railroad and subsequent development of the highways that traverse the County has influenced the development of non-agricultural and urban uses and will continue to do so.

Development of man-made land uses in the rural areas of the County has been limited primarily to farming and ranching activities and include rural residences and livestock barns and equipment and machine storage buildings. In addition, several small hog and cattle confined feeding facilities are scattered throughout the southern portion of the County.

Exceptions to these agriculture related uses in the rural areas of the County include the development of several recreational camps, hunting areas along the rivers, the Davis Creek Reservoir in the extreme southeast corner of the County and the recently constructed ethanol production plant located along Highway 11 south of the City of Ord.

Transportation Systems Impacts

The major transportation system components in Valley County consist of 4 state highways which traverse various portions of the County and the Nebraska Central Railroad which serves the City of Ord and the Village of North Bend and the southeaster portion of the County along the North Loup River.

The primary highway, Nebraska Highway 11, parallels the North Loup River. Nebraska Highway 70 extends in a southwesterly direction from the northeastern corner of the County to the Village of Arcadia and then westward into Custer County. Nebraska Highway 22 provides a link between Highway 11 and Highway 70 in the southern portion of the County while Nebraska Highway 58 provides a southward link from Highway 70 in the south-central portion of the County. This highway network provides excellent access to each urban community in the County, as well as providing convenient farm to market roadways.

Virtually all existing commercial and industrial land uses in the County have been developed on or near these major roadways and/or the rail line, typically near the urban communities in the County. Future commercial and industrial land uses will also, most often, prefer a location along the highways and/or the

rail line and thus the Future Land Use Plan and application of various zoning district should reflect this likelihood.

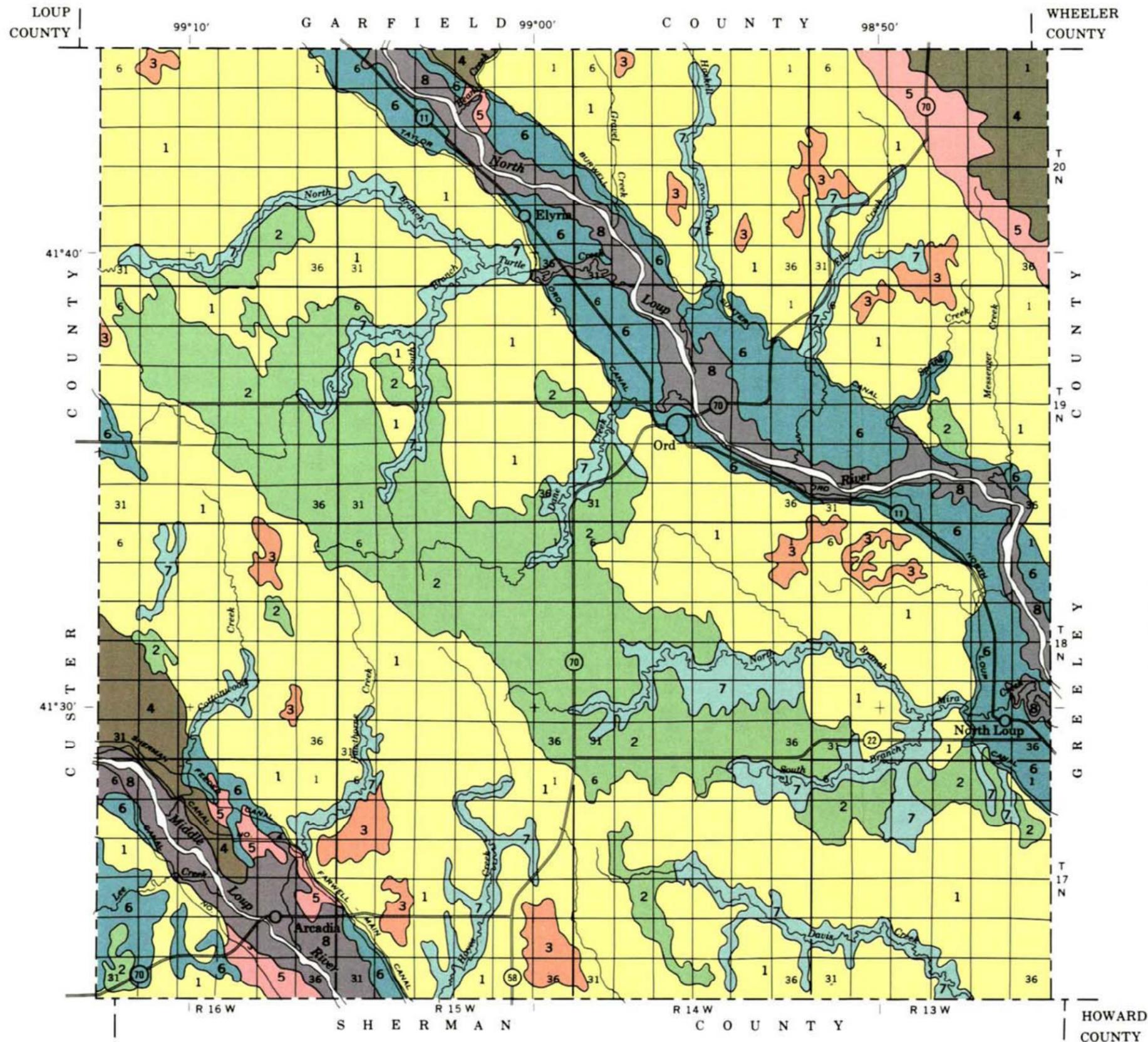
Public Facility Impacts

There are currently two public facilities located outside of the urban communities in the County which could impact future development in the rural areas of the County. These include the historic Fort Hartsuff site north of the Village of Elyria and the Davis Creek Reservoir, located near the southeastern corner of the County. These facilities, combined with the scenic quality of Highway 11, have the potential to attract a large number of tourists to the County if they are promoted on a statewide basis. An increase in tourist traffic may also encourage additional tourist and recreation related uses near these facilities or at points of access to the facilities on Highway 11.

Municipal Water Supply Wellhead Protection Impacts

An adequate supply of clean, uncontaminated water for domestic, industrial and recreational use in any urban area is a critical public need. In order to help insure that water supplies for the urban communities in Nebraska do not become contaminated in more than at present, federal and state legislation new encourages and permits each municipality in Nebraska to develop and implement land use (zoning) regulations which serve to limit the types of land uses that can be developed near each community's water supply points (typically municipal water wells) so that contamination which could result from certain land uses can be avoided. The water supply (wellhead) protection regulations will thus directly influence future land use patterns in the urban communities by restricting certain types of land uses in the wellhead protection areas.

Quite often, the land area on which the additional water supply protection regulations need to be applied exceeds the one-mile zoning jurisdiction limits for most Nebraska municipalities. This is the case with the City of Ord. As indicated on Figure 7, one of the wellhead protection areas for the City of Ord extends beyond the City's one mile zoning jurisdiction and thus the assistance of the County is needed to help protect the water supply for the City. The Future Land Use Plan in this comprehensive plan should thus recognize this wellhead protection area and its limits on land uses should be reflected in a County administered zoning district for this area.



**SOIL LIMITATIONS:
Sewage Lagoons and Confined Livestock Feeding Facilities**

- 1 Moderate Limitations - slope
- 2 Slight Limitations
- 3 Slight Limitations
- 4 Severe Limitations - high water table, poor filter
- 5 Severe Limitations - high water table, poor filter
- 6 Moderate Limitations - flooding in low areas
- 7 Severe Limitations - slope, flooding in low areas
- 8 Severe Limitations - flooding, high water table, poor filter, wetness/ponding

FIGURE 4

**SOILS LIMITATIONS
Valley County, Nebraska**

STAHR & ASSOCIATES, INC.
 Community and County Planning - Economic Development Consultants
 919 COUNTRY CLUB AVENUE, SUITE 4 TELEPHONE (402) 710-1819
 YORK, NEBRASKA 68467 E-MAIL ojstahr@hotmail.com

EXISTING LAND USE ANALYSIS

An evaluation of the land uses that presently exist within Valley County, Nebraska is critical to the formulation of this Comprehensive Development Plan. It is the type and location of the existing land uses which provides the starting point for formulating a plan for the future physical development of the County and the basis for the formulation of workable zoning regulations to protect existing uses and promote desired future uses.

Physical Character

In order to properly understand the impact of the existing land uses within the County and the overall trends in the location and extent of the existing land uses it is important to review to physical character of the County. This type of examination unveils why certain land uses exist and what land use trends have occurred and, in turn, details limitations of why development has not occurred in other areas. The following is a brief synopsis of the physical character of Valley County.

Valley County is located in the central portion of the State of Nebraska and has a total land area of 365,331 acres. Urban development within the County occurred along the major rivers in the County due to the need for water and limitations in modes of travel and thus travel distances during the original settlement of the County.

Historically, the goods and services provided and produced in Valley County revolved around the industry of agriculture. Even today, some 347,397 acres or 94% of the land area in the County is utilized for agricultural production. Of this total, 41% is utilized for cultivated crop production, 50% is pastureland and 3% is used as irrigation canals, farmsteads and residential uses. Of the total land area used for crop production, some 93,080 acres, or 62%, is irrigated land.

The approximately 18,000 acres in the County not used for agricultural production, 6% of the land area in the County, is comprised of non-agricultural commercial and industrial uses, urban areas, local roads and highways, cemeteries, the Davis Creek Reservoir, historic sites and other public and semi-public facilities.

The major transportation routes within the County have impacted the existing land use patterns in the County and will continue to influence future land use development within the County. Aside from the fact that these major highways provide intra-county access to the urban areas, as well as, provide further access to larger regional and national transportation routes and urban areas outside of the County, they

provide ideal locations for commercial business and industry within the County. Existing commercial and industrial development has been primarily located in close proximity to the major highways and railroad within the County generally in or near an urban area within the County.

As indicated on Figure 8, the location of rural residential uses has been substantially influenced by two factors. These factors include the locations of the two rivers traversing the County and the topography of the County. The majority of rural residential uses occurs in 3 bands which from the northwestern portion of the County to the southeastern portion. The northernmost of these bands parallels the North Loup River which flows through the northeastern third of the County. The southernmost band is situated along the Middle Loup River in the southwestern corner of the County and the central band is situated between the two rivers on the upland tablelands in the central portion of the County.

Understanding these physical characteristics of the County provides a better understanding of why land uses have developed in the way they exist now and provides insight into which trends should be continued and what planning policies should be utilized in the future. Such planning should continue upon the land use trends that have been positive in nature and avoid away past and present land use trends that have had a negative impact in the County and on its citizens and taxpayers.

An evaluation of the detailed land uses that presently exist within the County is critical to the formulation of its Comprehensive Development Plan.

Rural Residential Uses

In 2010 there were a total of 610 occupied residential structures in the unincorporated areas of Valley County. Given that in 2010 there were only 402 farms in the County, it becomes readily apparent that there are an increasing number of non-farm residential uses located in the rural areas of the County. Even assuming that 1/4 of the farms have multiple family members owning and residing on the farms in separate dwellings, the number of occupied non-farm residential structures is estimated to be over 110, representing nearly 20% of the residential uses in the rural areas of the County.

Many of these now non-farm residential structures are former farm residences which have been rented or sold-off to non-farm occupants.

Livestock Feeding Uses

In 2010, the number of livestock feeding uses, which have declined in number over the last 20 years, totaled 3 operations producing hogs and 24 operations feeding over 200 head of cattle per year. The majority of these uses are situated in the southern portion of the County. Given that nearly one-half of the land in the County is used for pasture and rangeland, the importance of livestock production, particularly cattle production should not be understated. Further, the recent trend in the number of cattle finishing uses in the County, which has been negative, should be reversed because additional livestock production, particularly finishing operations is one of the best ways of enhancing the local County economy. In order to accomplish this objective, the plan for future land uses in the rural portions of the County should address the issue of maintaining compatibility between livestock feeding uses and rural residential uses by limiting the amount or at least the locations of future rural residential development in order to provide locations for livestock feeding uses which will not impact such residential uses.

Rural Commercial Uses

Over the years, rural commercial and industrial land use locations have created a definite pattern. Virtually all recent commercial and industrial uses in the County, including the recent ethanol production facility, have been located on sites adjoining the highways serving the County, particularly along Highway 11. Any future commercial and industrial development in the rural areas of Valley County will likely follow this same pattern and future planning for such uses should recognize this pattern.

Public and Semi-Public Uses

A variety of public and semi-public uses including local churches, cemeteries, historic sites, municipal well fields, lakes and recreation areas and various types of governmental facilities exist in the rural areas of the County. An examination of the location of these public, semi-public uses indicates that, with the exception of the rural churches and cemeteries, these uses are for the most part situated near the urban communities within the County and along the North Loup River.

Public Road and Highway Use

Public road rights-of-way for the state highways in the County and County roads occupy nearly 3,600 acres of land in the County. The use of nearly 5.6 square miles of land for roads in the County makes roads and highways the second largest land use in the County, second only to agricultural crop land. The County roadways are unevenly distributed throughout the County reflecting the differences in land uses and land use densities throughout the County.

LAND USE TRENDS AND OBSERVATIONS

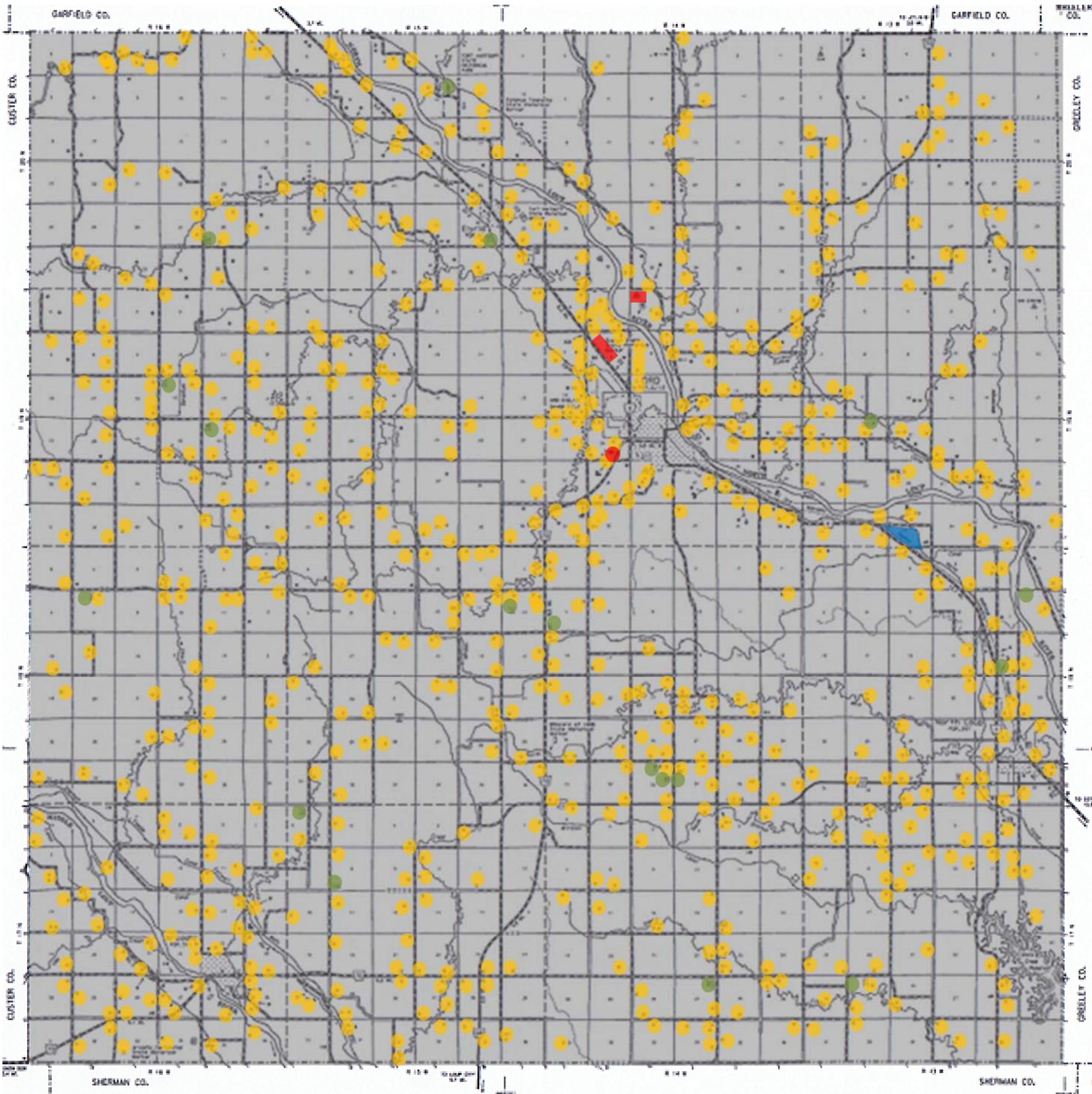
The land use pattern in Valley County has undergone several notable changes during the last two decades.

The most notable changes include:

- The number of small scale livestock production operations which were typically associated with rural farmsteads have all but disappeared. In addition, the number of larger scale confined livestock production facilities has also declined in number and location.
- A number of commercial and industrial land uses have been developed in the rural areas of the County, primarily along Highway 11 and the railroad. Given the fact that there are very limited quantities of undeveloped land along the highways and the railroad within the urban areas of the County, any future commercial or industrial development will likely prefer locations in the rural areas of the County along the highways and/or the railroad. This likelihood should be reflected in the zoning districts applied to land along the highways and railroad.
- Land included within the corporate limits of the municipalities has continued to increase. Today, the urban land uses included within these incorporated municipalities occupy slightly more than 2 square miles of land in the County, making urban land uses the third largest land use category in the County. Given that the majority of the urban communities in the County have experienced population declines over the last few decades, the inclusion of additional land within the corporate areas of the municipalities in the County is expected to be limited through the planning period.

The overall existing land use pattern in Valley County is one of decreasing residential density in the rural areas of the County, but increasing density in commercial and industrial uses, particularly near the highways and railroad which extend through the County.

A primary objective of the Future Land Use Plan and zoning regulations should be to assure that new land uses, which may be developed, be located and constructed in a manner which is compatible, not only with adjoining land uses, but with the environmental capacity, particularly water availability.



EXISTING LAND USE LEGEND

- Residential
- Commercial
- Industrial
- Public and Semi-Public
- Agricultural

FIGURE 8

**EXISTING LAND USE
Valley County, Nebraska**

STAHR & ASSOCIATES, INC.

Community and County Planning - Economic Development Consultants

919 COUNTRY CLUB AVENUE, SUITE 4 TELEPHONE (402) 710-1819
YORK, NEBRASKA 68467 E-MAIL ojstahr@hotmail.com

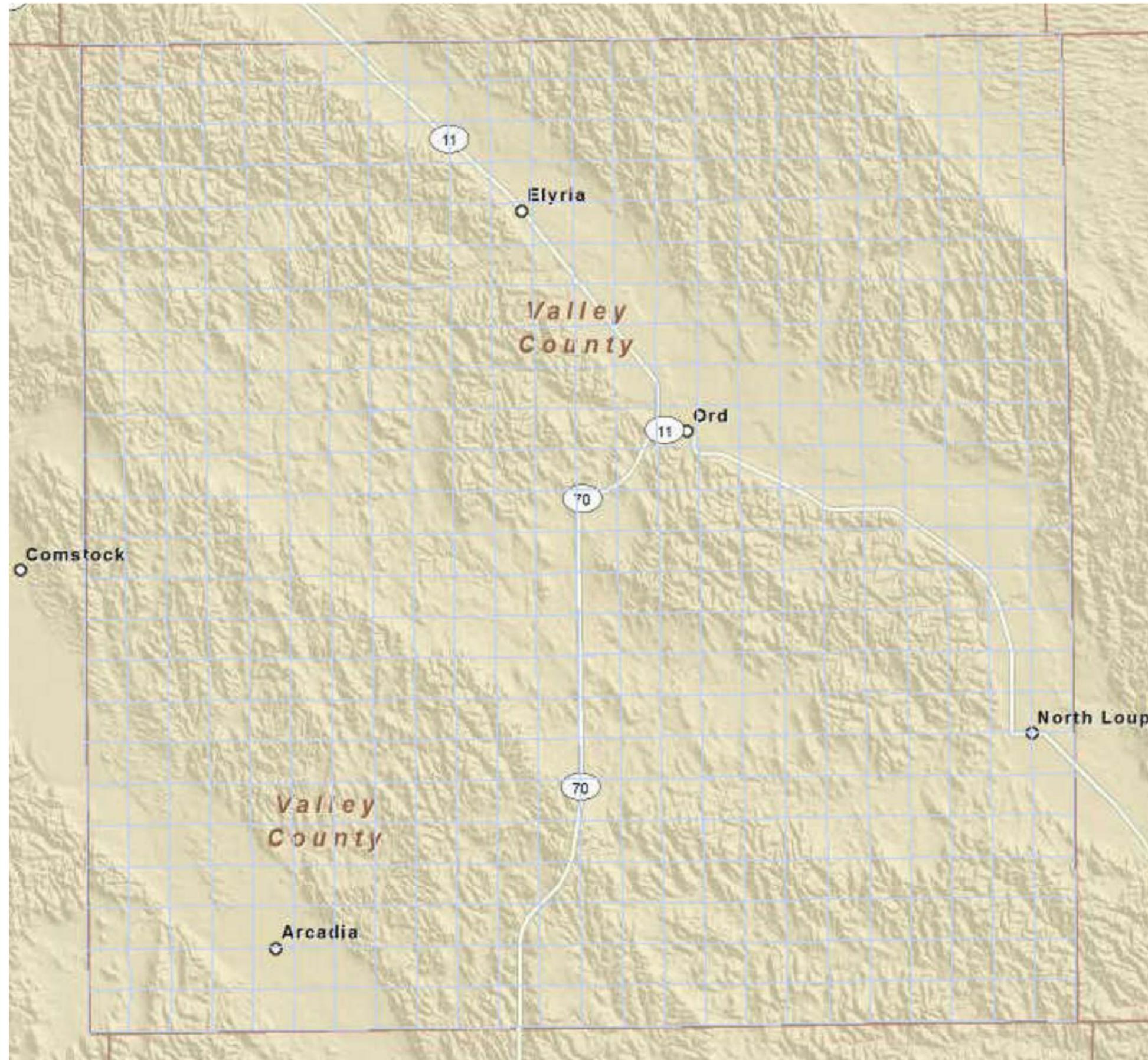


FIGURE 5
GENERAL TOPOGRAPHY
Valley County, Nebraska

STAHR & ASSOCIATES, INC.

Community and County Planning - Economic Development Consultants

919 COUNTRY CLUB AVENUE, SUITE 4
 YORK, NEBRASKA 68467

TELEPHONE (402) 710-1819
 E-MAIL ojstahr@hotmail.com