



The Keith County Plan



**A Comprehensive Plan for
Keith County, Nebraska
Prepared with the Citizens of Keith County
By RDG Crose Gardner Shukert
March, 2003**

Portions of The Keith County Plan have been updated/amended by
Marvin Planning Consultants, Inc and approved on May 23, 2018

THE KEITH COUNTY COMPREHENSIVE PLAN

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TABLE OF CONTENTS



Introduction1



Chapter 1.1: Population7



Chapter 1.2: Housing Chapter13



Chapter 1.3: Economy & Economic Development19

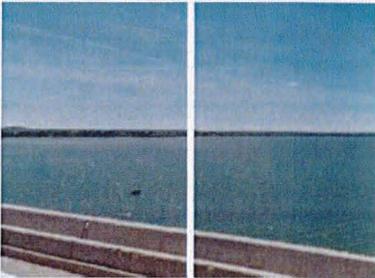


Chapter 2: Land Use & Development Trends 29

Table of Contents



Chapter 3: Environmental & Development Resources35



Chapter 4: Land Use41



Chapter 5: Energy Element65



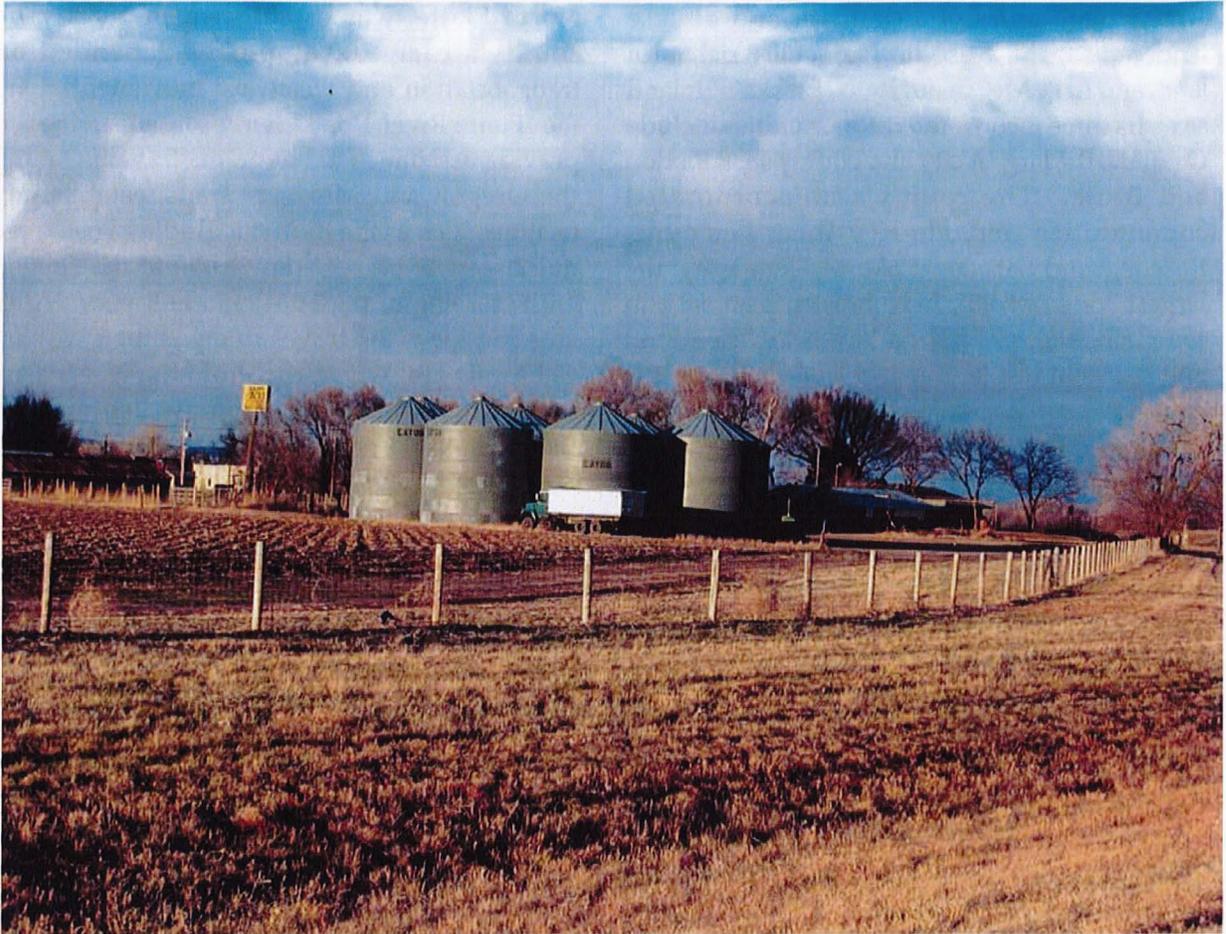
Chapter 6: Transportation, Infrastructure & Public Facilities73



Chapter 7: Plan Implementation89

Appendix A99

INTRODUCTION



THE KEITH COUNTY COMPREHENSIVE PLAN

INTRODUCTION

Keith County, Nebraska includes approximately 1,110 square miles of a dramatic and diverse landscape, featuring rolling sand hills, rich farm land, and Lake McConaughy, Nebraska's "inland sea." Its three incorporated communities include Ogallala, the largest city and county seat, Paxton and Brule. The county's unincorporated communities include Keystone, Lemoyne, Roscoe, and Sarben. Lake McConaughy, the largest body of water in Nebraska, is an oasis in the plains that provides a haven to year-round and seasonal residents, as well as visitors to the county.

This comprehensive plan is designed to help define the character of county growth, recommend policies to preserve vital environmental resources and agricultural lands, and minimize conflicts caused by development in rural areas. The plan is designed to help the county and its policy makers manage economic and environmental change. For example, while agriculture continues as the dominant force in the county's economy, the growing lake area residential and recreation economy creates new retail and service business opportunities. Lake McConaughy's attraction has influenced population change during the 1990's, with substantial growth in areas surrounding the lake and losses in most of the county's communities. This lake-related growth in turn affects development demand on highway corridors serving the lake. As a result, this plan includes a specific section on land use and development policy for the lake corridors.

EARLY HISTORY OF KEITH COUNTY

Keith County, named for Morrill C. Keith of North Platte, was established in 1873. The county's early development depended on transportation and westward movement along the Platte River Road. Early settlers arrived to provide assistance to emigrants traveling along the Oregon and Mormon Trails, establishing facilities such as the Beauvais Trading Post, three miles west of present-day Brule at the Oregon Trail crossing of the South Platte River. After crossing the river, travelers made their way up California Hill where ruts from the wagons are still visible today. The county also was the location of Pony Express stations including Diamond Springs near Brule.

The county prospered with the extension of the railroad and expansion of the cattle pens and loading chutes by Union Pacific Railroad. This helped Ogallala, the county seat, become a boomtown as cattle were herded north from Texas. Despite the end the "long drive" in the 1880's, expanded agriculture, encouraged by excellent rainfalls, encouraged the continued growth of settlement in the county. As years went by, the Lincoln Highway (US Highway 30) and Interstate 80 maintained the Platte River corridor's historical role as a principal transcontinental transportation route.

Lake McConaughy is probably Keith County's most distinctive environmental feature and its most notable visitor attraction. C.W. McConaughy, Mayor of Holdrege, first proposed the idea of a giant irrigation and power reservoir in 1913. In 1933, the Central Nebraska Public Power and Irrigation District was formed to manage and harness the water supply of the region. Central's network of facilities includes Kinglsey Dam and Lake McConaughy, several diversion dams, the 75-mile Tri-County Supply Canal with more than 20 small lakes, three hydroelectric plants, and miles of irrigation canals and laterals in seven Nebraska counties.

BASIC PRINCIPLES

This comprehensive plan for Keith County is based on the following basic principles:

- *The planning jurisdiction of Keith County contains unique environmental resources and features that should be recognized and preserved.* These features include Lake McConaughy, the scenic Platte River valley, numerous creeks and streams, prime farming and grazing lands, and overall good air and water quality.

- *Planning efforts should recognize that agriculture and agricultural related industries will remain an important economic force within the community along with a growing retail environment.* Agriculture will continue to be the county's primary land use and economic activity; however, retail and recreational components are likely to assume an expanded role. Retail and consumer service development could expand beyond its traditional concentration in Ogallala to provide local service to the lake area. As such, planning policy should recognize the potential of these sectors and explore opportunities to strengthen it.

- *Land use planning in Keith County should integrate the needs of development and the need for resource and open space conservation.* Development pressures within the county have grown as more permanent and seasonal residents are attracted to lake-related homes. In the past this residential development has focused on the north side of the lake; but, more recently, the south side has also been opened to development. Management of this growth is necessary to prevent the erosion of the open character of the rural landscape. The county plan should promote development patterns that accommodate appropriate development while preserving the rural character of the land.

- *Development and land use in the planning jurisdiction should be related to the natural features and capacity of the land.* Factors such as topography, drainage, vegetation, soil



characteristics, the presence of wetlands, and crop suitability, influence the type of development that is most appropriate for a given area. A significant portion of the I-80 corridor is located in the 100-year floodplain, generally less suitable for conventional residential development and confined animal feeding operations. Lake McConaughy, makes up a significant amount of northern Keith County. Land use policies should be sympathetic to the areas landforms and scenic vistas.

GOALS FOR KEITH COUNTY

An important part of the planning process for Keith County was the definition of county goals and priorities through a strategic planning process. This process assessed county features and defined goals for the twenty-year planning period. A broadly representative steering committee, representing a variety of interests in the county, was the driving force behind this strategic planning process. The process included:

- An environmental scan survey, completed by committee members to help define specific development issues.

- Division of the steering committee into working groups, organized around specific issues.

- Development of policy goals and priorities through public meetings, conducted by the Keith County Planning Commission.

The specific area plans for the lake corridors were also completed through parallel processes, involving property owners, potential developers, and other stakeholders in the process of developing land use and regulatory concepts for these key areas.

The Environmental Scan

The Environmental Scan Survey asked steering committee members to rank key features and characteristics of the county, assess strengths and weaknesses, and define significant planning issues. The survey asked participants to rank various county features on a "5" to "1" scale, from highest to lowest rating. Figure 1-1 illustrates the results of this portion of the environmental scan. Generally, a rating above 3.5 indicates that many respondents ranked the system above average (giving it a rating of 4 or 5), while a rating below 3.0 suggests that a significant number of respondents considered the system to be below average (giving it a rating of 1 or 2).

In addition to these ratings, the survey included open-ended questions to assess county strengths, weaknesses, and issues. Based on survey responses, major county strengths include:

- Recreational trails and potential for future trail development
- Prospects for future growth
- Keith County's people
- Overall quality of life
- Park and recreation resources
- Family friendliness
- Public safety systems
- Highway and interstate access
- Lake McConaughy

Significant community weaknesses include:

- Retaining young people
- Growth management
- Highway 61 corridor development
- Tax levels
- Business climate
- Job creation and growth
- Highway 92 corridor development
- Economic development efforts



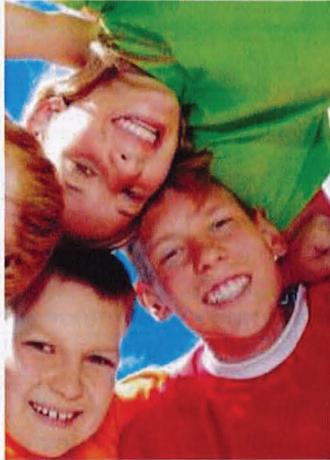
Figure 1.1: County Report Card

METHODOLOGY

Issues such as water management and a balance of environmental considerations and development demands are particularly important in Keith County. Because of these policy choices, some traditional planning methodologies (such as population projections and resulting calculation and allocation of urban land conversion needs) have limited application. Instead, this plan uses environmental analysis methods derived in part from the pioneering planning work of the landscape architect and environmental planner Ian McHarg. McHarg's methods overlay environmental constraints and opportunities to determine appropriate development policies for specific areas. These methods are reflected in the Keith County Land Use Plan.

The Keith County Plan is divided into the following sections:

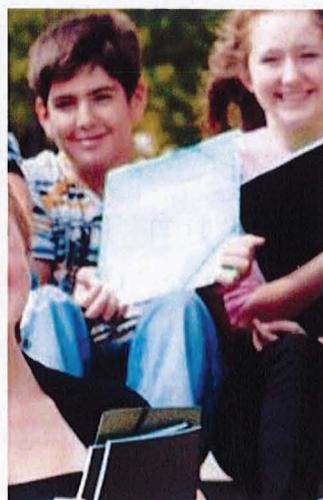
- *Part 1: A Profile of Keith County.* This section presents information about Keith County, its people, and its pattern of development that will help develop the policies that are most appropriate for the county. It examines population changes and characteristics, economic factors, and development trends.
- *Part 2: Development Trends.* This section reviews land use and development patterns and trends in the county planning jurisdiction, including an analysis of population and development patterns.
- *Part 3: Environmental and Development Resources.* This section analyzes the environmental conditions that affect the course of future development.
- *Part 4: Keith County's Land Use Plan.* This section presents a land use concept, along with principles and recommendations guiding land use policy in the planning jurisdiction. The land use plan is based on the analysis of environmental resources in Part 3, and relates development policy districts to environmental issues and ability to support growth.
- *Part 5: Lake McConaughy Corridor.* Lake McConaughy is a unique resource for Nebraska and its main access corridors present unique opportunities. This section discusses key development issues in the area, an overall planning philosophy for the area, and a specific development concept for the area.
- *Part 6: Transportation, Infrastructure, and Public Facilities Plan.* This section considers the county's support systems in light of the land use plan, and presents specific improvements designed to support the concepts of the land use plan. These infrastructure systems include utilities, transportation, public facilities, trails, and greenway corridors.
- *Part 7: Plan Implementation.* This section provides guidance and techniques for implementing key aspects of the county plan.



1.1

Population

Replaces part of Chapter 1 in March 2003 Comprehensive Plan



DEMOGRAPHIC PROFILE

Demographics aid in understanding the past and existing conditions; while applying these to the future. It is important for Keith County to understand where the county has been, where it is and where it appears to be going. Only then can specific changes in the vision for the county be implemented.

Population drives all of the major components making up the county including housing, local employment, economic, and the fiscal stability of the county. Historic population assists in developing projections for the future, which in turn assists in determining future housing, retail, medical, employment and educational needs within Keith 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 1.1.1 contains the historic population for Keith County, and the incorporated communities in Keith County, and the unincorporated areas, between 1980 and 2013. The data provides a look at where Keith County has been and provides a base line for population projections in the county.

**TABLE 1.1.1: POPULATION TRENDS AND ANALYSIS
KEITH COUNTY 1980 TO 2013**

Community	1980	1990	2000	2010	% Change 2000 to 2010	2013 est.	% Change 2000 to 2013
Ogallala	5,638	5,095	4,930	4,737	-3.9%	4,606	-2.8%
Brule	438	411	372	326	-12.4%	316	-3.1%
Paxton	568	536	614	523	-14.8%	509	-14.8%
Incorp. Areas	6,644	6,042	5,916	5,586	-5.6%	5,431	-5.6%
Unincorp. Areas	2,720	2,542	2,959	2,782	-6.0%	2,690	-3.3%
Keith County	9,364	8,584	8,875	8,368	-5.7%	8,121	-3.0%

Source: U.S. Census Bureau, 1980 - 1990, 2000, 2010, 2013 est.

Overall, the population decreases have been the result of widespread declines across the county. The largest percentage decrease was in the community of Paxton where there was a -14.8% change between 1980 and 2013. Ogallala had the smallest decline at -2.8% for the same period. The overall change in Keith County between 1980 and 2013 was -3.0%.

MIGRATION ANALYSIS

Migration Analysis is a tool which allows the county to understand critical dynamics of the populations shifts. Total migration indicates the population size migrating in or out of the county over a given period of time.

**TABLE 1.1.2: MIGRATION ANALYSIS
KEITH COUNTY 1980 TO 2013**

Time Period	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1980-1989	(780)	534	(1,314)
1990-1999	291	(21)	312
2000-2009	(507)	(68)	(439)
2010-2013	(247)	(74)	(173)
Total	(1,243)	371	(1,614)

Sources: U.S. Census Bureau 1980 – 2013
Nebraska DHHS, Vital Statistics Reports, 1980 –2013

Table 1.1.2 indicates the primary issue with the decreasing population in Keith County is people moving out of the county. Overall from 1980 to 2013, Keith County has actually seen an increase in natural change due more people being born versus dying. During the 33 year period births exceeded deaths by 371 people. However, most of this was driven by births between 1980 and 1990.

Between 1980 and 2010, the county lost, overall, 1,243 people; however, during the same period there were 1,614 people that moved away. The period where the county saw the greatest exodus was from 1980 to 1989 when 1,210 people moved away. This exodus equaled approximately one person in six people leaving Keith County for somewhere else. The current trend for 2010 to 2020 indicates a potential out-migration of over 430 people during the decade.

Since the 1980's the scale of the exodus has slowed; the largest out-migration period was between 1980 and 1990. Between 1990 and 2000, Keith County saw 312 people move into the county while there were 21 fewer births than deaths. Finally, the people that moved away between 2000 and 2010 equaled 439 or 30.5% of the total out-migration. Continued monitoring should occur in order to determine if these trend slow or become greater.

AGE STRUCTURE ANALYSIS

Age structure is an important component of population analysis. By analyzing age structure, one can determine other dynamics affecting the

population of Keith County.

Each age group affects the population in a number of different ways. For example, the existence of larger young age groups (20-44 years) means there is a greater ability to sustain future population growth compared to the larger older age groups. Understanding what is happening within the age groups of the community's population is necessary to effectively plan for the future.

**TABLE 1.1.3: AGE AND SEX CHARACTERISTICS
KEITH COUNTY 2000 TO 2010**

Age	2000	2010	2000-2010	
	Male and Female	Male and Female	Cohort Change	% Change
0-4	508	467	467	-
5-9	579	499	499	-
10-14	698	537	29	5.7%
15-19	661	460	-119	-20.6%
20-24	306	332	-366	-52.4%
25-29	424	385	-276	-41.8%
30-34	453	392	86	28.1%
35-44	1,364	857	-20	-2.3%
45-54	1,222	1,371	7	0.5%
55-64	1,030	1,296	74	6.1%
65-74	882	977	-53	-5.1%
75 & older	748	795	-835	-51.2%
Total	8,875	8,368	-507	-5.7%

U.S. Census Bureau 2000, 2010

Table 1.1.3 contains the age group structure for Keith County in 2000 and 2010. The examination of population age structure allows for an understanding of where some of the population shifts are occurring. These data allow for a better understanding of what could occur in the future.

Realizing how many persons are in each age group, and at what rate the age groups are changing in size, will allow for informed decision-making in order to maximize the future use of resources. As shown in Table 1.1.3, significant changes between 2000 and 2010 occurred within a number of different age groups.

A review of population by this method permits one to undertake a detailed analysis of which specific groups are moving in and out of the community. Negative changes in a group indicates out-migration or a combination of out-migration and

deaths.

Keith County saw growth in five age groups. The 0 to 4 and 5 to 9 groups always indicate an increase, since these persons were not born when the 2000 Census was completed. Outside of the 2010 age groups of 0-4 and 5-9 years, the other increase were in the 10-14 (2010), the 30-34 (2010), and the 35-44 (2010). Overall, there was an increase of 1,177 persons in these five age groups. When you eliminate the first two younger populations, there were 167 people that moved in during this period. This population increase consisted primarily of family aged adults and children.

**TABLE 1.1.4: NEGATIVE AGE GROUPS
KEITH COUNTY 2000 TO 2010**

2000 Age Group	Persons	2010 Age Group	Persons	Change
5 - 9 years	579 persons	15 - 19 years	460 persons	- 119 persons
10 - 14 years	698 persons	20 - 24 years	332 persons	-366 persons
15 - 19 years	661 persons	25 - 29 years	385 persons	- 276 persons
25-34 years	877 persons	35-44 years	857 persons	-20 persons
55-64 years	1,030 persons	65-74 years	977 persons	- 53 persons
65 years +	1,630 persons	75 years +	795 persons	- 835 persons
Total Change				- 1,669 persons

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

There were seven age groups from 2000 that declined by 2010. The group with the greatest loss was the 75 years + (2010) which lost 835 persons over the period. This loss is can be attributed to two causes, 1) people moving on after 65 years to other communities and senior care facilities, or 2) a dying population base. Both are likely an equal factor considering between 2000 and 2010 there were 439 resident deaths in Keith County.

The other major ages where Keith County has seen declines in population are in the young adults cohorts that typically leave home for their post-secondary educations. This is a very typical statistic in smaller, more rural counties such as Keith County. Eventually, some of these individuals may return to start a career and family.

**TABLE 1.1.5: POSITIVE AGE GROUPS
KEITH COUNTY 2000 TO 2010**

2000 Age Group	Persons	2010 Age Group	Persons	Change
NA	NA	0 - 4 years	467 persons	+ 467 persons
NA	NA	5 - 9 years	499 persons	+ 499 persons
0-4 years	508 persons	10-14 years	537 persons	+ 29 persons
20-24 years	306 persons	30-34 years	392 persons	+ 86 persons
35 - 44 years	1,364 persons	45 - 54 years	1,371 persons	+ 7 persons
45 - 54 years	1,222 persons	55 - 64 years	1,296 persons	+ 74 persons
Total Change				+ 1,162 persons

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

Overall, Keith County has had a unique population pattern occur during this past ten year period. Solid in-migration from family age groups but then still being negatively impacted by the out-migration of the elderly and post high school youth/adults.

Median Age

Between 2000 and 2010 the median age in Keith County increased from 41.1 years to 47.3 years. This increase equaled 6.2 years or an increase of 15.1%.

**TABLE 1.1.6: MEDIAN AGE/DEPENDENCY RATIO
KEITH COUNTY 2000 TO 2010**

2000		2010	
Under 18 years of age	2,243	Under 18 years of age	1,805
% of total population	27.3%	% of total population	23.0%
Total 65 yrs and older	1,630	Total 65 yrs and older	1772
% of total population	19.9%	% of total population	22.6%
Median Age	41.1	Median Age	47.3
Total Females	4,517	Total Females	4,172
Total Males	4,358	Total Males	4,196
Dependency Ratio	0.89	Dependency Ratio	0.84

Source: U.S. Census Bureau 2000 and 2010

The overall increase in the median age presents a great concern for the future of the county's population. The closer the median age is to 50 years

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

(%18 years and younger + % 65 years + % of remaining population)

the less likely the county will see sustained increases in births, which support future populations. The median age within Nebraska in 2010 was 36.2 years.

DEPENDENCY RATIO

The dependency ratio examines the portion of a county that is spent supporting age groups that have historically been dependent upon others for survival (those under 18 years and those 65 years and more). See the box above for details on calculating the ratio.

Table 1.1.6 indicates the dependency ratios for 2000 and 2010 in Keith County. The proportion of persons less than 18 years of age decreased by 19.5% between 2000 and 2010; while those aged 65 years and older increased by 8.7% overall.

In 2000, Keith County had a Dependency Ratio of 0.89 (47.2%/52.8%); however, by 2010 the Ratio had decreased to 0.84 (45.6%/54.4%). This is supported by the substantial decrease in the 18 and under age group.

ETHNICITY

Keith County during the past decade has seen a shift in the ethnicity within the county. The dynamic ethnicity adds to the overall population can be complex and can cause considerable growing pains and cultural shifts regardless of the ethnic background. The shifts seen in Keith County are moderate considering the Hispanic population increased by 99 persons or 26.4%. However, Keith County saw an increase in several categories including Asian and Pacific Islander, which

increased by 18 people or 120.0%. These two ethnic groups are likely immigrants.

**TABLE 1.1.7: POPULATION BY ETHNICITY
KEITH COUNTY 2000 TO 2010**

Race	2000		2010		2000-2010	
	Number	% of total	Number	% of total	Net Change	% change
White, not Hispanic	8,587	104.7	8,005	102.0	-582	-6.8
Black	7	0.1	18	0.2	11	157.1
Am. Indian & AK. Native	63	0.8	41	0.5	-22	-34.9
Asian & Pacific Islander	15	0.2	33	0.4	18	120.0
Other, not Hispanic	132	1.6	139	1.8	7	5.3
Hispanic	375	4.6	474	6.0	99	26.4
Mexican	294	3.6	388	4.9	94	32.0
Puerto Rican	0	0.0	5	0.1	5	-
Cuban	1	0.0	0	0.0	-1	-
Other Hispanic	80	1.0	81	1.0	1	1.3

Source: US Census 2000, and 2010

In addition, the White population saw an 6.8% decrease overall, which equaled 582 less White, non Hispanic people in the county. The County, communities and school districts need to track these changes annually in order to minimize any potential fiscal impacts.

POPULATION PROJECTIONS

Population projections are estimates based upon past and present circumstances. The use of population projections allows Keith County to estimate the potential population 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 future scenarios can be generated. 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 Keith County has for predicting future population changes. There are a number of methods to project the future population trends; the two projection techniques used below are intended to give Keith 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 Keith County, three different trend lines were reviewed: 1960 to 2010, 1990 to 2010, and 2000 to 2010. A review of these trend lines indicates Keith County will see varied levels of decreasing population between now and 2040. The following projections summarize the decennial population for Keith County through 2040.

Keith County Trend Analysis

Year 1960 to 2010

2010	7,845 persons
2020	7,748 persons
2030	7,652 persons
2040	7,557 persons

Year 1990 to 2010

2010	7,845 persons
2020	7,746 persons
2030	7,647 persons
2040	7,551 persons

Year 1980 to 2010

2010	7,845 persons
2020	7,523 persons
2030	7,215 persons
2040	6,919 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 Keith County's population will decline slightly in 2020 and then begin a steady increase each decade through 2040. The following projection for Keith County is based on applying survival rates to age cohorts, but does not consider the effects of either in-migration or out-migration.

Keith County Cohort Survival Analysis

Year Cohort Survival Model

2020	7,164 persons
2030	7,646 persons
2040	8,180 persons

SUMMARY OF POPULATION PROJECTIONS

Using the modeling techniques discussed in the previous paragraphs, a summary of the two population projections for Keith County through the year 2040 is shown in Figure 1.1.1. Three population projection scenarios were selected and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series. All three projections forecast a continuing decline in population for Keith County through the year 2040.

Low = 1980 to 2010

2020	7,523 persons
2030	7,215 persons
2040	6,919 persons

Medium = 1990 to 2010

2020	7,746 persons
2030	7,647 persons
2040	7,551 persons

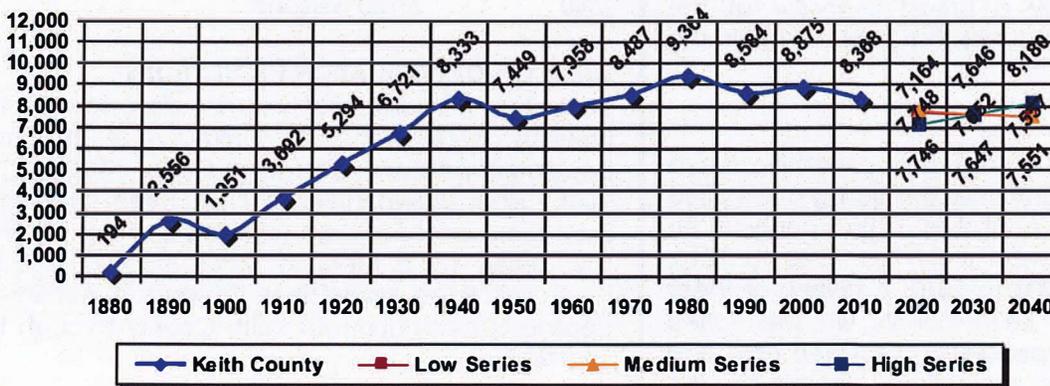
High = Cohort

2020	7,164 persons
2030	7,646 persons
2040	8,180 persons

Figure 1.1.1 reviews the population history of Keith County between 1880 and 2010, and identifies the three population projection scenarios into the years 2020, 2030 and 2040. Figure 1.1.1 indicates the peak population for Keith County occurred in 1920 with 10,763 people. Throughout the history of Keith County, the population has had several increases and decreases.

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. Keith County should monitor population trends, size and composition periodically in order to understand in what direction their community is heading. Keith County's greatest population threats will continue to be out-migration of youth, and strategies should be developed to further examine and prevent this phenomenon.

**FIGURE 1.1.1: POPULATION AND PROJECTIONS
KEITH COUNTY 1880 TO 2040**



Source: U.S. Census Bureau, Marvin Planning Consultants



1.2

Housing Chapter

Replaces part of Chapter 1 in March 2003 Comprehensive Plan



HOUSING PROFILE

The Housing Profile identifies existing housing characteristics and projected housing needs for residents of Keith County. The primary goal of the housing profile is to allow the county to examine past and present conditions; while, identifying potential needs including provisions for safe, decent, sanitary and affordable housing for every family and individual residing within county.

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 Keith County residents.

Projecting future housing needs, requires several factors to 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 Keith County.

AGE OF EXISTING HOUSING STOCK

An analysis of the age of the housing stock can reveal a great deal about population and economic conditions of the past. Examining the housing stock is important in order to understand the overall quality of housing in Keith County.

**1.2.1: AGE OF EXISTING HOUSING STOCK
KEITH COUNTY 2010**



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

Figure 1.2.1 indicates 1,161 homes or 21.3% of Keith County's 5,443 total housing units, were constructed prior to 1940. This statistic is county-wide, including each community, and consists of older well-kept homes as well as homes likely in need of repair or demolition.

Keith County has seen very positive construction activity between 1950 and 2000 with 3,909 (71.8%) homes constructed. This was especially true between 1970 and 1980 saw 1,318 (24.2%) new homes built during the decade. These data indicate the economy very good during these decades.

Approximately 74.8% of all housing units in Keith County were constructed prior to 1980. Due to the age of these homes, there may be a need for special weatherization programs in the county and the communities to bring these homes up to current energy efficiency standards.

**TABLE 1.2.1: COMMUNITY HOUSING TRENDS
KEITH COUNTY 2000 TO 2010**

Selected Characteristics	2000	2010	% Change 2000-2010
Population	8,875	8,368	-5.7%
Persons in Household	8,775	7,648	-12.8%
Persons in Group Quarters	100	197	97.0%
Persons per Household	2.37	2.43	2.5%
Total Housing Units	5,178	3,698	-28.6%
Occupied Housing Units	3,707	3,753	1.2%
Owner-occupied units	2,703	2,731	1.0%
Renter-occupied units	1,004	1,022	1.8%
Vacant Housing Units	1,471	1,671	13.6%
For rent		160	
Rented, not occupied		6	
For sale only		97	
Sold, not occupied		16	
Seasonal, Recreational, or Occasional Use	1,087	1,162	6.9%
All other vacants		230	
Owner-Occupied vacancy rate	2.3%	3.4%	47.8%
Renter-Occupied vacancy rate	12.0%	13.5%	12.5%
Single-family Units	2,933	3,862	31.7%
Duplex/Multiple-family units	323	438	35.6%
Mobile Homes, trailer, other	448	1,033	130.6%
Median Gross Rent - 2000-2010			
Keith County	\$404	\$553	36.9%
Nebraska	\$491	\$632	28.7%
Median Value of Owner-Occupied Units - 2000-2010			
Keith County	\$69,300	\$88,200	27.3%
Nebraska	\$88,000	\$119,700	36.0%

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

HOUSING TRENDS

Table 1.2.1 identifies several different housing trends in Keith County. The Table indicates the breakdown between owner- or renter-occupied housing as well as the number of people living in Group Quarters. Examining these type of housing trends allow for a better understanding of the overall diversity of the

population and their quality of life within Keith County.

Persons in Households/Group Quarters

In 2010 there were 1,127 fewer people living in households than in 2000, this represents a change of -12.8%. The decrease in persons in households is higher than the actual population decrease of 5.7% seen for the same period. Between 2000 and 2010, the number of people living in group quarters went from 100 people in 2000 to 197 in 2010 a change of 97.0%.

Persons per Household

Table 1.2.1 also includes the number of persons per household. The average persons per household in Keith County increased from 2.37 to 2.43 persons, which is not a common occurrence for this time period. The trend nationally has been towards a declining household size; however, the person per household in Keith County is similar to the surrounding counties:

- Arthur County has 2.46 persons per household
- Perkins County has 2.36 persons per household
- Lincoln County has 2.37 persons per household
- McPherson County has 2.55 persons per household
- Deuel County has 2.21 persons per household
- Garden County has 2.10 persons per household

Occupied vs. Vacant Housing Units

Occupied housing units in the county increased by 1.2% between 2000 to 2010; this was a 46 unit increase by 2010.

During the timeframe, vacant housing units grew from 200 units to 1,671 units or 13.6%. This is a significant increase for the 10 year Census period. The vacancy rates found in rental units increased from 12.0% to 13.5% or an increase of 83.8% from 2000 to 2010; while the increases in owner-occupied went from 2.3% to 3.4% or an increase of 47.8%.

The largest makeup of vacant housing were found in the Seasonal, Recreational, or Occasional Use category which made up 69.5% of all vacant units in 2010. This is due solely to the part-time housing found at Lake McConaughy.

Median Gross Rent

Median gross rent in Keith County increased from \$404 per month in 2000 to \$553 per month in 2010, or 36.9%. The State's median monthly gross rent increased by 28.7%. This indicates Keith County has seen gross rent increase slightly higher rate than the

state. However, the County's Median Gross Rent is still considerably less than the State at \$632.

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 28.7%, indicating Keith County's rents exceeded the rate of inflation for the 10-year period. Thus, Keith County tenants were paying more in monthly rents in 2010, in terms of real dollars, than they were in 2000, on average. Landlords were also making more on their investment.

Median Value of Owner-occupied Units

The Median value of owner-occupied housing units in Keith County increased from \$69,300 in 2000 to \$88,200 in 2010 and represents an increase of 27.3%. The median value for owner-occupied housing units in the state showed an increase of 36.0%. Housing values in Keith County grew at a slower rate than seen statewide. However, the Median Value of an owner occupied unit in Keith County is still nearly 3/4 of the state median and in reality the 2010 is farther from the state median value than it was in 2000.

In comparison to the CPI, the local value of owner-occupied housing increased at a rate slower than the CPI. This indicates housing values in the community actually were worth less in 2010 compared to 2000 dollars. In 2010, the median value of an owner-occupied dwelling was worth \$0.95 for every dollar in 2000.

Tenure of Households by Selected Characteristics

Table 2.2.2 shows tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Analyzing these data provides Keith County with a better understanding of the housing makeup countywide.

2000

The largest section of owner-occupied housing in Keith County in 2000, based upon number of persons, was two person households, with 1,183 units, or 43.8% of the total owner-occupied units. By comparison, the largest household size for rentals was the single person households which had 393 renter-occupied housing units, or 39.1% of the total renter-occupied units.

Keith County was comprised of 2,009 1-or 2-person households, or 66.7% of all households. Households

having 5-or more persons comprised only 7.8% of the owner-occupied segment, and 7.8% of the renter-occupied segment. Countywide, households of 5-or more persons accounted for 289 units, or 7.8% of the total.

rentals was the single person households with 479 renter-occupied housing units, or 46.9% of the total renter-occupied units; a change of 21.9% over 2000. The renter-occupied group having the largest percentage increase was the five-person household.

**TABLE 1.2.2: HOUSEHOLD CHARACTERISTICS
KEITH COUNTY 2000 TO 2010**

Householder Characteristic	2000				2010				O.O.	R.O.
	Owner-Occupied	% O.O	Renter-Occupied	% R.O	Owner-Occupied	% O.O	Renter-Occupied	% R.O	Percent Change	
Tenure by Number of Persons in Housing Unit (Occupied Housing Units)										
1 person	643	23.8%	393	39.1%	712	26.1%	479	46.9%	10.7%	21.9%
2 persons	1,183	43.8%	252	25.1%	1,282	46.9%	241	23.6%	8.4%	-4.4%
3 persons	337	12.5%	158	15.7%	336	12.3%	120	11.7%	-0.3%	-24.1%
4 persons	329	12.2%	123	12.3%	236	8.6%	95	9.3%	-28.3%	-22.8%
5 persons	148	5.5%	51	5.1%	98	3.6%	65	6.4%	-33.8%	27.5%
6 persons or more	63	2.3%	27	2.7%	67	2.5%	22	2.2%	6.3%	-18.5%
TOTAL	2,703	100.0%	1,004	100.0%	2,731	100.0%	1,022	100.0%	1.0%	1.8%
Tenure by Age of Householder (Occupied Housing Units)										
15 to 24 years	27	1.0%	116	11.6%	40	1.5%	94	9.2%	48.1%	-19.0%
25 to 34 years	218	8.1%	226	22.5%	182	6.7%	214	20.9%	-16.5%	-5.3%
35 to 44 years	514	19.0%	228	22.7%	307	11.2%	164	16.0%	-40.3%	-28.1%
45 to 54 years	544	20.1%	148	14.7%	577	21.1%	219	21.4%	6.1%	48.0%
55 to 64 years	492	18.2%	112	11.2%	635	23.3%	135	13.2%	29.1%	20.5%
65 to 74 years	475	17.6%	87	8.7%	536	19.6%	92	9.0%	12.8%	5.7%
75 years and over	433	16.0%	87	8.7%	454	16.6%	104	10.2%	4.8%	19.5%
TOTAL	2,703	100.0%	1,004	100.0%	2,731	100.0%	1,022	100.0%	1.0%	1.8%

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

In 2000, the age cohorts representing the largest home ownership group was 45-54 years. Of the total residents living in owner-occupied housing units, 20.1% were between 45 and 54 years of age. This group was closely followed by the 35 to 44 years with 19.0%. Overall, 71.9% of all owner-occupied units were owned by individuals 45 years and older.

The renter occupied housing was dominated by two cohort groups; the 35 to 44 years (22.7%) and the 25 to 34 years (22.5%). These two cohorts represent 45.2% of all the renter-occupied units in 2000.

2010

In 2010, the largest section of owner-occupied housing in Keith County remained with the two-person household, with 1,282 units, or 46.9% of the total owner-occupied units; an increase of 8.4% over 2000. By comparison, the largest household size for

In 2010, the age cohorts representing the largest home ownership group was those 55 to 64 years. Of the total residents living in owner-occupied housing units, 23.3% were between 55 and 64 years of age. The 45 to 54 years cohort was a close second with 21.1% of the total owner-occupied units.

Keith County was comprised of 2,714 1-or 2-person households, or 72.3% of all households; which represents an increase of 8.4% from 2000. Households having 5-or more persons comprised 6.1% of the owner-occupied segment, and 8.6% of the renter-occupied segment. Countywide, households with 5-or more persons accounted for 252 units, or 6.7 of the total.

The renter occupied housing was again dominated by the two different cohort groups; the 45 to 54 years (21.4%) and the 25 to 34 years (20.9%). These two cohorts represent 42.3% of all the renter-occupied units in 2010.

**TABLE 1.2.3: SUBSTANDARD HOUSING CONDITIONS
KEITH COUNTY 2000 TO 2010**

Substandard Units	Keith County		State of Nebraska	
	Total	% of Total	Total	% of Total
Characteristics				
2000 Units Lacking Complete Plumbing Facilities	29	1.5%	6,398	0.9%
2000 Units with More Than One Person per Room	85	4.4%	17,963	2.5%
2010 Units Lacking Complete Plumbing Facilities	11	0.6%	2,540	0.3%
2010 Units with More Than One Person per Room	96	4.9%	12,201	1.5%
Substandard Units				
2000 Total	114	5.8%	24,361	3.1%
2010 Total	107	5.5%	14,741	1.9%

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

Substandard Housing

According to the U.S. Department of Housing and Urban Development (HUD) guidelines, housing units lacking 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. In addition, anytime there is more than 1.0 persons per room, the housing unit is considered overcrowded, thus substandard.

These criteria when applied to Keith County indicate 114 housing units, or 5.8% 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 with 85 units. In some cases the lack of complete plumbing can be attributed to the number of seasonal dwelling found around Lake McConaughy.

In 2010 the total number of substandard housing units decreased to 107 units. The primary contributing factor, once again, was a overcrowding which accounted for nearly 90% of substandard problem and the actual reported number increased by 11 units from 2000 to 2010. Comparing Keith County to the state of Nebraska as a whole, the percent of substandard housing units in Keith County was considerably higher than the state as a whole for both time periods.

What these data fail to consider are housing units

that have met both criterion and counted twice. Even so, the county should not assume 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 maintains a high quality of life for its residents through protecting the quality and quantity of its housing stock.

HOUSING GOALS, OBJECTIVES AND POLICIES

Housing Goal 1

Provide quality housing throughout the county.

Housing Policies and Strategies

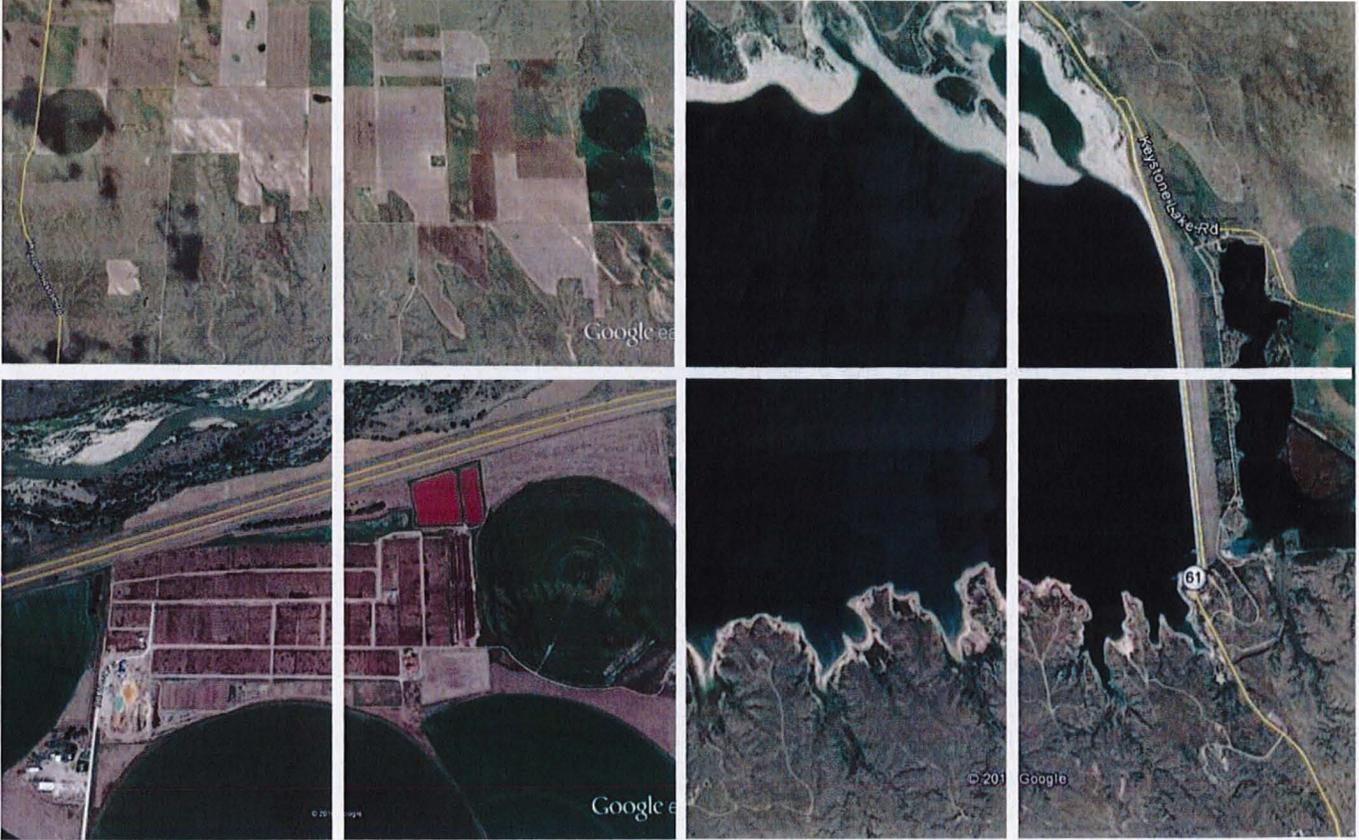
- H-1.1 The county should work with local agencies to provide quality housing.
- H-1.1 A program to identify substandard housing units throughout Keith County should be a priority and substandard housing units should be repaired or demolished.
- H-1.1 The County should continually work with each community as they strive to provide better housing within the corporate limits.

Housing Goal 2

Affordable housing should be available throughout the county.

Housing Policies and Strategies

- H-2.1 The County should work with agencies and funding sources like CDBG to offset development costs in order to bring the overall cost of housing down.
- H-2.2 The county should continue to focus on affirmatively furthering fair housing throughout the entire county area.
- H-2.3 The zoning and subdivision regulations should accommodate specific tools such as planned unit developments in order to aid in minimizing required improvements within developments.
- H-2.4 Support all funding mechanisms available to effectively lower the cost of development and housing.
- H-2.5 The County should continually work with each community as they strive to provide better housing within the corporate limits.



1.3

Economy and Economic Development

Replaces part of Chapter 1 in March 2003 Comprehensive Plan



ECONOMIC AND EMPLOYMENT PROFILE

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

Table 1.3.1 indicates the number of households in each income range for Keith County for 2000 and 2010. In 2000, the household income range most commonly reported was \$55,000 to 24,999, which accounted for 20.5% of all households; the second most common was the \$35,000 to 49,999 with 20.1% of the households reporting. Within the state of Nebraska the income range most reported statewide was the \$50,000 to \$74,999.

By 2010, the income range reported most was the \$35,000 to 49,999 which accounted for 18.1% of the total. The statewide income range was still the \$50,000 to \$74,999 range. Keith County saw strong growth in the middle to upper income levels while the lower levels saw some solid declines.

Those households earning less than \$15,000 decreased from 17.0% in 2000 to 13.2% in 2010. These household groups account for the poorest of the poor in the county. The decrease between 2000 and 2010 was 22.4%, which indicates some improvement.

The median household income for Keith County was \$32,325 in 2000, which was 82% of the State median income. By 2010, the median household income increased to \$42,898 or an increase of 32.7% and was still less than the state median income; however, the median household income in Keith County was at 89% of the state's. Therefore, the gap between the state and Keith County is shrinking.

The CPI for this period was 23.6%, indicating household incomes in Keith County were growing at a faster rate than nation. Households were earning more in real dollars in 2010 than in 2000.

TABLE 1.3.1: HOUSEHOLD INCOME KEITH COUNTY 2000 TO 2010

Household Income Ranges	2000				2010			
	Keith County	% of Total	State of Nebraska	% of Total	Keith County	% of Total	State of Nebraska	% of Total
Less than \$10,000	338	9.1%	55,340	8.3%	174	4.7%	47,902	6.8%
\$10,000 to \$14,999	293	7.9%	43,915	6.6%	317	8.5%	41,039	5.8%
\$15,000 to \$24,999	758	20.5%	98,663	14.8%	546	14.6%	82,906	11.8%
\$25,000 to \$34,999	572	15.5%	97,932	14.7%	481	12.9%	83,822	11.9%
\$35,000 to \$49,999	745	20.1%	122,654	18.4%	676	18.1%	109,525	15.6%
\$50,000 to \$74,999	632	17.1%	136,141	20.4%	661	17.7%	146,852	20.9%
\$75,000 to \$99,999	218	5.9%	58,361	8.7%	471	12.6%	87,734	12.5%
\$100,000 to \$149,999	96	2.6%	36,565	5.5%	247	6.6%	69,882	9.9%
\$150,000 to \$199,999	16	0.4%	8,551	1.3%	87	2.3%	17,498	2.5%
\$200,000 or more	31	0.8%	8,873	1.3%	75	2.0%	15,477	2.2%
Total	3,699	100.0%	666,995	100.0%	3,735	100.0%	702,637	100.0%
Median Household Income	\$32,325		\$39,250		\$42,898		\$47,995	
Number of Households	3,699		666,995		3,735		702,637	

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

INCOME SOURCE/PUBLIC ASSISTANCE

The table below shows personal income by source for Keith 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 1980 and 2014, the CPI was equal to 187.0%.

**TABLE 1.3.2: INCOME BY SOURCE
KEITH COUNTY AND NEBRASKA 1980 TO 2014**

Income Characteristics	1980	1990	2000	2010	2014	% Change 1980-2014	% Annual Change
Keith County							
Total Personal Income	\$96,779,000	\$128,479,000	\$199,390,000	\$284,297,000	\$372,476,000	284.9%	8.4%
Non-farm Income	\$83,724,000	\$116,638,000	\$191,347,000	\$259,079,000	\$312,419,000	273.2%	8.0%
Farm Income	\$13,055,000	\$11,841,000	\$8,043,000	\$25,218,000	\$60,057,000	360.0%	10.6%
Per Capita Income	\$10,340	\$14,978	\$22,558	\$34,011	\$45,866	343.6%	10.1%
State of Nebraska							
Total Personal Income	\$14,394,940,000	\$28,388,321,000	\$48,997,941,000	\$72,189,707,000	\$89,478,670,000	521.6%	15.3%
Non-farm Income	\$14,296,494,000	\$26,201,453,000	\$47,577,270,000	\$68,743,169,000	\$83,188,972,000	481.9%	14.2%
Farm Income	\$98,446,000	\$2,186,868,000	\$1,420,671,000	\$3,446,538,000	\$6,289,698,000	6289.0%	185.0%
Per capita Income	\$9,155	\$17,948	\$28,590	\$39,445	\$47,557	419.5%	12.3%

Source: U.S. Census Bureau 2000, American Community Survey 2005-2009

Non-farm and Farm Income

Total non-farm income, in Keith County, increased from \$83,724,000 in 1980 to \$312,419,000 in 2014, or an increase of 273.2%, which was more than 1.46 times the CPI. By 2014, farm income had risen from \$13,055,000 to \$60,057,000, or 360.0%, which is nearly two times the CPI.

Per Capita Income

The per capita income in Keith County increased from \$10,340 in 1980 to \$45,866 in 2014, or an increase of 343.6%. Keith County's per capita income has grown at a slower rate than the state as a whole.

Transfer Payments

Another income source deserving examination is the amount of Transfer Payments (not including the Farm Program dollars) to individuals in Keith County from 1970 to 2014, which is provided in Table 1.3.3. 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 Keith County were \$2,852,000, and the State was \$497,556,000. By 2014, Total Transfer Payments to Keith County were

\$71,902,000, or an increase of 2421.1%, and the State total was \$11,563,462,000, or an increase of 2224.1%.

The trend for transfer payments per capita between 1970 and 2014 indicates significant increases. In 1970 the Transfer Payment per capita in Keith County was \$335; by 2014 this increased to \$8,854 per person. This is an increase of 2544% or 57.8% annually.

The per capita Transfer Payments can be compared to the total per capita income of Keith County. When comparing the two, in 1970, Transfer Payments made up 8.7% of the total per capita income in Keith County; however, by 2014, Transfer Payments per capita comprised 19.3% of the total per capita income of the county (nearly 1 in 5 dollars per capita were a government payment).

Total transfer payments between 1970 and 2014 have shown an increase in each reporting period. Income maintenance and medical payments comprised the majority of total transfer payments. The largest percentage increase occurred within Medical Payments, which increased by nearly 6500% or 147% annually. Income Maintenance was second at nearly 4394% or 100% annually.

The significance of these numbers is to make the county aware of the impact federal programs, outside of the Farm Program, are having within Keith County. Discussions will likely continue in Washington D.C. regarding the cutting or elimination of some or all of these federal programs; as it does continue counties and communities need to realize the impacts and need to be prepared for any negative effects that result.

**TABLE 5.3: TRANSFER PAYMENTS
KEITH COUNTY/NEBRASKA 1970 TO 2010**

Payment Type	1970	1980	1990	2000	2010	2014	% Change 1970 to 2010	% Change Per Year
Keith County								
Government payments to individuals	\$2,658,000	\$9,635,000	\$18,775,000	\$35,157,000	\$63,904,000	\$70,206,000	2541.3%	57.8%
Retirement, Disability & Insurance Benefits	\$1,649,000	\$6,073,000	\$12,130,000	\$18,998,000	\$29,980,000	\$34,415,000	1987.0%	45.2%
Medical Benefits	\$416,000	\$2,122,000	\$4,550,000	\$12,329,000	\$24,639,000	\$27,228,000	6445.2%	146.5%
Income Maintenance Benefits (SSI, AFDC, Food Stamps, etc)	\$99,000	\$440,000	\$868,000	\$2,289,000	\$4,274,000	\$4,449,000	4393.9%	99.9%
Unemployment Insurance Benefits	\$102,000	\$178,000	\$257,000	\$254,000	\$1,492,000	\$460,000	351.0%	8.0%
Veteran's Benefits	\$323,000	\$689,000	\$749,000	\$906,000	\$1,984,000	\$2,407,000	645.2%	14.7%
Federal Education and Training Assistance	\$69,000	\$133,000	\$237,000	\$362,000	\$670,000	\$663,000	860.9%	19.6%
Payment to Non-profit Institutions	\$104,000	\$345,000	\$412,000	\$740,000	\$1,031,000	\$1,033,000	893.3%	20.3%
Business Payments	\$90,000	\$260,000	\$613,000	\$1,017,000	\$718,000	\$663,000	636.7%	14.5%
Total	\$2,852,000	\$10,240,000	\$19,800,000	\$36,914,000	\$59,962,000	\$71,902,000	2421.1%	55.0%
Transfer Payments Per Capita	\$335	\$1,094	\$2,308	\$4,176	\$7,173	\$8,854	2544%	57.8%
Total Per Capita Income	\$3,870	\$10,340	\$14,978	\$22,558	\$34,011	\$45,866	1085.2%	24.7%
Per Capita Transfer Payments as % of Per Capita Income	8.7%	10.6%	15.4%	18.5%	21.1%	19.3%	123.1%	2.8%
State of Nebraska								
Total	\$497,556,000	\$1,693,802,000	\$3,365,241,000	\$6,088,115,000	\$11,549,607,000	\$12,799,939,000	2472.6%	56.2%
Transfer Payments Per Capita	\$335	\$1,079	\$2,132	\$3,558	\$6,324	\$6,803	1930.9%	44%
Total Per Capita Income	\$3,905	\$9,386	\$18,459	\$28,967	\$39,935	\$47,557	1118%	25%
Per Capita Transfer Payments as % of Per Capita Income	8.6%	11.5%	11.6%	12.3%	15.8%	14.3%	66.8%	1.5%

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

INDUSTRY EMPLOYMENT

Employment by industry shows where the residents of Keith County are employed. The data in Table 1.3.4 does not necessarily represent the types and numbers of jobs within Keith County. Table 1.3.4 indicates employment size by industry for Keith County and the State of Nebraska for 2000 and 2010.

Table 1.3.4 shows the employment sector with the greatest number of employees was Retail Trade (16.3%), Educational, health and social services (14.7%), as well as Agriculture, Forestry, Fishing, and hunting and mining (10.6%). Each sector employed 724, 655 and 472 people respectively of the total employed residents in 2000.

By 2010, Educational, health and social services had increased to 851 employees or 19.7% of the total workforce. In 2010 the second largest employment sector was Retail Trade with 586 people or 13.5%. Agriculture, Forestry, Fishing, and hunting and mining remained at number three with 465 employees or 10.8%.

Overall the top five industries in Keith County in 2000 were:

1. Retail Trade
2. Educational, health, and social services
3. Agriculture, forestry, fishing and hunting and mining
4. Arts, entertainment, recreation, accommodations and food service
5. Manufacturing

Overall the top five industries in Keith County in 2010 were:

1. Educational, health, and social services
2. Retail Trade
3. Agriculture, forestry, fishing and hunting and mining
4. Transportation and warehousing and utilities
5. Construction
5. Manufacturing
5. Arts, entertainment, recreation, accommodations and food service

**TABLE 1.3.4: EMPLOYMENT BY INDUSTRY
KEITH COUNTY 2000 TO 2010**

Industry Categories	Keith County				State of Nebraska			
	2000	% of Total	2010	% of Total	2000	% of Total	2010	% of Total
Agriculture, Forestry, Fishing and Hunting and Mining	472	10.6%	465	10.8%	48,942	5.6%	41,216	4.4%
Construction	309	7.0%	342	7.9%	56,794	6.5%	56,187	6.0%
Manufacturing	358	8.1%	341	7.9%	107,439	12.2%	93,719	10.0%
Wholesale Trade	149	3.4%	155	3.6%	31,265	3.6%	26,945	2.9%
Retail Trade	724	16.3%	586	13.5%	106,303	12.1%	108,253	11.6%
Transportation and warehousing and utilities	336	7.6%	413	9.5%	53,922	6.1%	54,858	5.9%
Information	67	1.5%	62	1.4%	21,732	2.5%	18,424	2.0%
Finance, insurance, real estate, and rental and leasing	241	5.4%	221	5.1%	67,370	7.7%	72,320	7.7%
Professional, scientific, management, administrative, and waste management	283	6.4%	203	4.7%	63,663	7.3%	78,524	8.4%
Educational, health, and social services	655	14.7%	851	19.7%	181,833	20.7%	228,470	24.4%
Arts, entertainment, recreation, accommodation and food services	462	10.4%	340	7.9%	63,635	7.3%	73,724	7.9%
Other services (except public administration)	231	5.2%	203	4.7%	40,406	4.6%	42,997	4.6%
Public Administration	156	3.5%	143	3.3%	33,933	3.9%	39,467	4.2%
Total Employed Persons	4,443	100.0%	4,325	100.0%	877,237	100.0%	935,104	100.0%

Source: U.S. Census Bureau 2000 and American Community Survey 2005-2010

REGIONAL BASIC/NON-BASIC ANALYSIS

The following data examine five 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 Keith County is seeing exports from the state as a whole.

TABLE 1.3.5: BASIC/NON-BASIC EMPLOYMENT KEITH COUNTY 2010

Location	Management business, science, and arts occupations	Service occupations	Sales and office occupations	Natural Resources, construction and maintenance occupations	Production, transportation, and material moving occupations	Base Multiplier
Keith County	32.5%	13.9%	24.3%	14.2%	15.1%	17.5
Arthur County	49.1%	8.6%	8.6%	24.8%	9.0%	2.5
Lincoln County	28.1%	15.8%	24.0%	13.1%	19.1%	11.1
Perkins County	40.2%	17.8%	18.7%	12.1%	11.2%	10.1
Deuel County	22.3%	15.4%	28.6%	17.9%	15.8%	6.5
Garden County	36.6%	16.4%	25.8%	15.1%	6.1%	11.8
Nebraska	34.8%	16.2%	25.0%	10.1%	13.8%	NA

Source: American Community Survey 2006-2010

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
- Sales and office
- Natural resources, construction and maintenance
- Production, transportation, and materials moving

A related concept to the basic/non-basic distinction is the 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 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 if basic jobs bring new money into a local economy, the money then becomes the wages for workers in the economy. Therefore, more money brought in by basic jobs creates more non-basic jobs that are supported.

Basic Employment

The occupation categories are compared to the same categories for the state and where Keith County's percentage exceeds the state's percentage there is Basic employment. Table 5.5 indicates there are two categories where Basic employment is present:

- Natural Resources, construction and maintenance
 - Production, transportation, and material moving
- Overall, 5.4% of the employment base in Keith County is tied to the exportation of goods or services in these two categories.

The county needs to continually work on their Business Retention and Expansion process in order to make these employers stay in the county. In addition, in the areas of Sales and office, as well as, Management business, science and arts, the county needs to explore ways to push these occupations above the state as a whole. Thus, expanding the economic base and balancing the economics of the county.

Base Multiplier

The information in Table 1.3.5 shows Keith County has a base multiplier of 17.5, which means every job falling into the basic category, 17.5 other jobs in the county are supported and/or impacted. This is illustrated by comparing the basic and non-basic percentages against each other.

Therefore, these jobs tied to exports are critical to supporting these additional 17.5 jobs and the dollars generated from both sets of employment. Therefore, if Keith County lost just one of the jobs tied to exports then there is the potential to lose approximately 17.5 jobs from the non-basic employment side. There is no magical multiplier a county should aim to achieve.

Every county is different and the dynamics involved are different. The unique and ever changing dynamics are what make a particular 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 goal. 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 counties become too focused on attracting that next big catch and forget about the opportunities existing employers can offer through expansion of their operations.

COMMUTER TRENDS

Table 1.3.6 show the commuter characteristics for Keith County in 2000 and 2010. Travel time to work is another factor used to Table 2.3.6 shows how many residents of Keith County travel to work in several time categories.

**TABLE 1.3.6: TRAVEL TIME TO WORK
KEITH COUNTY 2000 TO 2010**

Travel Time Categories	2000 *	% of Total	2010	% of Total	% Change
Less than 10 minutes	558	49.6%	408	59.3%	-26.9%
10 to 14 minutes	129	11.5%	129	14.1%	0.0%
15 to 19 minutes	84	7.5%	80	2.4%	-4.8%
20 to 29 minutes	102	9.1%	65	3.0%	-36.3%
30 to 44 minutes	63	5.6%	90	12.0%	42.9%
45 to 59 minutes	29	2.6%	36	3.4%	24.1%
60 minutes or more	50	4.4%	51	5.8%	2.0%
Worked at home	111	9.9%	157	15.5%	41.4%
Total	1,126	100.0%	1,016	100.0%	-9.8%
Mean Travel Time (minutes)	14.1		16.6		17.7%

Source: U.S. Census Bureau 2000 and American Community Survey 2005-2010

Table 1.3.6 indicates there was an overall decrease in the number of people from Keith County working in 2010 compared to 2000. The number of people working decreased from 1,126 in 2000 to 1,016 in 2010 or a change of -9.8%. The -9.8% change in persons working compared to an overall population change of -7.0% and the level of out-migration from the county would suggest the overall change in commuter population was due to those leaving Keith County.

Table 1.3.6 indicates the workforce in 2010 spent more time traveling to work than in 2000. The average travel time increased from 14.1 minutes in 2000 to 16.6 minutes in 2010. The largest increase occurred with those traveling 30 to 44 minutes, which increased by 27 people or 42.9%. The second greatest group was the 45 to 59 minutes category, which increased by seven persons, or 24.1%. One item of note contributing to the drive time is those working from home increased by 46 people or 41.4%. All of the drive times less than 19 minutes all saw sharp decreases in the number of people driving those distances.

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, through the Census of Agriculture tracks agricultural statistics every five years. Since the frequency and years do not coincide with the decennial U.S. Census, it is difficult to compare sets of data.

AGRICULTURE TRENDS

Table 1.3.7 identifies key components affecting Keith 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 2002 through 2012.

Number of Farms

Table 1.3.7 shows the number of farms in Keith County decreased between 2002 and 2012. The trend nationwide has been for fewer but larger farms; however, Keith County saw more farms but slightly smaller farms. In 2002 there were 363 farms in the county; by 2012 the number increased to 388 or a change of 6.9%. The state of Nebraska, similar to Keith County, for the same period, saw an increase of over 600 farms for a total change of 1.2%. Therefore, the

number of farms in Keith County are increasing at a faster rate than the state as a whole.

**TABLE 1.3.7: AGRICULTURAL PROFILE
KEITH COUNTY 2002 TO 2012**

Agricultural Characteristics	2002	2007	2012	% Change 2002-2012
Number of Farms	363	398	388	6.9%
Land in Farms (acres)	627,842	581,567	541,266	-13.8%
Average size of farms (acres)	1,730	1,461	1,395	-19.4%
Total area for Keith County	710,272	710,272	710,272	0.0%
Percentage of land in farms	88.4%	81.9%	76.2%	-13.8%
Total cropland (acres)	262,547	260,184	253,940	-3.3%
Harvested cropland (acres)	165,774	202,075	200,310	20.8%
Estimated Market Value of Land & Bldg (avg./farm)	\$887,295	\$1,251,849	\$2,593,289	192%
Estimated Market Value of Land & Bldg (avg./acre)	\$509	\$857	\$1,859	265%

Source: U.S. Census of Agriculture, 2002, 2007, 2012

Average Size

The average size of farms decreased from 1,730 acres in 2002 to 1,395 acres in 2012. The overall decrease from 1997 to 2012 was 3.4%. Keith County's farms are considerably larger on average than the state of Nebraska. The average farm in Nebraska was 930 acres in 2002 and decreased to 907 acres in 2012, an decrease of 2.5%.

Total Cropland

The total cropland in Keith County has been decreasing between 2002 and 2012. In 2002, 88.4% of the land within Keith County was considered to be in farms and by 2012 the amount of the county considered to be in farms decreased to 76.2%.

Even though Keith County has 88.4% of the county considered farmland in 2002, only 262,547 acres (41.8%) was considered cropland. By 2012, the total cropland decreased to 253,940 acres or 46.9% of the total land in farms.

Harvested Cropland

The next term/data is harvested cropland. Harvested cropland is as it sounds, cropland actually harvested. In 2002 the Harvested Cropland in Keith County was 165,774 (63.1% of Total Cropland and only 26.4% of the Total Land in Farms). By 2012, the Harvested Cropland increased to 200,310 acres (78.9% of Total Cropland and 37.0% of the Total Land in Farms).

Estimated Market Value

Table 1.3.7 also shows the Estimated Market Values of Land and Buildings, both by average per farm and average per acre. In 2002 the average value per farm acre was \$509. The average value increased in every Census of Agriculture and in 2012 it reached an average per acre of \$1,859; an increase of 265.2% from 2002. The CPI for this same period was approximately 28%; therefore the average value per acre increased at nearly 10 times the rate of inflation in Keith County.

The increase in the average per acre also translates into an increase in the average per farm. The average value per farm in 2002 was \$887,295 and increased to \$2,593,289 in 2012, an overall increase of 192.0%. Again, this increase exceeded the CPI and the rate of inflation for the period.

The average per farm, statewide, was \$723,863 in 2002 and \$2,159,268 in 2012, an increase of 198.3%. Therefore, the average farm value in Keith County is greater than the state average.

**TABLE 1.3.8: NUMBER OF FARMS BY SIZE
KEITH COUNTY 2002 TO 2012**

Farm Size (acres)	2002	2007	2012	% Change 2002-2012
1 to 9	4	14	15	275.0%
10 to 49	37	47	42	13.5%
50 to 179	60	76	92	53.3%
180 to 499	81	93	59	-27.2%
500 to 999	50	44	53	6.0%
1,000 or more	131	124	127	-3.1%
Total	363	398	388	6.9%

Source: U.S. Census of Agriculture, 2002, 2007, 2012

Number of Farms

Table 1.3.8 shows the number of farms by size (in acres) in 2002, 2007, and 2012. The table between 2002 and 2012 shows there was a mixed change with regard to farm size. Farms 1 to 9 acres in size saw an increase of 275.0% while those 180 to 499 acres saw a change of -27.2%. Furthermore, the number of farms between 50 acres and 179 increased by 53.3%. Overall, Keith County saw an odd occurrence, with farms less than 180 acres increasing and some of the upper sized farms decreasing.

Farms and Livestock

Table 1.3.9 indicates the number of farms and livestock by type for Keith County between 2002 and 2012. The predominant livestock raised in Keith County are Cattle and Calves, and Beef Cows followed by Chickens. Livestock production in Keith County has been varied between 2002 and 2012. Most livestock categories have seen decreases in overall numbers; the only increase, assumption, was an increase within the sheep and lambs considering in 2012 this group was no longer disclosed.

Cattle and calf production has decreased by 4.6% for the total number of animals raised. However, there was an increase in the number of farms producing Cattle and calves; going from 150 in 2002 to 155 in 2012 or a change of 3.3%. The average per farm also decreased by 30 animals.

The remaining livestock grouping cannot be discussed in great detail since everyone was considered a disclosure issue.

**TABLE 1.3.9: FARMS AND LIVESTOCK BY TYPE
2002 TO 2012**

Type of Livestock	2002	2007	2012	% Change 2002 to 2012
Cattle and Calves				
farms	150	131	155	3.3%
animals	57,874	54,624	55,201	-4.6%
average per farm	386	417	356	-7.7%
Beef Cows				
farms	136	114	139	2.2%
animals	(D)	(D)	(D)	-
average per farm	(D)	(D)	(D)	-
Milk cows				
farms	4	1	1	-75.0%
animals	(D)	(D)	(D)	-
average per farm	(D)	(D)	(D)	-
Hogs and Pigs				
farms	1	3	2	100.0%
animals	(D)	(D)	(D)	-
average per farm	(D)	(D)	(D)	-
Sheep and lambs				
farms	2	2	3	50.0%
animals	(D)	(D)	107	-
average per farm	(D)	(D)	36	-
Chickens (layers and pullets)				
farms	11	11	7	-36.4%

Source: U.S. Census of Agriculture, 2002, 2007, 2012
(D) indicates disclosure problems

Farms and Crops

Table 1.3.10 shows the number of farms and crop by type for the period from 2002 to 2012. 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 for grain and wheat have been the two most frequently raised crops in Keith County since 2002. Corn has historically had the largest number of acres planted in Keith County during this period. Corn has seen a continued increases going from 74,959 acres planted in 2002 to 107,669 acres in 2012. At the same time the number of acres planted in soybeans has seen a decrease of 19.5%. Table 1.3.10 indicates most of the lost acres in wheat were made up in increased corn and soybean production.

**TABLE 1.3.10: FARMS AND CROPS BY TYPE
2002 TO 2012**

Type of Crop	2002	2007	2012	% Change 2002 to 2012
Corn for Grain				
farms	124	152	156	25.8%
acres	74,959	105,172	107,669	43.6%
average per farm	605	692	690	14.2%
Corn for Silage				
farms	27	15	21	-22.2%
acres	4,250	1,097	2,424	-43.0%
average per farm	157	73	115	-26.7%
Sorghum				
farms	-	1	1	-
acres	-	(D)	(D)	-
average per farm	-	(D)	(D)	-
Wheat				
farms	139	153	121	-12.9%
acres	49,499	59,799	39,848	-19.5%
average per farm	356	391	329	-7.5%
Oats				
farms	2	-	-	-
acres	(D)	-	-	-
average per farm	(D)	-	-	-
Soybeans				
farms	28	22	68	142.9%
acres	4,143	3,914	17,511	322.7%
average per farm	148	178	258	74.0%
Dry Edible Beans excluding Limas				
farms	24	15	14	-41.7%
acres	4,674	2,111	2,790	-40.3%
average per farm	195	141	199	2.3%
Potatoes				
farms	-	1	1	-
acres	-	(D)	(D)	-
average per farm	-	(D)	(D)	-

Source: U.S. Census of Agriculture, 2002, 2007, 2012

Two crops have been completely eliminated from production in Keith County; these are Oats and Sorghum. As of the 2012 Census of Agriculture there was only one farm planting sorghum and no farms in the county planting oats.

Agriculture has always been a major part of the Keith County economy. It appears 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.

CHAPTER TWO



LAND USE & DEVELOPMENT TRENDS

This section examines existing land use characteristics in Keith County.

LAND USE

Map 2-1: Existing Land Use displays the distribution of existing land uses in the Keith County planning jurisdiction. Information was collected by field inspection in 2001.

Agricultural and Open Land

Agriculture remains the dominant land use in Keith County. Agricultural uses vary from the north to the south side of the North Platte River. The northern sections of the county are part of the sand hills region, and contain sandy soils that are relatively unsuitable for crop production. These rolling grassy hills are excellent for cattle grazing, the main use of the land in the area. Crop production is prevalent south of the river (the South Table), and includes cultivation of a variety of crops. The soil types and environmental issues related to these areas are discussed in detail in Chapter Three.

Lake McConaughy, Nebraska's largest body of water, is the second largest land use in the county. The lake's surface area is approximately 35,700 acres. The lake, owned by the Central Nebraska Public Power and Irrigation District, is the state's largest irrigation reservoir, and provides water, hydropower and recreation to Keith County and the surrounding area. Central also owns recreational and leasehold lands around the lake. Its largest holdings are along the north shore, where most recreational lands are leased to and operated by the Nebraska Game and Parks Commission as a State Recreation Area.

Residential Uses

Residential development is the third largest land use in terms of area in the county planning jurisdiction. Before 1960, most residential development occurred within the county's incorporated and unincorporated communities,



and in areas south of the North Platte River. At this time, rural residential development was most prevalent south of the river and along the Highway 61 corridor from Ogallala to Grant. When the Lake McConaughy's impoundment flooded the original site of Lemoyne, the town was relocated to the north bank of the lake and became the initial population center for development on the north shore.

The popularity of water recreation at Lake McConaughy expanded the market for lake-related residential development. Development grew along the north side of the lake, served by Highway 92 and enjoying direct access to the lake and major recreation areas. This development included a number of linear subdivisions, extending west from the Martin Bay area, and currently extending to the Omaha Beach area. Most development has occurred in a relatively narrow corridor north of Highway 92 except for Lemoyne which is located south of Highway 92. Major development concentrations include:

- The Martin Bay and Arthur Bay areas. Some of these older residential areas include mobile home development on individual lots.
- Sandy Beach. Developments here include single-family homes on individual lots, with access road patterns running generally parallel to Highway 92.

- Lemoyne, an unincorporated town near the east/west midpoint of the north shore. Most of Lemoyne's residential development occurs south of Highway 92, and includes a variety of housing types.

- Otter Creek and Cedar Vue, near the western edge of development. Growth in the Cedar Vue area includes larger, more conventional single-family subdivision development on relatively large lots.

Central maintains much of the lakefront and land area between the highway and Union Pacific corridor and the lake for public and leasehold use. Lakefront recreation areas leased to the Nebraska Game and Parks Commission extend from the north end of Kingsley Dam to the North Shore area just east of Lemoyne. Central also leases the Lake Ogallala State Recreation Area to the NGPC.

While the majority of residential development occurred on the relatively accessible north shore, served by the Highway 92 corridor, some growth also developed on the lake's south side. The Mako Chi Mni and Lakeview subdivisions date from the 1970's. During the last decade, this less accessible but perhaps more scenic shoreline has experienced increasing popularity. More recent subdivisions include Bayside Estates, The Dunes, Hidden Canyon Estates, and the Yacht Club, along with the development of the Bayside Golf Course. Trails Crossing, a large, master-planned mixed-use community, was also proposed during the late 1990s, but has not been executed. Recent development on the south shore has tended to be in larger lot settings, with higher cost houses than older subdivisions along the north shore.

Some of Central's property has also been leased for both seasonal and permanent residential development. These developments include both cabins and mobile home/manufactured housing developments. The K-1 Cabin Area, on the south shore of the lake, and the K-2, K-3, and K-4 Cabin

Areas on the north shore, provide permanent, year-round housing on leasehold property.

Commercial Uses

Commercial land uses make up a relatively small part of the Keith County planning area. Most commercial development in the county occurs within the communities themselves, specifically within Ogallala and the Interstate 80 interchange. Outside of municipal jurisdictions, most commercial development is related to Lake McConaughy. The largest existing commercial concentration is located in the Martin Bay area, near the junction of Highways 61 and 92. This mixed-use area features a bank, restaurants, convenience services, and recreational commercial development, and serves as a major commercial cluster for the lake community. Other commercial development along the north shore occurs in convenience clusters, typically at the intersection of Highway 92 and a lake or beach access road. Commercial development, including hospitality and convenience services, is also located on Central land leased to individual businesses south of Kingsley Dam.

A more recent trend has been the development of lake-related commercial uses along the Highway 61 corridor between the dam and the edge of the Ogallala jurisdiction. As of 2002, these uses have focused on sales of major durable goods related to the lake life-style, including boat and manufactured home sales. These developments prompted Keith County to designate the Lake Corridor a special development area. The Lake Corridor is analyzed in more detail in Chapter Five of this County Comprehensive Plan.

Industrial Uses

Most industrial uses in Keith County are located within the communities or along the Interstate 80 corridor. Industrial development outside developed areas is usually agriculturally based. Some industrial



uses are located along the two Union Pacific corridors and along Highway 30.

Public and Semi-Public Uses

The primary public use in the county is Lake McConaughy, owned by the Central Nebraska Public Power and Irrigation District. The Nebraska Game and Parks Commission manages much of the shoreline, under a long-term leasehold agreement with Central. The most recent lake-related development is the completion of a new Visitors Center by the Game and Parks Commission, on the east side of Highway 61 south of Kingsley Dam. Other than the lake and associated recreational areas, most public and recreational uses within the county are located within the communities and outside the jurisdiction of the county, except for sites in Keystone and Roscoe.

Keith County has two major state recreation areas:

- *Lake McConaughy State Recreation Area*, a 5,492 acre park on Central property that is managed by the Nebraska Game and Parks Commission. It is located on the north side of Lake McConaughy approximately 10 miles north of Ogallala. The Lake McConaughy SRA accommodates a wide variety of recreational uses, including camping, superb beaches, boating and fishing, and other facilities. NGPC recently completed a continuous inner road, linking Martin Bay

with the Sandy Beach area. This road relieves recreational use pressure on Highway 92 and accommodates bicyclists within the SRA.

- *Lake Ogallala State Recreation Area* is located directly east of Kingsley Dam. The park covers 239 acres excluding the 320 acre lake and is also managed by the Nebraska Game and Parks Commission.



DEVELOPMENT TRENDS

The development of the highway corridors and areas around Lake McConaughy raise land use policy questions for Keith County. Major development trends that Keith County planning must address include:

- *Continuing development on the south shore of Lake McConaughy.* Until about 1985, south shore development was limited by the distance between the shoreline and Highway 26 (in contrast to the adjacency of Highway 92 on the north shore), relatively poor local access, and rugged landforms. Since then, however, the scenic quality of the shore, increased affluence, and the attraction of water access increased housing demand in this area. This led to the subsequent platting of several new subdivisions, including Bayside Estates and the Dunes, and the construction of the Bayside Golf Course. Even

more ambitious was the Trails Crossing proposal, a large mixed use development. While this project is in doubt as of 2002, it nevertheless demonstrates potential interest in large-scale development. Assuming the viability of the lake and a reasonably strong economy, residential development on the south shore will continue to be a significant land use trend.

- *The Lake Corridor.* Increasing demand has emerged for development, including commercial growth, along the Highway 61 corridor between Ogallala and Kingsley Dam. Significant commercial projects were developed at the Road 120 and Road 130 intersections during 2001 and 2002. The County has put an innovative performance zoning district in place to maintain the quality of development along this highly visible corridor, and to prevent the emergence of a small-lot commercial strip along the gateway to the lake.

- *The Highway 26 Bypass.* While largely a planning issue for the City of Ogallala, the relocation of Highway 26 to a bypass corridor 1.5 miles west of the former Spruce Street alignment also has county planning implications. The city plans call for construction of an interchange of the relocated highway with Interstate 80. This road system would continue south with an improved alignment for Road 80 West, providing a direct link from the west county to commercial, industrial, and residential development south of I-80.

- *Subdivision development standards.* As development continues in the lake environments of Keith County, the nature of water supply and wastewater service becomes a significant issue. In the rural county, water is typically provided by private wells and sewage disposal is furnished by private septic systems. Larger developments will increasingly require systems that provide water and arrange for community wastewater disposal systems.

LAND USE ISSUES

This analysis of land use and development patterns suggests the following major conclusions and issues:

- Subdivision activity within the planning jurisdiction has been primarily located around Lake McConaughy.
- The vast majority of the county's growth has occurred on the north side of the lake within the Lonergan Precinct. Much of this occurred within established developments.
- Industrial development is concentrated within the interstate and railroad corridors specifically within the Ogallala area.
- Keith County's recreational facilities provide important recreational opportunities and preserve unique ecology, including wetlands and wildlife.
- Unique environmental resources exist that should be protected from adverse effects, caused by inappropriate development. A primary example of such a resource is the Platte River Valley and Lake McConaughy and its shoreline.
- Rural residential development and expanding agricultural uses create potential conflicts. Operational issues, such as the application of pesticides, odors, and late operating hours frequently draw complaints from residential neighborhoods, some of whom are used to urban land use regulations. The Land Use Plan should seek methods to minimize land use conflicts.

CHAPTER THREE



ENVIRONMENTAL & DEVELOPMENT RESOURCES

A basic goal of this comprehensive plan for Keith County is to develop policies that balance environmental values and reasonable development demands. Relating development policy to environmental characteristics helps strike this balance by permitting appropriate development in a way that conserves the region's most important natural resources and assets. This section identifies and maps these vital assets. Overlaying these resource maps helps determine policies that will ultimately guide land use review, decisions and project design.

THE KEITH COUNTY PLANNING JURISDICTION:
A GEOGRAPHIC OVERVIEW

Keith County is a dividing line between very different geographical landscapes. The northern half of the county is characterized by Nebraska's unique Sandhills, a formation that makes up about 18,000 square miles of the state's area. The Sandhills landscape consists primarily of sloping hills twenty-five to a hundred feet above the intervening valleys. Blowout areas where the underlying soil formations are exposed often characterize these hills. Lakes, rich valleys, and fertile table lands punctuate the Sandhills landscape. A heavy grass covers most of the area, making it ideal for range and grazing land.

The Platte River valleys with their fertile Alluvial soils dominate the central sections of the county. The area between the North and South Platte Rivers consists mostly of Rosebud-Bridgeport soil and has some of the steepest slopes in the county. The South Table, south of the South Platte River, has some of the most fertile soil in the county. This region of the county is relatively level and more suitable for crop production than other sections.

The following discussion reviews Keith County's major environmental attributes, and identifies policies for each condition. These policies help to define the development policy districts proposed by the Future Land Use Plan. They also



provide criteria to guide review of development applications within these districts.

ENVIRONMENTAL CONSIDERATIONS: DESCRIPTION OF OVERLAY MAPS

PRIME FARMLAND

Prime farmlands are best suited to producing food, feed, forage, and fiber crops. They have the soil quality, growing season, and moisture supply needed to produce a sustained high crop yield when treated and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economic resources. It is not excessively erodible or saturated with water for long periods.

Map 3-1: Prime Farmland identifies these important agricultural resources, based on the Natural Resources Conservation Service's Soil Survey for Keith County. Appendix A lists the soil types that are considered particularly suitable for farming and are mapped in Map 3-1. The best areas for crop production are located in the southern sections of the county. The North Platte River valley provides a clear dividing line between soil types.

Policy:

Generally, prime farmlands in Keith County should be preserved. Development that takes them out of production should be avoided. Development of prime farmland is acceptable if potential sites are within significant growth corridors, generally within 1/4 mile from a state or federal highway, or within another area designated for development in the Future Land Use Plan. Project design that affects prime farmlands should utilize conservation development techniques, clustering smaller estate lots in no more than 50% of the overall project area and preserving remaining farmland as common space.

STEEP SLOPES

Maps 3-2: Steep Slopes indicates areas with slopes greater than 6%. These steeper grades are generally located between the North and South Platte Rivers. These slopes are considered susceptible to erosion. Land-altering activities should generally be avoided or developed with careful consideration to drainage and topographic concerns.

Policy:

Projects that involve development of slopes in excess of 6% should submit and execute erosion control plans as part of development applications. Erosion control measures should be implemented to prevent loss of soil and increases in stormwater volume or velocity normally created by development. These measures can mitigate potentially adverse effects on neighboring property. On-site retention or detention devices may be employed to prevent excessive flows. Project grading in general should minimize disturbance of the natural forms of land. Development should generally be avoided on steep slopes in excess of 14%. On sites with varying slopes, conservation development techniques should be employed to avoid disturbance of steeply sloped areas by preserving them as common open space. Such development may use smaller lots, in exchange for preservation of sloped areas.

HYDRIC SOILS

Map 3-3: Hydric Soils identifies the location of hydric soils throughout Keith County. These soils typically are saturated with water because of drainage during the growing season, creating anaerobic conditions. They are also subject to occasional inundation through ponding and flooding. These soils are typically coincident with stream bottoms, flood prone areas, wetlands, or other poorly drained areas. Hydric soils, along with vegetation attracted to wet environments and hydrology are used to define wetlands. Those soils identified as Hydric soils in Map 3-3 had a Hydrologic group rating of "C" or higher meaning that they were at least seasonally saturated. Hydric soils are most frequently located along the North and South Platte Rivers and along the county's drainageways. Hydric soils are also found in the county's wetlands areas.

Policy:

Hydric soils, including wetlands and drainageways constitute vital environmental resources and are generally unsuitable for development. These areas should be conserved as open space or as significant public or private environmental resources. Development plans for individual projects should preserve hydric soils by incorporating them into common areas or greenways.

FLOODPLAINS

Map 3-4: Floodplain displays the location of floodplains within Keith County. These are areas that will be inundated with water during a storm event that has a 1% probability of occurring within a given year (the so-called 100-year floodplain). Contemporary floodplain regulations require elevation of finished floor levels one foot above the 100-year flood level. The floodplain along the South Platte River is bounded by Highway 30 on the north and Interstate 80 on the south, creating a fairly tight corridor across the county. The North Platte River lacks these man-made boundaries and therefore its floodplain is less defined.



Policy:

Flood plains should be left as open land, in agricultural or recreational uses. In extremely unusual cases, development may take place within the 100-year floodplain. Any such development should comply with the Keith County Floodplain Resolution and should minimize impact or modification of floodplains.



DEVELOPMENT SUITABILITY

Maps 3-5 and 3-6: Development Suitability displays those areas that have severe limitations for dwellings with basements, and septic systems, based on soil properties. Development Suitability maps are based on information included in the Soil Survey of Keith County, prepared by the Natural Resources Conservation Service.

Dwellings with basements are structures built on shallow sub-grade foundations on undisturbed soil. Soils with a high water table, flooding, shrinking and swelling, and organic layers can cause the movement of footings. A high water table, depth to bedrock or to a cemented pan, large stones, slope, and flooding can also affect the ease of excavation and construction. Map 3-5 specifically identifies those soils with severe ratings for flooding, wetness, ponding, and depth of rock.

Septic Systems require soils that have a medium texture, neither too fine and silty nor coarse, containing some gravel. Soils that promote effective operation of septic systems should contain a water table or impervious layer at least four feet below the bottom of the proposed septic installation. Soils that are less suitable for septic installation may be clays that are relatively impermeable and prevent percolation; or soils that are so sandy or permeable that wastes drain rather than percolate. The areas in color on Map 3-6 are those soils that have severe ratings for flooding,

wetness, poor filter, ponding and slow percolation as based on the Natural Resources Conservation Service. Use of septic systems in these areas may require larger lots or special design standards.

The Urban Suitability Maps indicate severe limitations to construction in the northern sections of the county and adjacent to the rivers and lakes.

Policy:

In areas with high water tables or with soils subject to shrinking and swelling, construction may use slab-on-grade development. Basements should be carefully engineered to accommodate difficult soils conditions.

The use of septic systems creates complicated policy questions. While the sandy soils of much of the rural development area are conducive to septic systems, the high water table of many of these areas can create challenges. In addition, sandy soils may be too absorbent for standard tanks and lateral fields, requiring special treatments to produce on-site retention and percolation. Septic system installation should follow standards established by the Nebraska Department of Environmental Quality. Lots should be designed to promote the use of septic systems – typically, lots that are closer to square will be more effective than elongated parcels. Larger projects in vulnerable areas should use community wastewater systems. It should be noted that sewage lagoons have the same development suitability constraints with respect to soils as standard tank and absorption field systems.



ENVIRONMENTAL COMPOSITE

Map 3-7 presents a composite map, overlaying all of the environmental constraints presented in this chapter. In the composite, areas in the lightest color have the fewest constraints to development, while those in darker shades present greater developmental challenges. In addition to providing overall information on environmental vulnerability, the composite helps to guide the definition of land use policy zones identified in the next chapter. Two areas present relatively few development and environmental constraints:

- The area north of Ogallala, a prime location for future development with easy access to the Lake and to Interstate 80.
- The area is located north of the North Platte River, north and west of Keystone. This area is less likely to see short-term development because of a lack of commercial services and transportation access. Future development at Martin Bay and along the southeast Lake Corridor could generate additional residential activity in this area.

INFRASTRUCTURE CONSIDERATIONS

RURAL WATER AND SEWER SYSTEMS

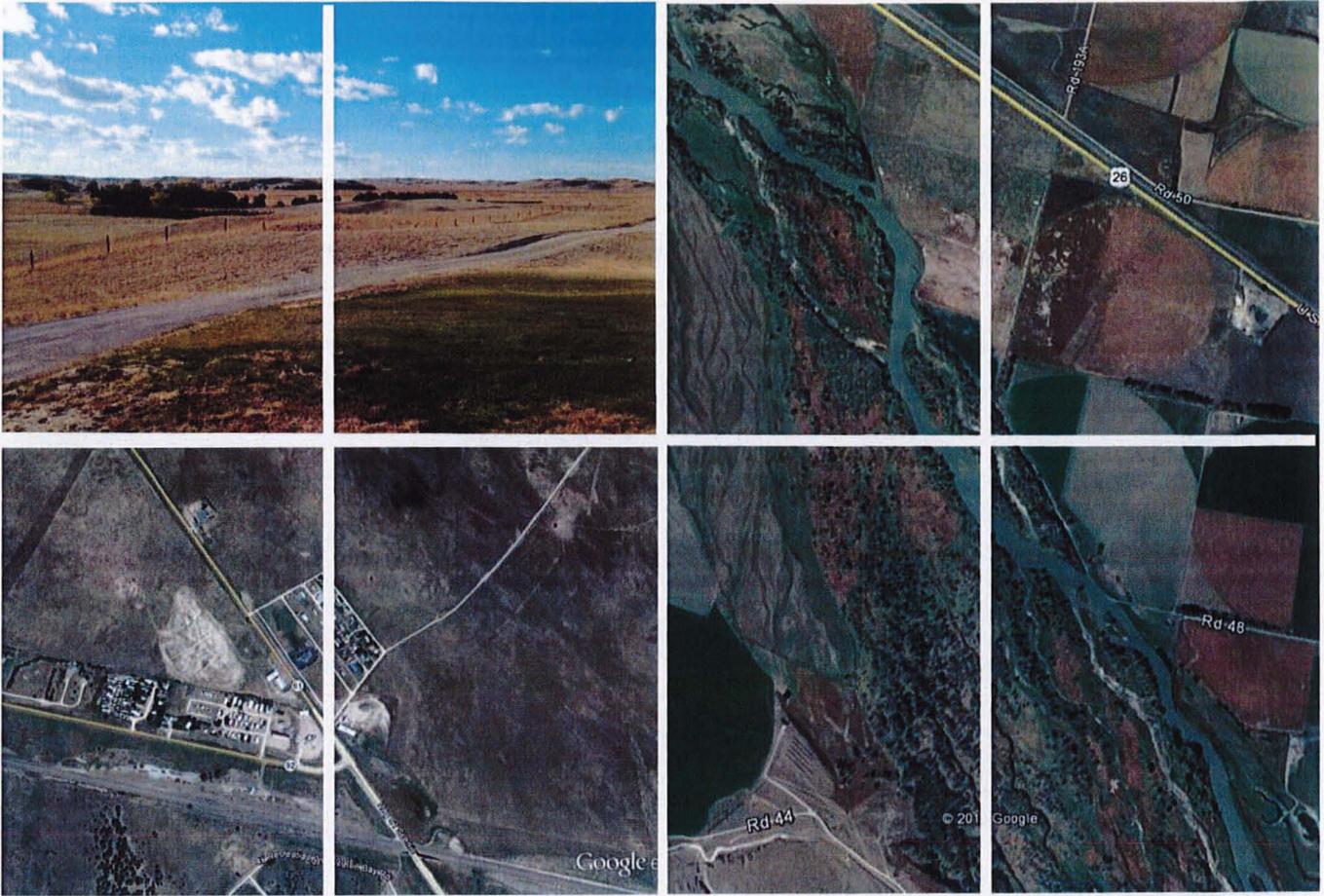
Keith County currently does not have rural or community water systems. As a result, most county developments (including those developed at relatively high densities) are served by individual well and septic systems.

Policy:

Primary development infrastructure issues relate to the nature and quality of water and sewer service. Due to the increasing number of subdivisions around the north, and especially, south shores of the lake, the development of a rural water system becomes a distinct possibility. Community water is particularly important because of the relatively high density of development on the lake's north shore. The Natural Resources District may serve as an initiator in the process of investigating the feasibility of rural water development and lead the effort to organize a Rural Water District.

Community wastewater systems also have a place in infrastructure planning. In some north shore situations, septic systems serve lots and home sites that are too small for an ideal septic field. An overall priority must be to insulate Lake McConaughy from any contamination that can result from improperly developed or maintained wastewater systems. Central's open space holdings can help mitigate potential contamination.

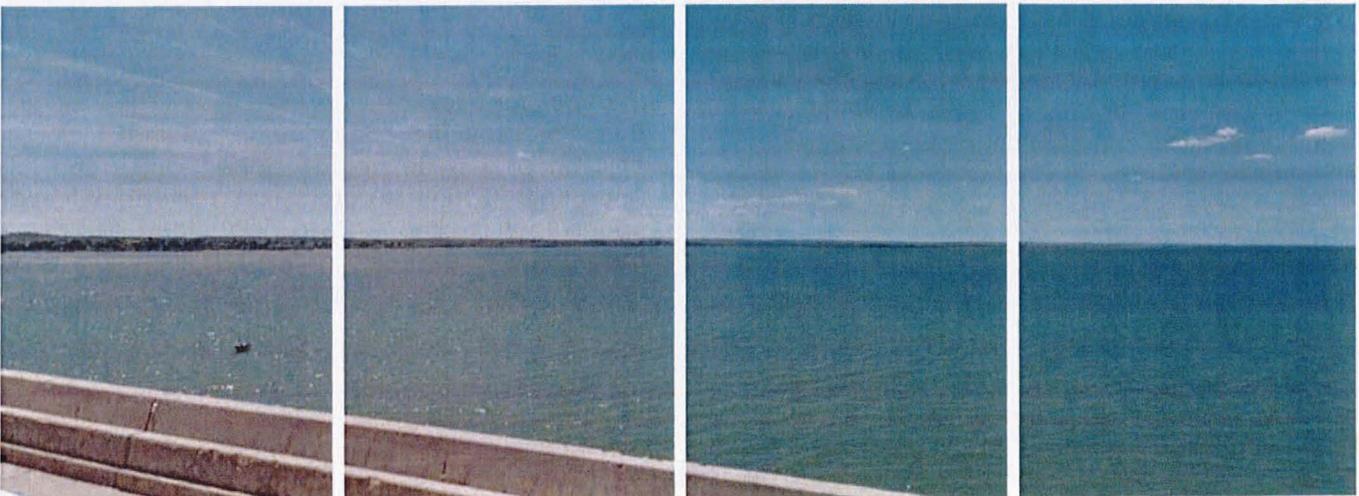
Ultimately, the county will need to consider community wastewater systems to serve areas with small lots that may experience failing septic systems. Large subdivisions should be encouraged to provide community systems. All septic system design and installation should require careful review.



4

Land Use

Replaces Chapter 4 and 5 in March 2003 Comprehensive Plan



INTRODUCTION

The purpose of the Keith County Land Use Chapter is to provide a general guide to land use which directs future uses and zoning criteria. The resulting land uses are intended to guide development and growth without creating multiple incompatibilities with existing uses and environmental conditions within Keith County. It is imperative to formulate a plan tailored to the needs, desires and environmental limitations of the planning area. The Chapter should promote improvements in all the components of the local economy.

KEITH COUNTY LAND USE ELEMENTS

The elements of the Keith County Land Use Chapter include:

- Existing Land Use, and
- Future Land Use Plan
- The Lake McConaughy Environs

Each of these elements are integrated in some manner. Effective evaluations and decisions regarding development decisions require a substantial amount of information to be utilized.

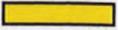
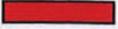
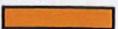
EXISTING LAND USE

The term "Existing Land Use" refers to the current uses in place within a building or on a specific parcel of land. The number and type of uses can constantly change within a county, and produce a number of impacts either benefiting or detracting from the county. The short- and long-term success and sustainability of the county is directly contingent upon available resources utilized in the best manner given the constraints faced by the county during the course of the planning period.

Overall, development patterns in and around Keith County have been influenced by topography, water, soils and manmade features such as two Nebraska highways, three U.S. Highways, as well as a man-made lake, Lake McConaughy. These items will likely continue to influence development patterns throughout the course of the planning period.

Existing Land Use Categories

The utilization of land is best described in specific categories that provide broad descriptions where numerous businesses, institutions, and structures can be grouped. For the purposes of the Comprehensive Plan, the following land use classifications are used:

- Farmsteads/residential uses 
- Commercial uses 
- Quasi-Public/Public/Exempt (includes churches and schools) 
- Livestock facilities 
- Agriculture 
- Game and Parks 

The above land use categories may be generally defined in the following manner:

Agriculture/Open Space

Agriculture remains the dominant land use in Keith County. Agricultural uses vary from the north to the south side of the North Platte River. The northern sections of the county are part of the sand hills region, and contain sandy soils are relatively unsuitable for crop production. These rolling grassy hills are excellent for cattle grazing, the main use of the land in the area. Crop production is prevalent south of the river, and includes cultivation of a variety of crops.

Lake McConaughy, Nebraska's largest body of water, is the second largest land use in the county. The lake's surface area is approximately 35,700 acres. The lake, owned by the Central Nebraska Public Power and Irrigation District, is the state's largest irrigation reservoir, and provides water, hydropower and recreation to Keith County and the surrounding area. Central also owns recreational and leasehold lands around the lake. Its largest holdings are along the north shore, with limited holdings on the south side, where most recreational lands are leased to and operated by the Nebraska Game and Parks Commission as a State Recreation Area.

Livestock facilities

These are specific confinement buildings including chicken and swine houses, dairies, and open lots. Since Keith County is considered a Livestock friendly county then it is important to locate these facilities so their ability to exist and expand in the future is not encroached upon by other incompatible uses.

Residential Uses

Residential development is the third largest land use in terms of area in the county planning jurisdiction. Prior to 1960, most residential development was within the county's incorporated and unincorporated communities; plus, some areas south of the North Platte River. The Lake McConaughy's impoundment flooded the original site of Lemoyne, the town was relocated to the north bank of the lake and became the initial population center for development on the north shore.

Development grew along the north side of the lake, served by Highway 92 and including direct access to the lake and major recreation areas. This development extends west from the Martin Bay area to the Omaha Beach area. Most development has occurred in a relatively narrow corridor north of Highway 92 except for Lemoyne which is located south of Highway 92. Major development concentrations include:

The Martin Bay and Arthur Bay areas

Some of these older residential areas include mobile home development on individual lots.



Sandy Beach

Developments here include single-family homes on individual lots, with access road patterns running generally parallel to Highway 92.

Lemoyne

An unincorporated town near the east/west midpoint of the north shore. Most of Lemoyne's residential development occurs south of Highway 92, and includes a variety of housing types.



Offer Creek and Cedar Vue

Near the western edge of development, growth in the Cedar Vue area includes larger, more conventional single-family subdivision development on relatively large lots.



The majority of residential development occurred on the relatively accessible north shore, served by the Highway 92 corridor, some growth has occurred on the south side. The Mako Chi Mni and Lakeview subdivisions date from the 1970's. The south shoreline may be less accessible but is typically more scenic and has experienced increasing popularity.

Subdivisions include Bayside Estates, The Dunes, Hidden Canyon Estates, and the Yacht Club, along with the development of the Bayside Golf Course. Development on the south shore has tended to larger lots, with higher cost houses than the older subdivisions along the north shore.

Central Nebraska Public Power and Irrigation District

Central Nebraska Public Power and Irrigation District (CNPPD) owns Lake McConaughy and much of the lakefront and land area between the highway and Union Pacific corridor.

Lakefront recreation areas leased to the Nebraska Game and Parks Commission (NGPC) extend from the north end of Kingsley Dam to the North Shore area just east of Lemoyne. Central also leases the Lake Ogallala State Recreation Area to the NGPC.

Some of Central's property has also been leased for both seasonal and permanent residential development. These developments include both cabins, manufactured housing and mobile home developments. The K-1 Cabin Area, on the south shore of the lake, and the K-2, K-3, and K-4 Cabin area.

Commercial Uses

Commercial land uses make up a small part of the Keith County's jurisdiction. Outside of municipal jurisdictions, most commercial development is related to Lake McConaughy.

The largest existing commercial area is located in the Martin Bay area, near the junction of Highways 61 and 92. This mixed-use area features a bank, restaurants, convenience services, and recreational commercial development, and serves as a major commercial cluster for the lake community.



Other commercial development along the north shore occurs in convenience clusters, typically at the intersection of Highway 92 and a lake or beach access road. Commercial development, including hospitality and convenience services, is also located on Central land leased to individual businesses south of Kingsley Dam.

Another trend has been the development of lake-related commercial uses along the Highway 61 corridor between the dam and the edge of the Ogallala jurisdiction. These uses have focused on sales of major durable goods related to the lake life-style, including boat, farm and ranch supplier, and boat and camper storage buildings.

Most commercial development in the county occurs within the communities themselves, specifically within Ogallala and the Interstate 80 interchange.

Industrial Uses

Most industrial uses in the County are located within the communities or along the Interstate 80 corridor. Some industrial uses are located along the two Union Pacific corridors and along Highway 30.

Public and Semi-Public Uses

The primary public use in the county is Lake McConaughy, owned by the Central Nebraska Public Power and Irrigation District. NGPC manages much of the shoreline, under a long-term leasehold agreement with Central. The most recent lake-related development is the completion of a Visitors Center by the Game and Parks Commission, on the east side of Highway 61 south of Kingsley Dam. Other than the lake and associated recreational areas, most public and recreational uses within the county are located within the communities and outside the jurisdiction of the county, except for sites in Keystone and Roscoe.

Keith County has two major state recreation areas:

- *Lake McConaughy State Recreation Area*, a 5,492 acre park on Central property that is managed by NGPC. It is located on the north side of Lake McConaughy approximately 10 miles north of Ogallala. The Lake McConaughy SRA accommodates a wide variety of recreational uses, including camping, beaches, boating and fishing, and other facilities. NGPC has a continuous inner road, linking Martin Bay with the Sandy Beach area. This road relieves recreational use pressure on Highway 92 and accommodates bicyclists within the SRA.
- *Lake Ogallala State Recreation Area* is located directly east of Kingsley Dam. The park covers 239 acres excluding the 320 acre lake and is also managed by NGPC.

DEVELOPMENT TRENDS

Development trends outside of the municipalities and their jurisdiction, within Keith County are focused along the highway corridors and areas around Lake McConaughy. These areas continue to have questions asked regarding the proper uses and location of said uses. Major development trends Keith County planning must continue to address include:

Continued development on the south shore of Lake McConaughy

Until about 1985, the south shore had limited development due to the distance between the shoreline and US Highway 26, relatively poor local access, and rugged landforms.

The scenic quality of the shore, increased affluence, and the attraction of water access increased housing demand in this area. This has led to the platting of several subdivisions, including but limited to Bayside Estates, the Dunes, including but limited to Happy Trails and the Vistas and the construction of the Bayside Golf Course. Residential development on the south shore should continue to be a significant land use trend.

The Lake Corridor

Demand for development has continued during the past decade, including commercial growth, along the Highway 61 corridor between Ogallala and Kingsley Dam. Significant commercial projects have been developed along the corridor. The County has an innovative performance zoning district in place to maintain the quality of development along this highly visible corridor, and to prevent the emergence of a small-lot commercial strip along the gateway to the lake.

Subdivision development standards

Due to continued development in the lake environs, the nature of water supply and wastewater service becomes a significant issue. Eventually, there may come a point where community water and/or community sewer systems will need to be constructed.

In the rural county, water is typically provided by private wells and sewage disposal is furnished by private septic systems. Larger developments will increasingly require systems providing water and arrange for community wastewater disposal systems.

FUTURE LAND USE PLAN

The Future Land Use Plan provides the basis for the formulation of land use policy and zoning regulations. For this reason, it is imperative to formulate a plan tailored to the needs, desires and environmental limitations of the planning area. The Future Land Use Plan should promote improvements in all components of the local economy. The following common principles and land use concepts have been formed to guide future development and redevelopment activities within Keith County's planning and zoning jurisdiction. The principles and concepts used in this Plan reflect several elements, including:

- the current use of land within and around the county;
- Future Land Use Concepts;
- the desired types of growth, including location of growth;
- physical characteristics, opportunities and constraints of future growth areas; and
- current population and economic trends affecting the county

Efficient allocation of land recognizes the forces of the private market and the limitations of the County's budget. A Future Land Use Plan is intended to be a general guide to future uses; while trying to balance private sector development (the critical growth element in any county) with the concerns, interests, and demands of the overall local economy and desires.

Land Use: Major Concepts

The basic principles and concepts designed to meet the challenge of growth and preservation of rural character in the county include:

- Maintenance of Rural Character
- Value of Resource Conservation
- Gradient of Development
- Conservation Development
- Mixed Use Nodes
- Regional Recreational and National History

Maintenance of Rural Character

The open character, including its panoramic vistas, is important to Keith County residents. Development standards and land use planning for Keith County should maintain this fundamental character, locating development in areas where demand is emerging and developing in ways not compromising this quality.

Urban growth should be primarily focused in and around the City of Ogallala. Lower density residential development should be accommodated in specific areas of the county based upon solid market demands; while preserving major vistas from ridge tops and other areas with exposed views.

Value of Resource Conservation

The county's jurisdiction includes important environmental assets, identified in this plan. These include agricultural lands, streams and bodies of water, steep slopes, floodplains, wetlands, and other hydric soils. The conservation of these features makes the county's jurisdiction special and distinguishes it from conventional development. The concept of balancing conservation of environmentally sensitive areas and development calls for establishing policies focused on conserving these resources, while permitting owners and developers a reasonable yield on property.

Standards for development in the County should:

- Restrict the amount of fill taking place within the 100-year floodplain.
- Require conditional use permits for developments in areas identified as environmentally sensitive.
- Protect all unique geographic or geologic formations.
- Minimize impact on designated wetlands and other essential ecosystems.

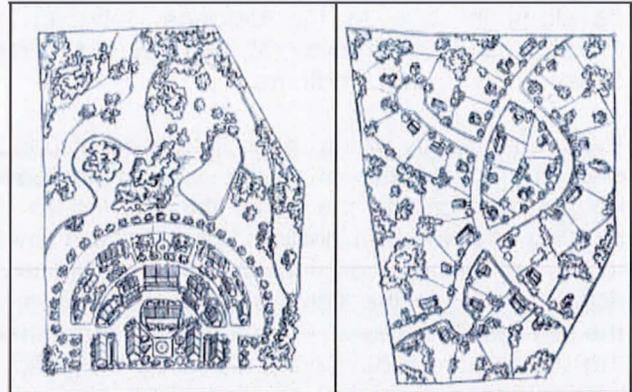
Gradient of Development

A gradation of development should direct higher density development to communities within the county. In addition, this level of development could be directed to areas where community facilities, utilities, and transportation access support denser development. Higher density development may also be supportable in areas with few environmental constraints, or eventually with the construction of community water and wastewater systems. Lower-density should be minimized.

This gradation of residential development may change over time. For example, the development of community systems in an area previously designated for more limited development may change its classification. For example, large-scale, mixed density developments in this area can incorporate a variety of housing settings, but generally require installation of community water and wastewater systems.

Conservation Development

Large lot subdivisions often are designed in the same fashion as conventional urban subdivisions. In many cases, these designs compromise or degrade the very sense of openness and character found in rural Keith County. In areas where preservation of open character or natural resources is a major value, the concept of conservation subdivisions is more appropriate. This priority is especially important in environmentally sensitive settings such as Eagle Canyon.



Conservation subdivisions (left) feature smaller lots with a high percentage of open space. Conventional subdivisions (right) feature large lots with little common open space. A conventional subdivision is subject to all of the base zoning district standards, such as minimum lot size, front setbacks, landscaping, and adequacy of public facilities.

The Conservation Development method is especially applicable to these valuable and vulnerable areas. In conservation subdivisions, the density permitted on a parcel of ground is the same as permitted for conventional development. However, environmental resources are preserved as common open spaces, permitting development on smaller lots, clustered in the built-up part of the development.



For example, an 80 acre site developed at 5 acres per unit permits construction of 16 houses. In a conservation subdivision, the same 16 home sites may be clustered on half the site area, or 40 acres, with the remaining land left in open, recreational, or agricultural uses. The open space may be owned in common by property owners, or may be maintained in private ownership.



Conservation designs, skillfully executed, can preserve such features as vistas, waterways, and agricultural lands more effectively than conventional subdivision. As a result, this technique preserves environmental features, thereby furthering the public interest, while at the same time creating more appealing development. Land development regulations should prohibit the further platting of land designated as common open space within conservation subdivisions.

Mixed Use Nodes

Residential development in the lake area and the south part of the county related to the Highway 61 corridor, along with increasing visitor-related businesses provide opportunities for significant retail and service development. The linear nature of development along Highway 92 on the north shore of the lake, and the along South Highway 61 in the Ogallala to Grant corridor, tends to encourage a linear commercial development pattern. This linear development pattern is often referred to as a commercial "strip." A similar pattern along Highway 26 should be discouraged due to the topography and access control along the Highway, its emergence would have significant impact on lake views and the quality of the environment.

County development policy should prevent the development of commercial strips. Commercial development should instead be focused at mixed-use nodes, providing a clustering of services and punctuating residential development with activity centers.

The plan should include a variety of nodes, designed to fill the service needs and economic opportunities presented by the rural county. These include:

- Local service nodes
- Village commercial nodes
- The Lake Gateway Corridor

Commercial development at interchanges is generally located within the jurisdictions of the county's incorporated municipalities. The Roscoe interchange is unsuitable for commercial development because of environmental limitations, and easy access to major development at the Ogallala interchange.

Regional Recreation and Natural History

Lake McConaughy is one of the state's leading recreational and tourist attractions, drawing visitors and property owners from Nebraska, Wyoming, and Colorado. NGPC has completed major improvements at the lake's recreation areas, including the Lake McConaughy Visitors Center just south of Kingsley Dam. While lake-related areas will continue to serve as the county's major recreational features, land use and planning policy should support complementary recreational and historical projects.



Special land use policies and techniques supporting the recreational and historical aspects of Keith County include:

- *Recreational trail development within the county.* The leading trail opportunities connect state beaches and recreation areas on the north shore

of Lake McConaughy between Otter Creek and Martin Bay. Construction of the inner road through the Lake McConaughy SRA from Martin Bay to Sandy Beach opens adjacent trail opportunities. Other components include designated routes on highway shoulders. Such a shoulder has been developed along Highway 61 between Ogallala and Martin Bay, except across Kingsley Dam. Here, trail development below the dam through Lake Ogallala State Recreation Area has been started.

- *Support and designation of a route for the American Discovery Trail which has been identified to pass through Keith County, as well as the old Lincoln Highway route through Keith County.* The American Discovery Trail is a Congressionally-designated cross-country trail, linking Point Reyes, California and Cape Henlopen, Delaware. The trail project was initiated by the American Hiking Society, but is now managed by a separate nonprofit foundation. Nebraska's former Second District Congressman, Douglas Bereuter, led the Congressional charter effort and was particularly instrumental in successful efforts to route a northern loop through Nebraska.

- Village Development Area
- Local Service Mixed-use Nodes
- Lake Corridor (overlay)
- Industrial
- Parks and Public Open Space

Other Land Use Considerations

- *High intensity agricultural uses, such as Confined Animal Feeding Operations (CAFO), should be avoided within the proximity of residential uses and either of the Platte River Channels.* Of agricultural operations, confined animal feeding operations (CAFO's) typically generate the most intense external environmental effects, including odors affecting the quality of life of neighbors. Therefore, the land use plan proposes any new CAFO within the proximity of any residential uses or either Platte River channel be considered only by special review. This policy is designed to identify locations for CAFO's which are most free of major land use, operational, or environmental conflicts.
- *Residential development districts should be adopted establishing densities based on the ability of land, transportation systems, and other services to support development.*

Land Use Categories

The future land uses for Keith County are separated into seven categories. The following list shows the land uses within this plan:

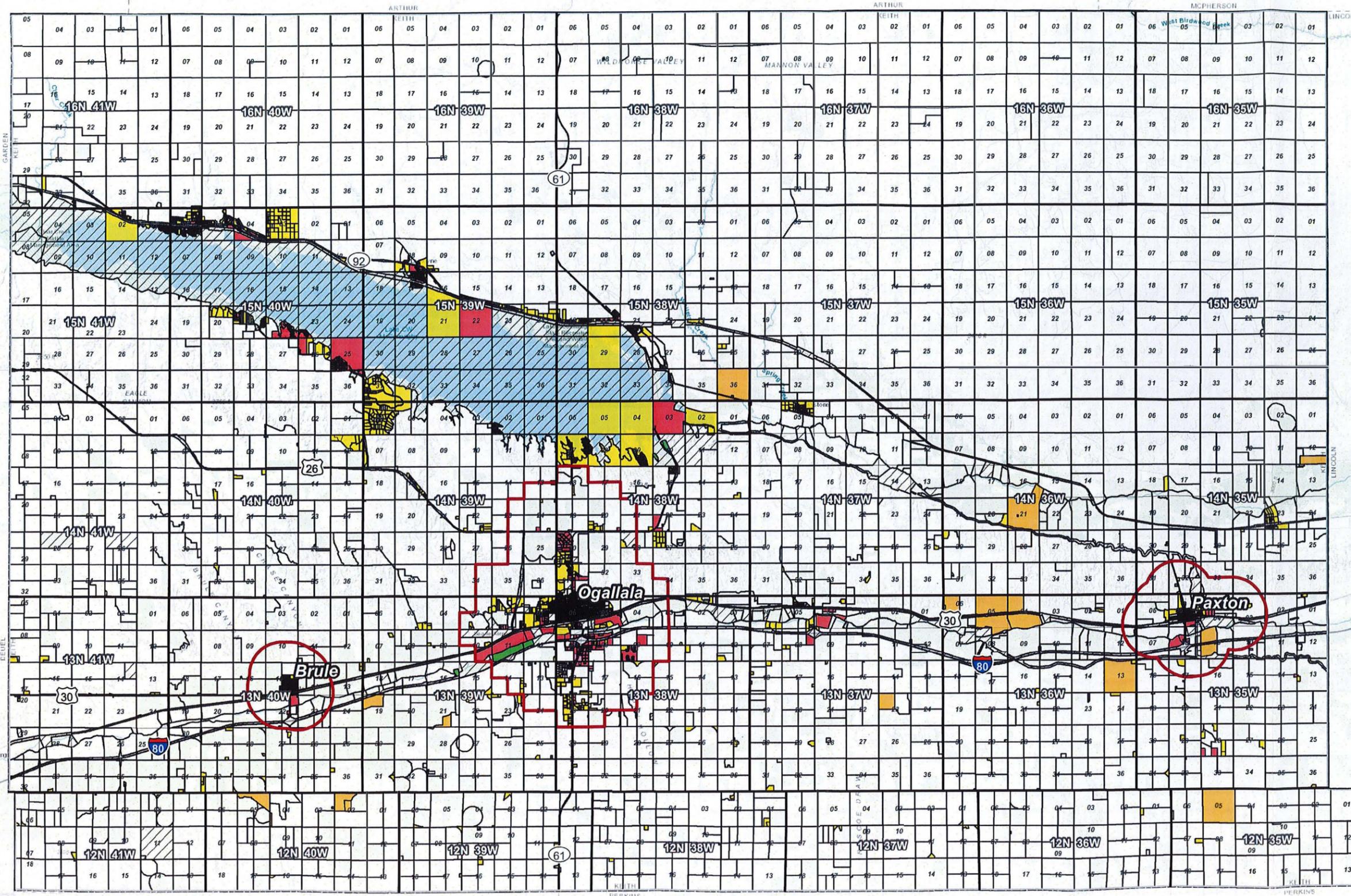
- Primary Agricultural
- Transitional Agricultural
- Rural Residential

EXISTING LAND USE
KEITH COUNTY, NEBRASKA

FIGURE 4.1

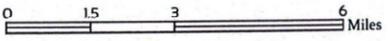
Legend

- City/Town
- Extraterritorial Jurisdiction
- Parcel
- ▭ County Boundary
- Existing Land Use**
- ▨ Agricultural
- Commercial
- ▨ Exempt
- Feed Lot
- Game & Parks
- Permission
- Residential
- TIF Project




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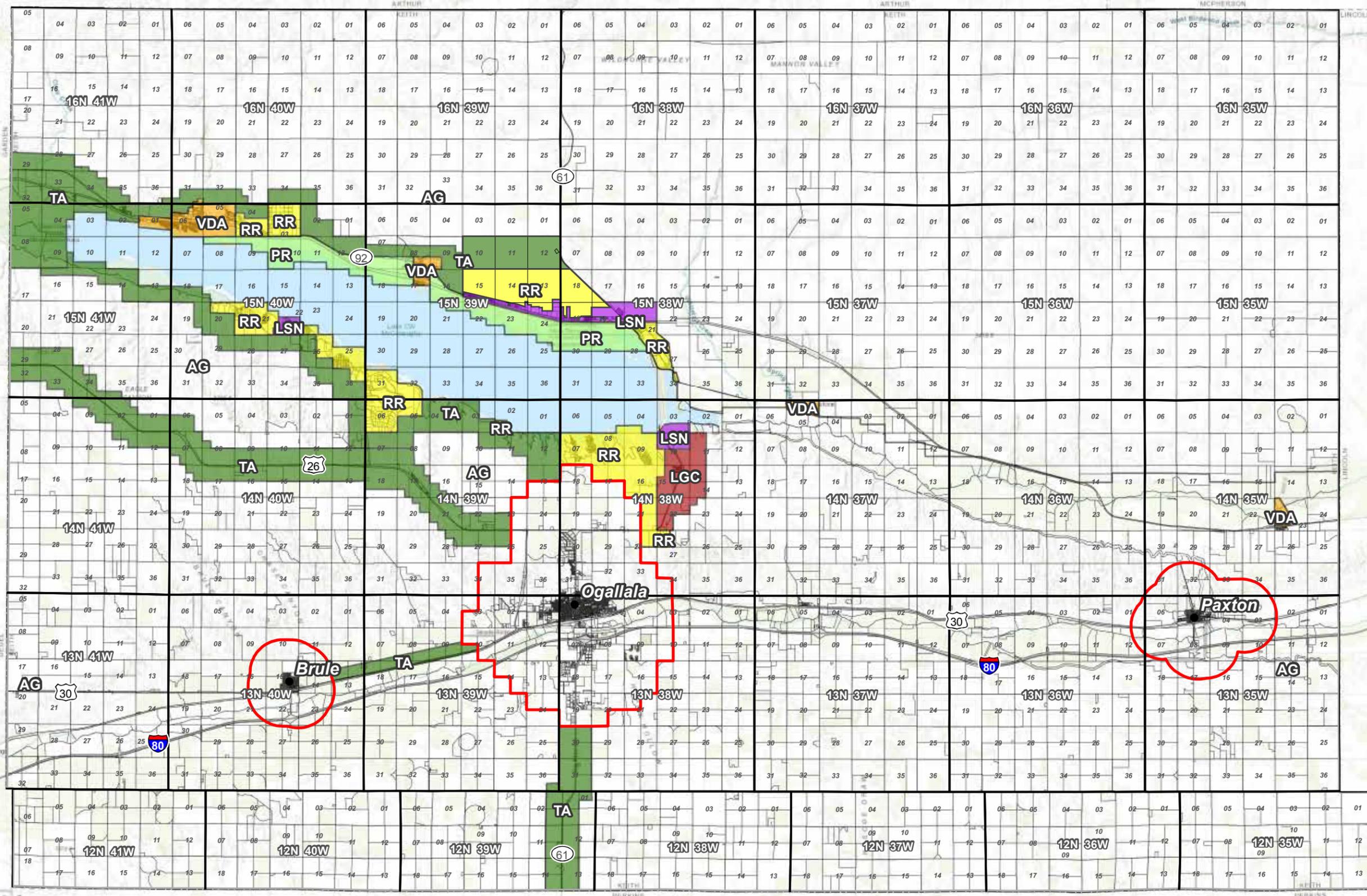
PROJECTION: NE State Plane (Ft.)
 DATUM: NAD 83
 DATE: 05.07.2018



 1" = 3 miles

DISCLAIMER: This Geographic Information Systems (GIS) and its components are designed as a source of reference for answering inquiries, for planning and for modeling. GIS is not intended, nor does it replace legal description information in the chain of title and other information contained in official government records such as the County Clerk and Records office or the courts. In addition, the representations of locations in this GIS cannot be substituted for actual legal surveys.

FUTURE LAND USE
KEITH COUNTY, NEBRASKA

FIGURE 4.2

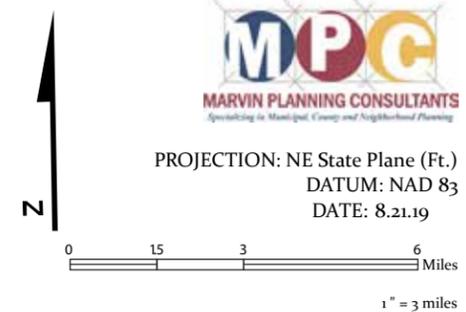


Legend

- City/Town
- Extraterritorial Jurisdiction
- Parcel
- ▭ County Boundary
- Future Land Use**
- Primary Agriculture
- Transitional Agriculture
- Rural Residential
- Village Development Area
- Local Service Node
- Lake Gateway Corridor
- Parks and Recreation



PROJECTION: NE State Plane (Ft.)
DATUM: NAD 83
DATE: 8.21.19



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PRIMARY AGRICULTURE

General Purpose

Agriculture is the primary land use within Keith County and it is anticipated to continue as such during the plans lifespan. However, growth and change in both the agricultural and development sectors can significantly change the character of rural Keith County. Without fundamental concepts, growth is likely to occur in an unmanaged way, adversely affecting the character of the rural landscape and compromising those values and features considered attractive to both present and future residents. The basic land use challenge posed for the county jurisdiction involves accommodation of current development pressures while maintaining and preserving the rural character of the land. The fundamental concepts presented in this section establish the guiding principles that provide this balance.

Compatible uses

1. Crop production, including grazing lands
2. Livestock operations depending upon environmental constraints
3. Private grain storage
4. Manure/fertilizer applications
5. Single acreage developments
6. Public recreational, wildlife and historical areas
7. Tourism activities such as: parks, hunting preserves, fishing, wineries, etc.
8. Religious uses and structures
9. Educational uses and structures
10. Community/Recreational Center
11. Larger park and recreation areas
12. Renewable energy systems

Incompatible Uses

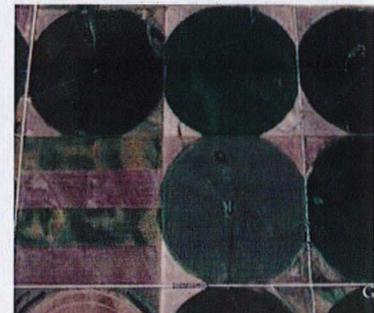
1. ~~Mobile homes as a single-family dwelling unless located within a mobile home park~~ Removed 12.26.18
2. ~~Residential subdivisions~~ Removed 6.25.19
3. Industrial uses
4. Commercial uses

Potential issues to consider

1. Valentine Soils
2. Other environmentally sensitive soils
3. North Platte River Corridor
4. South Platte River Corridor
5. Floodway
6. Floodplain and flooding hazard
7. Proximity to existing livestock facilities
8. Wetlands
9. Depth to groundwater
10. Topography and steep slopes
11. Natural amenities such as trees, ponds, and streams
12. Site drainage
13. Potential for groundwater contamination
14. Existing and/or proposed sanitary system
15. Potable well locations
16. Wellhead protection areas

Special policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.
2. A second dwelling may be allowed with special conditions placed on the use.
3. Residential densities within this land use category should be no more than 1 dwelling unit per 1/4 section. (Amended 4.24.19)



TRANSITIONAL AGRICULTURE

General Purpose

The Transitional Agriculture District is primarily a buffer between key areas such as the extraterritorial jurisdictions of the communities and more intensive agricultural areas of the County. The area allows for basic agricultural uses, except for the larger confinements of livestock. The district may also be placed along key corridors where similar concepts are desired.

Compatible uses

1. Crop production, including grazing lands
2. Private grain storage
3. Manure/fertilizer applications, where allowed
4. Single acreage developments
5. Public recreational, wildlife and historical areas
6. Tourism activities such as: parks, hunting preserves, fishing, wineries, etc.
7. Religious uses and structures
8. Educational uses and structures
9. Community/Recreational Center
10. Larger park and recreation areas

Incompatible Uses

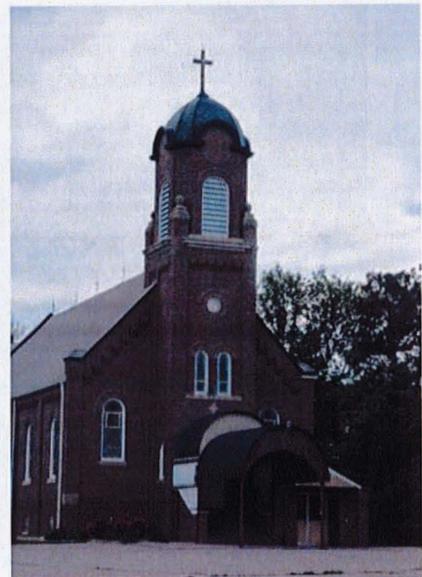
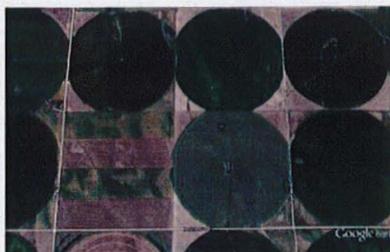
1. Confined Livestock operations
2. ~~Mobile homes as a single family dwelling unless located within a mobile home park~~ Removed 12.26.18
3. ~~Residential subdivisions~~ Removed 6.25.19
4. Industrial uses
5. Commercial uses

Potential issues to consider

1. Valentine Soils
2. Other environmentally sensitive soils
3. North Platte River Corridor
4. South Platte River Corridor
5. Floodway
6. Floodplain and flooding hazard
7. Proximity to existing livestock facilities
8. Wetlands
9. Depth to groundwater
10. Topography and steep slopes
11. Natural amenities such as trees, ponds, and streams
12. Site drainage
13. Potential for groundwater contamination
14. Existing and/or proposed sanitary system
15. Potable well locations
16. Wellhead protection areas

Special policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.
2. Residential densities within this land use category should be no more than 4 dwelling units per 1/4 section. (Amended 4.24.19)



RURAL RESIDENTIAL

General Purpose

This district is designed for low-density residential development. In certain settings, higher densities are permitted. Major developments, with higher densities including lots or residential densities of 1 unit per acre or less, should use community wastewater systems. For use of septic systems in this district, lots should be appropriately designed to create sustainable fields.

Compatible uses

1. Residential subdivisions
2. Religious uses and structures
3. Educational uses and structures
4. Community/Recreational Center
5. Park and recreation areas
6. Crop production

Incompatible Uses

1. Confined Livestock operations
2. Mobile homes as a single-family dwelling unless located within a mobile home park ~~Removed 12.26.18~~
3. Industrial uses
4. Commercial uses

Potential issues to consider

1. Valentine Soils
2. Other environmentally sensitive soils
3. North Platte River Corridor
4. South Platte River Corridor
5. Floodway
6. Floodplain and flooding hazard
7. Proximity to existing livestock facilities
8. Wetlands
9. Depth to groundwater
10. Topography and steep slopes
11. Natural amenities such as trees, ponds, and streams
12. Site drainage
13. Potential for groundwater contamination
14. Existing and/or proposed sanitary system
15. Potable well locations
16. Wellhead protection areas

Special policies

1. Lots should be nearly square as opposed to long, narrow lots that have a high ratio of depth to width.
2. Typically, located along:
 - The south shore of Lake McConaughy
 - Between higher-density development nodes on the north shore of the lake



VILLAGE DEVELOPMENT AREA

General Purpose

These areas include residential areas at community rather than acreage densities, with lots or home sites smaller than one acre. In addition, the county should investigate the development of rural water systems to serve these higher density development districts. These 2 areas will include:

- The county's unincorporated villages.
- Developed communities along the north shore of Lake McConaughy, according to the Lake Corridor Plan.
- Other major mixed-use projects. For large, comprehensively planned community projects.

Compatible uses

1. Residential uses
2. Commercial support businesses
3. Acreages and associated accessory uses
4. Religious uses and structures
5. Educational uses and structures
6. Community/Recreational Center/Recreational facilities

Incompatible Uses

1. Livestock operations
2. Industrial uses
3. Large commercial developments
4. Mobile homes as a single-family dwelling unless located within a mobile home park

Potential issues to consider

1. Rural Water availability and connections
2. Floodplain and flooding hazard
3. Floodway
4. Topography and steep slopes
5. Proximity to existing livestock facilities
6. Wetlands
7. Depth to groundwater
8. Natural amenities such as trees, ponds, and streams
9. Site drainage
10. Existing and/or proposed sanitary system
11. Potable well locations
12. Wellhead protection areas.
13. Valentine Soils
14. Other environmentally sensitive soils
15. North Platte River Corridor
16. Potential for groundwater contamination

Special policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.
2. Density of lots could be similar to an adjacent community unless the development is on individual septic and water, then the minimum sanitary standards would apply.
3. Cluster developments should be considered and required in this land use area.



LOCAL SERVICE NODES

General Purpose

These mixed use and commercial areas provide for local service needs and are typically located at the intersections of highways and major beach or development access roads. These areas include relatively small-scale commercial buildings, focused on convenience and recreation services, restaurants, small-scale retailing, and personal services.

Compatible uses

1. Small scale commercial development
2. Resort style commercial
3. Recreational support businesses
4. Restaurants, taverns, and other eating establishments
5. Hospitality businesses; such as cabins, motels, convenience stores, etc.
6. Religious uses and structures
7. Recreational vehicle parks
8. Educational uses and structures
9. Self-storage facilities; provided, specific criteria are met
10. Community/Recreational Center/Recreational facilities

Incompatible Uses

1. Livestock operations
2. Industrial uses
3. Large scale residential developments
4. Mobile homes as a single-family dwelling unless located within a mobile home park

Potential issues to consider

1. Highway access
2. Highway Rural Water availability and connections
3. Floodplain and flooding hazard
4. Floodway
5. Topography and steep slopes
6. Proximity to existing livestock facilities
7. Wetlands
8. Depth to groundwater
9. Natural amenities such as trees, ponds, and streams
10. Site drainage
11. Existing and/or proposed sanitary system
12. Potable well locations
13. Wellhead protection areas.
14. Valentine Soils
15. Other environmentally sensitive soils
16. North and South Platte River Corridors
17. Potential for groundwater contamination

Special policies

1. The overall size of these areas are intended to be approximately 1/2 mile by 1/2 mile, centered on an intersection of the highway.
2. Self-storage facilities should be setback from the intersection or highway frontage in order to minimize visual impacts of the area.
3. Parking requirements should be met.
4. Signage should be minimal in size and height in order to minimize visual impacts on the area.
5. Mobile home parks should be setback from the highways and roadways in order to minimize visual impacts.
6. Any accessory uses/structures should be constructed or screened in a manner that does not detract from the character of the area.
7. Cluster developments should be considered and required in this land use area.



LAKE GATEWAY CORRIDOR

General Purpose

This area will include development of multiple uses along the Highway 61 principal approach to Lake McConaughy. Mixed-use development here is permitted in a linear fashion, but subject to special requirements and design standards.

Compatible uses

1. Recreational support businesses
 - Boat sales, service and storage
 - Storage facilities
 - RV sales, service, and storage
 - Similar uses
2. Commercial/convenience services
3. Agricultural uses other than confined feeding
4. Manufactured home sales

Incompatible Uses

1. Livestock operations
2. Large scale commercial
3. Residential development
4. Industrial development
5. Mobile homes

Potential issues to consider

1. Highway access
2. Floodplain and flooding hazard
3. Floodway
4. Topography and steep slopes
5. Wetlands
6. Natural amenities such as trees, ponds, and streams
7. Site drainage
8. Potable well locations
9. Valentine Soils
10. Other environmentally sensitive soils
11. Potential for groundwater contamination

Special policies

1. Service/access roads should be required as this area develops in the future.
2. Parking requirements should be established.
3. Signage should be minimal in size and height in order to minimize visual impacts on the area.
4. All storage areas, outside or inside, should be screened in order to minimize the visual impact.
5. Any accessory uses/structures should be constructed or screened in a manner that does not detract from the character of the area.



INDUSTRIAL DISTRICT

General Purpose

Most industrial uses in Keith County should continue to be located within the communities or along the Interstate 80 corridor. Industrial development outside developed areas is usually agriculturally based. Some industrial uses are located along the two Union Pacific corridors and along Highway 30.

Compatible uses

1. Self storage units
2. Outdoor storage areas
3. Light manufacturing
4. Agricultural uses other than confined feeding
5. Commercial uses

Incompatible Uses

1. Livestock operations
2. Large scale commercial
3. Residential development
4. Industrial development
5. Mobile homes

Potential issues to consider

1. Highway access
2. Rail access
3. Floodplain and flooding hazard
4. Floodway
5. Topography and steep slopes
6. Wetlands
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Potable well locations
10. Valentine Soils
11. Other environmentally sensitive soils
12. Potential for groundwater contamination

Special policies

1. Service/access roads should be required as this area develops in the future.
2. Uses should be minimally invasive to the natural character of Keith County.
3. Parking requirements should be established.
4. Signage should be minimal in size and height in order to minimize visual impacts on the area.
5. All outside storage areas should be screened in order to minimize the visual impact.
6. Any accessory uses/structures should be constructed or screened in a manner that does not detract from the character of the area.



PUBLIC/PARK USES

General Purpose

The primary public use in the county is Lake McConaughy, owned by the Central Nebraska Public Power and Irrigation District. The Nebraska Game and Parks Commission manages much of the shoreline, under a long-term leasehold agreement with Central. Other than the lake and associated recreational areas, most public and recreational uses within the county are located within the communities and outside the jurisdiction of the county, except for sites in Keystone and Roscoe.

Compatible uses

1. Visitor's Centers
2. Recreational areas
3. Community/Civic facilities
4. Life Safety facilities, such as: fire halls, law enforcement center, etc.

Incompatible Uses

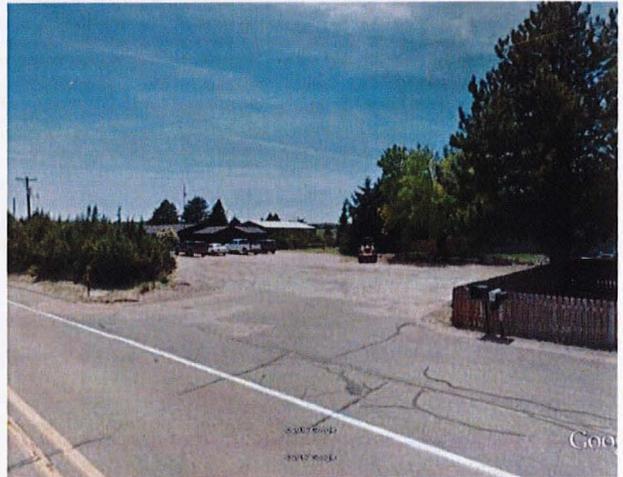
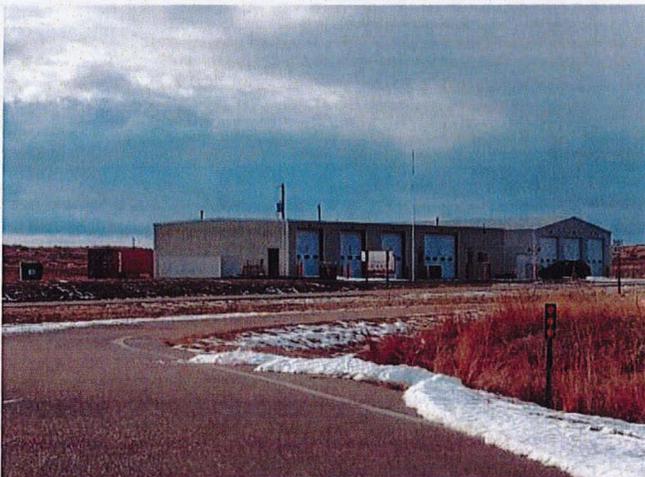
1. Livestock operations
2. Large scale commercial
3. Industrial uses
4. Residential development
5. Mobile homes

Potential issues to consider

1. Highway access
2. Floodplain and flooding hazard
3. Floodway
4. Topography and steep slopes
5. Wetlands
6. Natural amenities such as trees, ponds, and streams
7. Site drainage
8. Potable well locations
9. Valentine Soils
10. Other environmentally sensitive soils
11. Potential for groundwater contamination

Special policies

1. Service/access roads should be required as this area develops in the future.
2. Uses should be minimally invasive to the natural character of Keith County.
3. Parking requirements should be established.
4. Signage should be minimal in size and height in order to minimize visual impacts on the area.
5. Any accessory uses/structures should be constructed or screened in a manner that does not detract from the character of the area.



LAKE MCCONAUGHY AREA PLAN

As development continues, it must be successfully managed. Indeed, development to date, largely concentrated on the more accessible north shore of the lake, has followed a relatively unplanned pattern of linear residential subdivisions, acreages, mobile home parks, and scattered commercial services. Lake McConaughy is a unique resource for Keith County and its main access corridors present unique opportunities. As a general rule, the quality of development should match this resource.

MAJOR LAKE DEVELOPMENT ISSUES

Issues surrounding development within the Lake Area involve different visions of the county and the opportunities and threats growth can bring to these visions. Major issues and trends affecting the corridor include:

- **New seasonal residents and visitors.** Lake McConaughy is a large body of water available for recreational use in the middle of a large region having limited opportunities for water recreation. As a result, the lake has a natural attraction from a region including Nebraska, Colorado and Wyoming. The demand for water recreation in turn generates demand for seasonal residences. To date, residential demand has been accommodated in linear subdivisions along the highway corridor, most notably on the north shore of the lake; and on leased sites within property owned on the north shore by the CNPPD. The region is now experiencing larger subdivision development pressure on its less accessible south shore. Many of these developments include houses on relatively large lots. Housing demand for more modest homes has traditionally followed the highway corridor.
- **Commercial development pressure.** With new people and increasing recreational popularity comes pressure for commercial development.

To date, this commercial development has included convenience services, restaurants, and lakeshore lodges. But greater recreational traffic and increased residential demand has created pressure for more intensive types of lake-oriented commercial services

- **The character of the area.** The openness and scale of the landscape are important values to Keith County. Development needs to occur in a manner that balances the economic needs with

the need to preserve the rural character of the county's most visible environment.

- **Development quality and appearance.** Much of the corridor's previous development has been expedient and improvised. Thus, some older residential subdivisions are laid out in a parallel manner to take advantage of the highway access and visibility but provide little in amenity to residents. Other residential development is in mobile homes or other manufactured units, sometimes on private property and occasionally on properties leased from Central. These patterns have resulted in a relatively unplanned environment at odds with the character of the surrounding landscape and the importance of Lake McConaughy as a resource.
- **Environmental impacts.** While the visual impact of development on the land and its character is important, development also brings environmental concerns. Some subdivisions are developed to urban density on well and septic systems. While the area's sandy soils are fairly conducive to septic service, these high densities can create significant long-term problems. As development occurs in the area (and around the lake in general), it must be carefully managed to protect an important and fragile environment.
- **Economic opportunity.** *The Lake McConaughy corridor is relatively "under-retailed" for a major visitor attraction. While Ogallala is a significant commercial center for lake residents and visitors, commercial development nearer the lake could provide expanded opportunities for consumer spending. Creating attractive shopping and entertainment options in the lake area can provide significant economic returns to the county and its residents.*

Overall Lake Area Philosophy

Lake McConaughy is a unique resource in Nebraska. While this principle is apparent, the uniqueness of the lake requires unique policies. Development in this special area should be guided and not left to chance. Nebraska has no other recreational water resources to match Keith County's inland sea.

- The quality of development in the lake corridor should match the quality of the resource. Because the lake is a special resource, development should be held to special standards.

- Maintaining the open character of Keith County's land is an important value. Given the beauty of the landscape and the value residents ascribe to the area, letting the Lake Corridor take on the quality of an urban strip is unacceptable. Maintaining the rural and open character of the corridor is an important land management principle.
- Land use policy should balance development demand and the character of the land. This corridor should and will experience development. The region can benefit from the increased economic activity, growth can bring. However, a land use system appropriate to this corridor should provide opportunities for growth. A key is balance, defining the amount of development remaining sustainable and assuring it preserves the character of this special region.
- Commercial development should add new settings that complement rather than replace Ogallala. The county and its largest city have common interests; and clearly the city's economic health is indispensable to the county. Retail and commercial development in the county should work to provide unique settings for the entire region, rather than seeking to replace Ogallala as the primary commercial service center while preserving the character of the land and lake that attracted.
- Development policies along the highway corridor should address potential transportation impact. New growth and development can create traffic congestion, which in turn can seriously harm the lake experience. Most development to date has been completely dependent on the highway corridor. New development must supplement the highway, and provide opportunities for using alternative transportation methods, including bicycles in good weather.
- Development along the corridor should avoid a continuous strip character. It should include a rhythm of development and open space to preserve the open character of the land.
- Clustering is the means to balance between the develop and the value of maintaining open space and rural character. Focusing higher-density development in certain areas while maintaining significant stretches of open space, agricultural land, and low-density residential development. Continuous "strip" development, severely compromises rural character by preventing travelers from seeing the land.
- Define specific communities along the corridor by using graphics, signs, gateways, and landscaping.
- Community clustering and maintenance of rural character can be strengthened by identifying clusters as distinct subareas of similar character. This can reinforce the sense of rhythm and orientation along the corridor, and can also help develop real community and identity among residents.
 - ◊ Boundaries should be established which effectively limit and define linear development along the corridor.
 - ◊ Entrance features such as gateways, landscape feature, and graphics mark these boundaries.
 - ◊ Signs and mile markers along the way should reinforce this sense of identity, thus the need for signage, graphics and landscaping.
- Commercial development should be focused at specific locations that include:
 - ◊ Major highway intersections
 - ◊ Planned development districts with special performance and design standards
 - ◊ Intersections with major county roads and lake access points
 - ◊ Mixed use centers
- Major mixed-use centers should develop at two strategic locations: the Kingsley Lodge area and the Martin Bay area. These centers should feature pedestrian oriented environments, becoming major activity centers and focuses for specialty retail, restaurants, lodging, and visitor services.
- Any additional linear commercial development along segments of the Lake Corridor should occur within planned development districts.
- The Lake Corridor overlay district carries special requirements. Features of the special overlay district include:
 - ◊ Special design standards applying to the corridor's context. These standards are based on issues important to Keith County and consistent with the objectives of this plan.
 - ◊ An additional requirement is projects earn a specific number of performance points in order to proceed. The overlay process provides a number of ways in which projects may achieve the requisite performance points.
 - ◊ Staff and Planning Commission review and final approval by the Board of County Commissioners of specific project applications.

◇ Criteria for Standards: The following issues are of importance and define the regulations and standards contained in the special overlay district:

- ◆ Setbacks, allowing a visitor to maintain a feeling of spaciousness and openness. Setbacks are also required to accommodate future needs for additional road rights-of-way.
- ◆ The principal views from the highway should be landscaped, rather than paved. To the maximum degree possible, large areas of pavement should be oriented away from or screened from the highway.
- ◆ The overlay district encourages appropriate, sustainable landscaping. Appropriate landscaping should make extensive use of native materials, which should avoid major impact on the land and available water resources.
- ◆ Development regulations should govern the spacing of buildings and development, preventing the road from being lined continuously by development.
- ◆ The size, height, and impact of signs should be minimized. Signs should be unified and designed to communicate, rather than "shout." Monument or ground signs are preferred to pole signs.
- ◆ Displays that line products up parallel to the highway are discouraged. Standards should encourage carefully designed displays of these major items.
- ◆ Direct access cuts to the highway are to be minimized. Developments should use parallel access roads, which connect with intersections to prevent traffic conflicts. Access roads to the rear of uses are preferred to frontage roads. Rear access roads can be double loaded and encourage developers to orient landscaped areas to the highway.
- ◆ Building design is an important visual characteristic. Standards should encourage the use of quality materials. In addition, offsets and window treatment should be used to reduce the scale of buildings.
- ◆ Developments are to minimize impervious surfaces, to reduce runoff and permit storm water to permeate the ground. On-site techniques for detention and

controlled discharge of stormwater should be employed.

- ◆ Projects should be encouraged to develop special amenities for the benefit of users, residents, and visitors to the corridor. Amenities may include bodies of water or other environmental features, trail access, building articulation, or use of quality building materials and designs.
- ◆ Lighting should be directed to areas specifically requiring illumination, such as signs, buildings, and parking areas. Extraneous lighting and glare should be avoided. Lighting fixtures and design should promote dark skies.

Implementation

The Lake McConaughy Area Plan presents a general guide for public policy and land use decisions, as well as private investments. The plan will be implemented by means of a variety of individual actions and decisions over a long period. However, it is important in strategic development areas to establish an immediate mechanism that allows development to proceed, but assures consistency with the goals and concepts of this plan.

The Lake Corridor Overlay District, presented here, provides a policy framework to be implemented by the County. This special district has the following characteristics:

- It is an overlay district, meaning it is used in combination with one of Keith County's base zoning districts. For example, a project in the overlay district area may be zoned TS (Tourist Services District), in combination with the Corridor Overlay. This means the base district describes how land can be used; but the overlay establishes additional special standards than those for the normal TS district.
- The overlay district establishes the basic standards that all development must meet. These standards include such factors as setbacks, landscaping, parking location, signage, access, stormwater management, and impervious coverage. These standards are consistent with the goals and issues identified in this Land Use Plan for these strategic areas.
- Finally, the district requires projects attain a certain number of performance points, requiring development above base standards in this area. However, performance points can be attained in a number of different ways, from providing visitor amenities to increasing the amount of

landscaping. Creative site design can also result in performance rewards.

WELLHEAD PROTECTION AREAS (OVERLAY)

General Purpose

This land use area is identified for the protection of public water supplies. These areas are identified but will not be strictly enforced through zoning until an interlocal agreement is approved by the county and other party owning the wellhead.

These areas are considered as overlays and are in addition to the requirements and policies of the underlying area.

Typical Uses

1. Use allowed in the underlying area that are not considered a contamination hazard to the wellhead area and the water supply.

Potential Issues to Consider

1. See underlying land use category.

Buildable Lot Policies

1. See underlying land use category.

Development Policies to Consider

1. See underlying land use category.

FUTURE LAND USE GOALS

Land Use Goal and Objectives

Guiding future growth and development in Keith County in order to insure compatible uses locate together is essential during this planning period.

General Land Use Policies and Strategies

- GENLU-1.1 Future land uses in the county should carefully consider the existing natural resources of the area, including soils, rivers, and groundwater.
- GENLU-1.2 Future growth and development in Keith County should work toward compact patterns of land uses.
- GENLU-1.3 The County should control leapfrog development beyond the extraterritorial jurisdictions of the communities in Keith County.
- GENLU-1.4 Keith County should consider limited future development to identified areas along the major highways spanning the county.
- GENLU-1.5 The Keith County Land Use Plan and

Zoning Regulations should be designed to expedite the review and approval process where possible.

- AGLU-1.6 All land uses and structures should be carefully reviewed for compliance with the duly adopted floodplain and floodway regulations in Keith County.

Agricultural Land Use Policies and Strategies

- AGLU-1.1 Keith County should continue to develop policies that enhance their "Livestock Friendly" designation.
- AGLU-1.2 Keith County should continue to encourage uses referred to as "Agritourism" (Wineries and orchards).
- AGLU-1.3 Livestock production should be encouraged in Keith County provided environmental conditions are appropriate.
- AGLU-1.4 Livestock production should be protected from the establishment of conflicting uses such as acreages.
- AGLU-1.5 New livestock operations should be located in areas where their impact on neighboring land uses will be minimal.
- AGLU-1.6 Keith County should allow agricultural production throughout the county; except where there may be potential conflicts with other policies of this plan.
- AGLU-1.7 Livestock operations should be encouraged to utilize odor reducing technologies such as methane digestion and composting .
- AGLU-1.8 Regulations should be established and implemented that create setback and buffer requirements to minimize the impacts of solid, liquid, and gas emissions from livestock facilities.
- AGLU-1.9 Establish adequate separation distances between livestock facilities and residential uses.
- AGLU-1.10 Establish adequate separation distances between residences and livestock operations allowing for potential expansion of livestock operations.
- AGLU-1.11 Keith County should minimize encroachment of non-agricultural uses into areas designated as "Prime Farmland".
- AGLU-1.12 Encourage low to zero non-farm densities in prime farmland areas and other agricultural districts by providing residential lot size requirements, densities and separation distances between

AGLU-1.13	residential and agricultural uses. Protect the quality of groundwater in agricultural areas of Keith County.	provide for operation and maintenance services.
AGLU-1.14	Work with livestock producers on a continual basis in evaluating protections and regulations.	4) Should be appropriately, if not uniquely, suited to the area or site proposed for development;
Residential Land Use Policies and Strategies		5) Should not be located in any natural hazard area, such as a floodplain (unless a sandpit development mitigating the circumstances) or area of geologic hazard, steep slope, severe drainage problems or soil limitations for building or sub-surface sewage disposal, if relevant
RESLU-1.1	Residential developments should be separated from more intensive uses, such as agriculture, industrial, and commercial development, by the use of setbacks, buffer zones, or impact easements.	6) Should be furnished with adequate access – when possible a minimum of two entrances and exits.
RESLU-1.2	Encourage low to zero non-farm densities in prime farmland areas and other agricultural districts by providing residential lot size requirements and proper separation distances between residential and agricultural uses.	RESLU-1.7 Examine implementation of a planned unit development (PUD)/Clustered Development concept which provides a viable alternative to conventional urban development patterns, while providing a means to encourage creative yet responsible/sensitive developments.
RESLU-1.3	Develop subdivision regulations to provide a quality living environment while avoiding inefficient and expensive public infrastructure expansions.	RESLU-1.8 Keith County should review and accommodate, wherever possible, any new or alternative development concepts or proposals, provided such concepts or proposals are consistent with and do not compromise in any way the established disposition of land uses on the Land Use Map or the goals and policies of the Plan.
RESLU-1.4	New residential developments should include a subdivision agreement, which provides for the maintenance of common areas, easements, groundwater, use of plant materials and drainage.	RESLU-1.9 New residential construction or relocations should not be allowed along any minimum maintenance road unless the road is upgraded to county specifications and paid for by the property owner, prior to construction.
RESLU-1.5	Establish zoning and subdivision design standards requiring buffers, and screening standards and functional usable green space, for new developments.	
RESLU-1.6	All proposed rural area developments should be based on reasonable expectations and no large-scale development should be approved without:	
	<ol style="list-style-type: none"> 1) The submission and approval of a layout and design concept, with provision for the staging and servicing of all phases of the development; 2) The approval of all federal and state agencies relative in any applicable health, safety and environmental controls; and 3) An adequate demonstration of the financial capacity (escrows, performance bonds, etc.) and responsibility of the applicants to complete the development and 	
Commercial Land Use Policies and Strategies		
COMLU-1.1	Encourage the location of commercial uses to locate within the communities of Keith County or along the major highways.	
COMLU-1.2	Encourage the location and clustering of commercial uses within the rural areas of Keith County at major transportation intersections.	
COMLU-1.3	Utilize frontage roads within clustered commercial centers when locating along major roads/highways.	
COMLU-1.4	Commercial uses should be required to	

provide their own adequate water supply without negatively impacting existing neighboring properties.

COMLU-1.5 Landscaping standards for all new commercial construction and expansion to existing operations should be implemented.

COMLU-1.6 Discourage the construction of "strip" commercial developments in rural areas of the county.

Industrial Land Use Policies and Strategies

INDLU-1.1 Encourage the location of industrial uses to locate within the communities of Keith County or along the major highways and/or the UPRR rail line.

INDLU-1.2 Where industrial uses need to locate in the rural areas of the county and need rail access, the county should work with UPRR to identify strategies for spur lines/sidetracks.

INDLU-1.3 Industrial development not utilizing rail transport should be discouraged from locating next to a railroad right-of-way.

INDLU-1.4 Heavy industrial uses with a high water and/or waste disposal requirement should be encouraged to locate or relocate only in or immediately adjacent to urban areas where all required services are available.

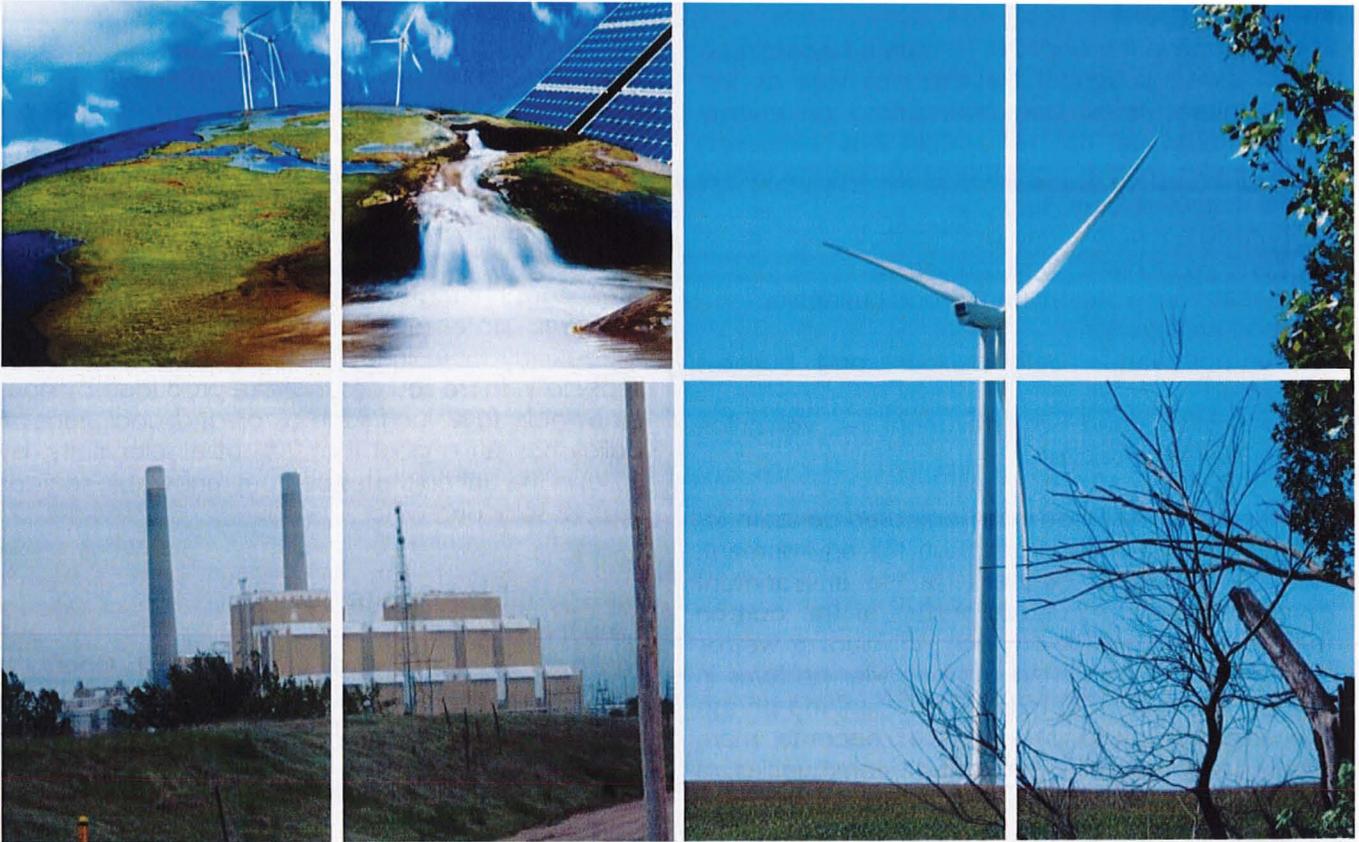
INDLU-1.5 Industrial areas located outside a community's extraterritorial jurisdiction should have adequate services, including major utility lines, electric power substations and transmission lines, rail, sanitary sewer and water can be provided, and where appropriate, gas lines are available.

INDLU-1.7 Industrial uses should be located so an adequate buffer space is provided between incompatible land uses.

INDLU-1.8 The County should develop appropriate performance, design and specification standards and requirements for all existing and future industrial uses to guide their location or relocation in the County.

INDLU-1.9 The County should encourage industrial development that bases its products on renewable and indigenous raw materials.

INDLU-1.10 The County should recognize and encourage small-scale industries as viable alternatives to larger, conventional enterprises.



5

Energy Element



Energy Element

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 Keith County Comprehensive Development Plan should be something 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 world'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 world, the more likely these sources will be second nature and common place in the future.

Americans have grown to rely heavily on electricity. However, state and federal policies have been increasingly more insistent on curbing this reliance; 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.

Energy infrastructure

Electrical Power

The majority of electrical power in Keith County is supplied by two entities. These entities include:

- Midwest Electric Cooperative Corporation based in Grant, and
- Wheat Belt Public Power District based in Sidney

Figure 5.1
Rural Public Power Districts in Keith County



Source: <http://nrea.org/sites/default/files/>

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.

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.

Figure 5.2
Tri-State Renewable Resource Locations



Source: <http://nrea.org/sites/default/files/>

Electrical Distribution

The overall distribution system is in good condition. Typically the local rural power districts are continually upgrading the system and performing need maintenance.

Natural Gas Service

Natural gas is available in parts of Keith County and is supplied by Source Gas.

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 these different sectors.

Residential Uses

Within Keith County the residential uses are provided a number of options for both power and heating and cooling. These include electrical power, natural gas, oil, propane, and wood. The most dominate of

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

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 Keith 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

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

The use of natural gas, oil, propane and wood in commercial structures are typically used 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. Similar to residential uses, commercial uses located within the more urban parts of Keith 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

Keith 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 dominate of the energy sources that are available and used by the residents of Keith 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 Keith 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.

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:

- Become even more conservative with energy usage
- Make use of existing and future programs for retrofitting houses, businesses, and manufacturing plants
- 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 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 or LED bulbs
- Changing air filters more regularly
- Installing additional insulation in the attic

- Keeping thermostats set at cooler levels in the winter and higher levels in the summer
- 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 can be 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. Again, not all of the solutions will have an immediate return on investment. 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
- Keeping thermostats set at cooler levels in the winter and higher levels in the summer
- 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 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

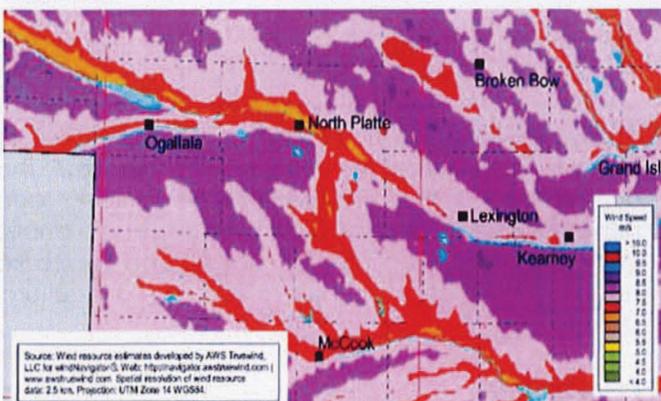
Renewable Energy Sources

Renewable energy sources are those natural resources such as the wind, 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 is 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.

Figure 5.3:
Annual Average Wind Speed at 80 Meters
Nebraska



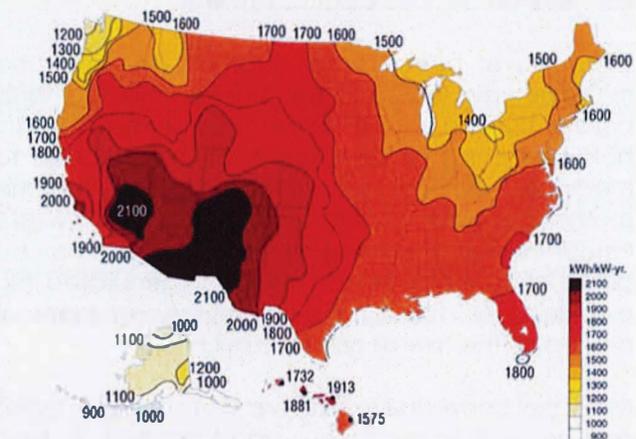
Wind can be used to produce electricity through the construction of small-scale or utility/commercial grade wind conversion systems (wind turbines). However, not all areas of the state have the ideal levels needed to produce electricity on a utility or commercial level; but the use of small-scale wind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

The wind quality in Keith County is above average, especially south of the South Platte River and into northern Perkins County. The darker purple areas are the more ideal locations for wind. However, any future wind development will be determined with the use of meteorological towers used to compile wind data for approximately a one year period prior to making any future decisions.

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 are more 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).

Figure 5.4:
Solar Potential Contours
United States



Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar panels can typically produce between 100 and 200 watts per square meter at an installed cost of \$7 to \$9 per watt, 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 below 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 generated 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.

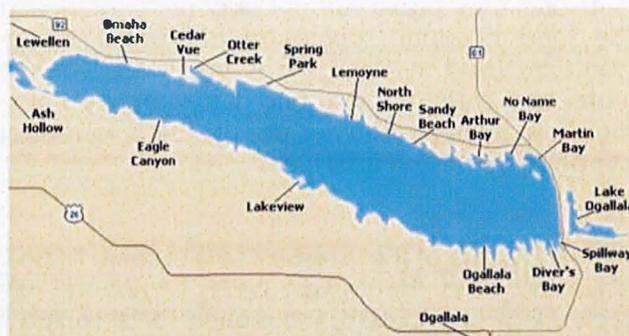
Renewable Energy In Keith County

Keith County has a long history of renewable energy dating to the 1930's. The renewable energy is focused on hydroelectric generation. The source of this hydroelectric power is Kingsley Dam and Lake McConaughy north of Ogallala along the North Platte River. The following paragraphs contain a history of the area and are direct excerpts from

www.ilovelakemac.com .

Lake McConaughy

As early as the 1880's, citizens of south-central Nebraska discussed the possibility of bringing irrigation to the area. Interest in irrigation grew with each successive drought cycle until the drought and economic depression of the 1930's helped convince state and federal officials and community leaders of the need for irrigation.



The Public Works Administration approved funding for the hydro-irrigation project in 1935 and construction began in 1936. Kingsley Dam was closed and dedicated in 1941 and project operations began soon afterward.

The dam and reservoir are named for George P. Kingsley, a Minden, Nebraska banker, and C.W. McConaughy, a grain merchant and mayor of Holdrege, Nebraska, two of the leading promoters of the project. Although neither lived to see the completion of the project, their leadership and perseverance eventually culminated in a public power and irrigation project that helped Nebraska become one of the nation's leading agricultural states.

Kingsley Dam

Kingsley Dam, located 9 miles north of Ogallala, Nebraska, is the second largest, hydraulic fill dam in the world. It is over 162 feet high, 3.1 miles long, has 26 million cubic yards of material, and holds Lake McConaughy, which is 22 miles long and 142 feet deep.

Kingsley Dam was formed by the pumping of a mixture of loess soil and water into the ground, making a watertight core. Lake Ogallala was formed from the pumping of the soil into Kingsley Dam. It is 35 feet deep, 1.6 miles long, and .3 miles wide.

Even though it is smaller than Lake McConaughy, Lake Ogallala is in the middle class size of lakes in Nebraska. Sand from the riverbed below was pumped to form the sides of the dam. Then, to make sure that nothing would try to go under the dam, giant steel sheets were driven into the watertight core and into the ground below. The water facing side of the dam is layered with limestone rocks from Wyoming and 180,000 "jackstones."

A jackstone is a 6-pointed stone that looks similar to a toy jack, weighing over 800 pounds each, for a combined weight of 144 million pounds.

A unique feature to the Kingsley Dam is the water release and flood control system. The system is located on the south side of the dam, partially in the water and is composed of two parts, the outlet tower and the morning glory spillway. The outlet tower is 185 feet tall, 42 feet wide, has one ring gate and 4 tractor gates that regulate normal water release functions like irrigation. The gates are located on the sides and middle of the structure. The structure is connected to a 20 foot wide, steel reinforced, concrete tube that runs underground to the power plant on the other side of the dam. When all the gates are open, it can release over 7,000 cubic feet per second, or over 420 thousand gallons a minute.

Source: <http://www.ilovelakemac.com/the-lake/lake-history/>

Energy Programs in 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.

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 ([LB 629](#)), 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

Electric Air Source Heat Pump

Both Midwest Electric Cooperative and Wheat Belt Public Power District offer rebates and assistance on electric air source heat pumps. Consumers need to check with the electric utility to determine eligibility requirements and rebates amounts.

Other Rebate Programs

Wheat Belt Public Power District also offers rebates on qualifying electric water heaters, Energy Star appliances and motor efficiency standards. Check their website for specific qualifying standards.

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.

CHAPTER SIX



TRANSPORTATION, INFRASTRUCTURE & PUBLIC FACILITIES

This section addresses community service systems necessary to support the concepts and directions of the Land Use Plan.

STREET CLASSIFICATION

Map 6-1: Road Classification illustrates the county's transportation resources, along with proposed changes in road classification. Principal roads are classified as follows:

Freeways and Expressways include Interstate 80. Interstate 80 has four interchanges within Keith County: Paxton (Exit 145), Roscoe (Exit 133), Ogallala (Exit 126, Highways 26 and 61), and Brule (Exit 117).

Major Arterials include State and Federal Highways:

- US Highway 26 extends north and west out of Ogallala. The highway links Ogallala with Ash Hollow State Historical Park and eventually runs to the Wyoming state line. A bypass has been developed for Highway 26 1.5 miles west of its former alignment along Spruce Street in Ogallala. Highway 26 is a two-lane section with surfaced shoulders from Ogallala to the Garden County line. It closely follows the routes of the Oregon and Mormon Trails and has been designated the Western Trails Scenic and Historic Byway under the state's scenic byway program.
- US Highway 30 extends east and west through Keith County and serves Paxton, Roscoe, Ogallala, and Brule. Highway 30, formerly the Lincoln Highway, parallels the Union Pacific main line and generally parallels Interstate 80 west of Grand Island. Highway 30 is a two-lane section with surfaced shoulders east of Ogallala, and without shoulders west of Ogallala.
- Nebraska Highway 61, providing north-south access through the county. Highway 61 extends from the Kansas state line near Benkelman, continues through Imperial and Grant, enters Keith

County and passes through Ogallala, crosses Kingsley Dam, and extends north through the Sandhills to Hyannis, Merriman, and the South Dakota state line. Highway 61 is a two-lane section with surfaced shoulders from Ogallala to Martin Bay (with the exception of the passage over Kingsley Dam, which lacks shoulders), and without shoulders north of Martin Bay. The highway provides a two-lane section with paved shoulders just south of Interstate 80, and converts to a two-lane roadway without paved shoulders for the balance of its route through Keith County.

- Nebraska Highway 92, crosses the state from the Scottsbluff/Gering area in the west to the Omaha metropolitan area. Highway 92 in Keith County is the principal road serving the north shore of Lake McConaughy, joining Highway 61 at Martin Bay. It continues as a joint route with Highway 61 north to Arthur in Arthur County, and then splits to continue eastward. Highway 92 in Keith County is a two-lane section without surfaced shoulders.

Other Arterials. These major roads connect with and complement the major arterial system by linking towns with principal highways and connecting various parts of the county and the county to the region. These arterials normally have two-lane paved or gravel sections.

Collectors. These county roads are generally found on section lines and are surfaced with gravel, although in some cases may be paved. These roads typically have low volumes and provide access to agricultural areas, beaches and lake recreational areas, or individual development areas. They may also provide access to rural farmsteads and the arterial system. The Keystone-Sarben Road is the most northern collector road in the county.

Other County Roads. These roads tend to be section line roads on the south side of the county. On the north side they tend to follow the geography of the area and have significant sections that are unimproved.



TRANSPORTATION PLAN

Map 6-2 displays the proposed County Transportation Improvements Plan. The plan includes changes in roadway classification, major pavement upgrade projects, interchange development, and trail development.

Changes in Classification

The Transportation Plan identifies the following major changes in road classification:

- Upgrade of the Keystone Lake Road and the Keystone-Roscoe Road to "other arterial" status. These road segments are currently paved and create a secondary loop joining the communities of Roscoe and Keystone with Interstate 80 and Highway 61 at the Lake Ogallala State Recreation Area.
- Upgrade of Road 120 to "other arterial" status between the Keystone- Roscoe Road and Highway 61. Additional development in the Highway 61 corridor will increase the importance of this farm-to-market link from the east.
- Designation of the Mako Chi Mni (Road West B North) access to collector status. Increased south shore development warrants this new collector designation.

- Designation of Road 130 as a collector between the Keystone-Roscoe Road and the Mako Chi Mni Road. Additional lake corridor and south shore development will increase traffic utilization of this corridor, one mile north of Highway 61 and 26.

- Designation of Lakeview West Road, extending from Lakeview to Eagle Canyon, as a collector. This road links south shore neighborhoods together.

Pavement Upgrades and Transportation System Development

Priorities for Keith County roads will largely depend on the development of the lake area. Accelerated development along the south shore of the lake will require more additional maintenance and probable upgrades to some of the existing access roads.

On the north shore of Lake McConaughy, well-maintained asphalt roads serve older, more established developments. However, the pattern of residential development and recreational resources divided from one another by Highway 92 and an increasingly busy Union Pacific Railroad line, create the potential for major grade crossing safety problems. Environmental impact, development patterns, and topography make grade separations impractical. However, several policies can reduce safety issues, including:

- *Enhanced warning signage and railroad crossing warning equipment at designated crossing points.* In some cases, signals or modified road alignments can increase safe stacking distance at crossings.
- *Creation of greater street interconnectedness among subdivisions north of Highway 92.* Currently, most subdivisions are individual development pods with single points of access of Highway 92. As developments continue north of the highway on the north shore corridor, they should provide lo-

cal roads that interconnect between developments. This provides residents with a low-traffic alternative to Highway 92, and can assist with the management of crossings across the highway and the railroad.

A grade separation is being proposed at the intersection of Highway 61 and the Union Pacific Railroad line on the east side of the lake and could be completed as soon as 2006.

Local road interconnectedness should also guide development design in other potential rural development areas, including conservation development zones, the south shore of the lake where feasible, and the south Highway 61 corridor.

A majority of the county's 860 miles of roads are located south of the North Platte. Sparse development on the north side means few roads and even fewer that are fully accessible. This puts an even greater importance for the county's state and federal road system. It will be very important for the county to continue to work closely with the state to maintain these important links and continue to provide access to all parts of the county. The county should continue its ongoing program of maintaining existing road and bridges and identifying priority improvements within its one- and six-year program.

Road Improvement Program

Short-term road improvements include paving or upgrading of

- K1 Cabin Road, connecting to Highway 61 on Road 130.
- Ogallala Beach Road from the "Y" to the lakefront.
- Mako Chi Mni access from Highway 26 to the lakefront.
- Lakeview West Road, west from Lakeview access to Eagle Canyon area.

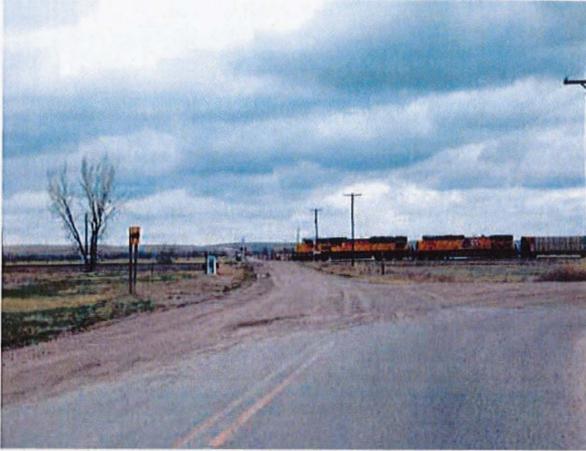
- Road 80 from Road West B to Road East H. Part of Road 80 West passes through the Ogallala planning jurisdiction and is an integral part of the transportation element of the city's comprehensive plan. Road 80 would provide an east-west link to a proposed new Highway 26 interchange, providing a direct south access to commercial, truck-related transportation, industrial, and south county residential development from I-80.

Long-term road improvements include:

- Road 120 from the Highway 61 curve to Keystone-Roscoe Road.
- Road 130 from the Mako Chi Mni access to Keystone-Roscoe Road.
- The farm-to-market road system south of Interstate 80, generally composed of Roads West 40, West 60, West 70 and West 80 from the Deuel County line to Highway 61. Sections of this road are paved. Rehabilitation of deteriorating sections and hard-surfacing of unpaved sections should be in the county's long-term plans.
- Connections to Highway 30 at Interstate 80 crossings including Road West H (Brule exit), Road East H (Roscoe exit), and Road East T (Paxton exit).
- Extension of Road West 70 from Road A to Highway 61. This would be dependent on the amount of development in Ogallala's southern jurisdiction.
- Upgrade of Road 30, Road K and Road 40 in southern Ogallala as an improved collector within the county's southern tier.

Interchange Development

During the late 1990's, Highway 26, once routed along Spruce Street and the Spruce/A Street one-way pair in Ogallala was realigned on a new bypass route 1.5 miles west of the old alignment.



This new route skirts the western edge of Ogallala and provides a direct route to the Ogallala airport and older industrial parks. The current Highway 26 alignment routes traffic back through the city on Highway 30, and south over the Union Pacific viaduct to Interchange 126. Highway 26 terminates at this interchange.

The plan recommends a new interchange for the Highway 26 bypass with Interstate 80. This project will require an overpass over Highway 30, the parallel Union Pacific mainline, and the South Platte River, with an interchange to Highway 30. South of the interchange, Highway 26 should be tied to an improved Road 80, providing direct access from the interstate to industrial and commercial development occurring or planned south of I-80. This relieves truck traffic through the center of Ogallala, increases the marketability of southern industrial areas, and provides a better separation between industrial and resident/visitor traffic in the center of the city.

Trail Development

Keith County is historically a crossroads for the western emigrant trails, and trail development should play a substantial role in the county's transportation and recreation future. Trail access, encouraging bicycle and pedestrian movement, can complement auto travel on the north shore of the lake, reducing environmental impact and traffic congestion. The Nebraska State Trails Plan

(1994) included a detailed analysis of trail development in the Lake McConaughy area. Kirkham Michael and Associates completed a subsequent trail concept for Keith County in 1999.

While Keith County does not currently have a trail system, the relatively recent upgrading of Highway 61 with paved shoulders provides an important bicycle link between Ogallala and Martin Bay.

In addition, the designated Nebraska route of the American Discovery Trail (ADT) crosses through Keith County. Entering the state from the west via Julesberg, Colorado, the ADT in the overall area:

- Extends north from Highway 138 and 30 through Big Springs and follows Big Springs Road to Highway 26.
- Continues along Highway 26 through Ash Hollow State Historical Park to the junction with Highway 92 near Lewellan.
- Continues east along Highway 92 and through state recreation areas on the north shore of Lake McConaughy to Martin Bay.
- Follows Highway 61 to the Keystone Lake Road intersection.
- Follows Keystone Lake Road to Keystone-Roscoe Road, then to the Sutherland Canal maintenance road east to the county line.

The City of Ogallala has also become involved in trail development. It completed an excellent short trail, linking the center of town with Williams Park through the Western Diamonds sports complex. In addition, the city developed a roadside trail, incorporating bicycle and pedestrian access along Highway 26/61 south of 1st Street (Highway 30) to commercial development on the south side of the I-80 interchange. The city's comprehensive plan proposes building on this foundation by providing a comprehensive looped

transportation and recreational trail system that extends as far west as the Highway 26 bypass.

This plan proposes a trail development program composed of the following segments:

- A linked trail network through the Lake McConaughy recreation areas between Martin Bay and Omaha Beach. This trail can connect the lake's beaches and variously passes between wooded and open areas. In addition to providing an excellent recreational enhancement for users of these facilities, it can help to relieve peak-season traffic congestion on Highway 92. In some areas, the trail route may parallel or utilize Highway 92; however, most access is available through recreation areas, and can parallel existing roads. This trail proposal, incorporated into the ADT route, will require participation by the Nebraska Game and Parks Commission (NGPC) and the Central Irrigation District.
- West of Omaha Beach, development of shoulders or a roadside trail along Highway 92 west to the county line. This is also a portion of the American Discovery Trail (ADT) route, linking the Lake McConaughy segment to Highway 26 near Lewellan.
- Continuation of trail development from Martin Bay below Kingsley Dam through Lake Ogallala State Recreation Area. Although road bicyclists can utilize Highway 61 at the top of Kingsley Dam, the Lake Ogallala route furnishes a somewhat safer and less stressful alternative.
- Utilization of paved shoulders and share-the-road signage along Highway 26 from the county line past the "Y" and along Highway 61 from the "Y" to Martin Bay. An ideal trail would provide separated access from the "Y" to the dam and Lake Ogallala along Highway 61.



- Share-the-road signage of Keystone Lake Road and Keystone-Roscoe Road to Sutherland Canal and south to Roscoe.
- Directional signage and trail accommodations along the Sutherland Canal maintenance road
- Directional signage along Road West L, Road West 90, Road West P, and other appropriate roads in the California Hill historical area.
- Consideration for an interconnected wilderness hiking trail on the south shore of the lake, incorporating such a greenway into development plans.
- Share-the-road signage along major highway corridors that experience bicycle travel, including Highway 92, Highway 61 from Martin Bay to Ogallala, Highway 26, Highway 30, Keystone Lake Road, and Keystone-Roscoe Road.
- Appropriate signage and trailblazers for the American Discovery Trail route through Keith County.

INFRASTRUCTURE

Maintaining the existing infrastructure and providing opportunities for growth, where appropriate, is an important concern for Keith County. By efficiently planning for maintenance and strategically locating maintenance equipment and personnel, the county can ensure that maintenance and construction occur in a timely and cost effective way. Infrastructure directions have been discussed in the context of the land use plan.

Storm drainage is handled by surface drainage throughout the county's jurisdiction. Storm drainage flows into the county's network of streams and gulches during heavier rains and eventually into the North and South Platte Rivers.

Most of the county's subdivisions currently utilize individual wells and septic systems.

The specific infrastructure recommendations follow:

Wastewater

The county should continue to monitor the operation of septic systems in rural subdivisions. Within substantial new subdivisions in the Tier 2 development areas, or in subdivisions with a gross density of more than one unit per two acres, community wastewater systems meeting wastewater treatment standards established by DEQ and other regulatory agencies should generally be installed. In addition, the county should encourage replacement of septic systems in subdivisions with community systems when feasible. This is particularly important where residential densities are too high to accommodate replacement septic systems. Candidates for replacement include those areas with higher densities around the Lake, particularly on its north side. Some characteristics of lake developments make wastewater policy relatively complex. While densities on the north side of the lake are higher than on the south shore, many housing units are occu-

ried only on a seasonal basis; as a result, wastewater systems receive minimal use during parts of the year. However, a decline in the number of seasonally occupied units during the 1990's could indicate a change in this pattern.

In new developments the county should encourage the use of environmentally sensitive methods of wastewater treatment and disposal. The conservation concept, maintaining common open space, provides greater opportunities for development of these systems. Techniques such as spray irrigation or land treatment should be incorporated into new projects, and may represent cooperative efforts among several developments. With these methods, wastewater is aerated in deep lagoons and applied to the land surface at rates consistent with the absorption capacity of the soil. This process will require a close working relationship with the Nebraska Department of Environmental Quality to ensure that all state and federal regulations are being met. The county will also encourage and facilitate grants for community wastewater systems.

Other techniques that should be incorporated into new development include:

- *Wastewater Reclamation and Reuse.* This represents a refinement of the land treatment option. Treatment is achieved in deep aerated cells with a residence time of 14 to 40 days. Wastes are macerated or pulped before introduction to the lowest level of the first cell. After further settlement and treatment, the water can then be applied to cropland and open space.
- *Constructed Wetlands.* Artificial wetlands are gaining growing acceptance for treatment of wastewater. Generally, this technique supplements rather than replaces septic treatment. The wetlands provide further treatment for septic effluent before that effluent is conducted to drainage fields.
- *Alternative Sewer Systems.* These systems include septic tank effluent drains, which are

small diameter lines that conduct liquid effluent from septic tanks, which settle out solids. This tandem system reduces the cost of sewer lines and, by reducing solids from the liquid effluent, permits smaller, less expensive treatment plants.

Developments using septic systems should design lots to provide efficient septic fields. Thus, lots that are more nearly square or have a smaller ratio of depth to width are more effective than deep, narrow lots that have a high ratio of width to depth.

Water Systems

New subdivisions developed at higher residential densities should utilize community water systems. The design of these systems should complement the conservation subdivision concept proposed in the Development Concept. They should also provide access for the local fire department to support fire suppression.

The County should also consider the potential development of a rural water system, primarily to serve lakeside residential development. This effort would need to be coordinated with the Twin Platte Natural Resource District which under State Statute is eligible to be the controlling entity for a rural water district. Community system development is most appropriate along the high-density north shore of the lake, including relatively densely settled areas such as Lemoyne. Should the county proceed with this concept, it should begin working with the NRD to form a detailed feasibility study identifying the overall costs and benefits of such a system and a system of assessing costs to beneficiaries.



PUBLIC FACILITIES

Public facilities include public buildings and community services that are necessary to support development in the jurisdiction. Table 6.1: Public Facilities Inventory provides a description, evaluation, and recommended modification for each county facility.

Parks and Recreation

Parks and recreation concepts have been discussed within the land use plan. In addition to municipal parks within constituent towns, the jurisdiction's main regional recreational facilities are Lake McConaughy and Lake Ogallala Recreation areas.

Major park, open space, and recreation recommendations include:

- *Incorporating parkland and open spaces by using the conservation subdivision concepts.* The preservation of a substantial part of a subdivided parcel in common or open space will provide adequate open space for recreational purposes. Central Public Power and Irrigation owns the lakeshore, but the county should still work to safe guard scenic corridors around the lake as development continues to occur. It will be important to preserve the wide-open feel of the natural landscape.



- *Developing a detailed implementation plan for the North and South Platte River corridors.* This concept envisions a system of public lands, held by nonprofit organizations and land trusts, and private lands, united in maintaining the integrity of this unusual environment. The implementation plan and its execution should be developed in cooperation with Ogallala, Paxton and Brule, whose jurisdictions incorporate parts of these corridors. It must also include adjacent property owners and the Department of Natural Resources to develop a cooperative concept for management and to define appropriate levels and locations for public use and access.

- *The completion of regional parks, trail linkages, and river and trail access sites, identified earlier in this plan.*

School Districts

The Keystone school district is located within the village of Keystone and consists of two building. The buildings are in good condition and meeting the areas needs. Since the 1997-98 school year the enrollment has dropped from 30 to 25 and is only projected to be at 23 during the 2002-03 and 2003-04 school years. The district will need to continue to closely monitor funding and funding sources. State aid cuts and increasing pressure from the Unicameral to close K-8 grade districts may make survival difficult.



The Lemoyne School District is located north of Highway 92. The building is in good condition and meets the area's needs. Lemoyne also faces decreasing enrollment, and is likely to have fewer than ten students during the 2002-2003 school year. The district's decreasing enrollment will make its continued existence difficult. The district should plan for decreases in state aid and pressure to consolidate.

Table 6.1: Public Facilities Inventory

<p>Courthouse 511 N. Spruce St. Ogallala, NE</p> <p>Description</p>	<p>The Keith County Courthouse is a brick structure that was constructed in 1962. The upper floor of the split level structure contains the judges offices, county clerk, treasurer, assessor, commissioners room, and county court room. The lower level contains planning and zoning, highway department, veterans affairs, surveyors, probation, extension office and district court.</p> <p>The building is handicap accessible from the east side with handicap parking on both the east and west sides of the building. The bathrooms on the upper level are also accessible. The building and elevator were all designed for the addition of a third floor if necessary.</p> <p>The social services building is located cross West A Street from the courthouse. The wood frame building was originally a residence that has been converted into offices and storages.</p>
<p>Evaluation</p>	<p>Overall the building is in good condition. During the mid 1990's the exterior of the building was refurbished and the HV/AC system was updated. However, the boiler was not updated. Windows in the building are also single-pane and leak a lot of air.</p> <p>The most significant issue facing the courthouse is the need for additional space. Specifically additional storage space. A technology committee has been formed to work on microfilming and archiving documents on to CD's.</p>
<p>Recommendations</p>	<p>Replace single pane windows with more energy efficient windows.</p> <p>Budget for replacement of the boiler system within the next 5 to 10 years.</p> <p>Complete space needs assessment to determine best use of the facility along with a document archiving program to provide additional space.</p>

Table 6.1: Public Facilities Inventory

<p>Sheriff Department Description</p> <p>West A Street south of the Keith County Courthouse</p>	<p>The Keith County Sheriff's department is made up of two structures. The original building is a brick structure that originally housed the jail and a residence for the sheriff. The upper level of the building was the residence while the lower level had 4 jails cells. Today the building houses the department secretary, sheriff's office, chief deputy, sergeant and 4 deputies. The lower level is used for the 911 communications center, a meeting room and the cells are used for storage. The building is not handicap accessible.</p> <p>The new building was completed in 1967 as the new jail. The brick building also provides offices for 6 correctional officers and 1 investigator. The county is currently down to only 4 correctional officers. The building is handicap accessible. An awning is also attached to the south side of the building for department parking and intake.</p> <p>The department has 1 marked van, 7 marked units, and 3 unmarked vehicles. Besides full-time deputies the department also has a reserve force of 5.</p>
<p>Evaluation</p>	<p>Overall the buildings are in good condition. Some remodeling was completed on the older section of the department but additional work is still needed on the exterior of the building. A ramp should also be installed at the front of the building.</p> <p>The newer building also needs some roof work due to periodic leaks. The jail has received outstanding ratings during periodic inspections. The most pressing need within the next 5 to 6 years will be replacement of the motors on the doors within the jail.</p>
<p>Recommendations</p>	<p>Install a ramp at the front door of the sheriff's office to make the building handicap accessible. Additional internal accessibility issues could still exist even with the ramp, such as access to offices and restrooms. A facility analysis should be completed to determine the feasibility of retrofitting the older building and providing additional office and meeting space.</p> <p>The county should budget for replacement of the motors on the jail doors within the next five to six years. The county should also consider updating the intercom system within the jail.</p> <p>Establish a routine replacement program for department vehicles and equipment.</p> <p>Continue routine maintenance and as the buildings age prepare for larger projects.</p>

Table 6.1: Public Facilities Inventory

County Shops	
<p>Brule Shop District 3 Brule, NE</p> <p>Description</p>	<p>The Brule shop consists of two buildings. An older metal building has one bay and a lean-to with parking bays. The building is heated and contains the district’s main maintenance shop and a restroom.</p> <p>A newer three bay metal building is located across the street and has an office and break room. The main use of the building is for storage of the road department’s equipment. The restrooms is partially handicap accessible (its grab bars) and is heated.</p>
Evaluation	The shops are in good condition and seem to be meeting the County’s needs.
Recommendations	Re-establish routine replacement program for all road equipment.
<p>Ogallala Shop District 2 Ogallala, NE</p> <p>Description</p>	<p>There are three buildings that are utilized by District 2 in Ogallala. The main metal building has 2 bays and the 2nd building has only one door but is large enough to store equipment. The third building is used for car impoundments.</p>
Evaluation	The buildings are in good condition and provide adequate space.
Recommendations	<p>Re-establish routine replacement program for all road equipment.</p> <p>Continue routine maintenance.</p>
<p>Paxton Shop 40693 Jamison Road</p> <p>Description</p>	<p>The Paxton Shop is the oldest of the three. The block building has 2 bay doors and a lean-to for storage.</p>
Evaluation	The Paxton facility is in need of addition space. Expansion at the current site is not possible and any additional buildings would need to be at a different location.
Recommendations	<p>Identify location for future expansion.</p> <p>Re-establish routine replacement program for all road equipment.</p> <p>Continue routine maintenance.</p>

Table 6.1: Public Facilities Inventory

School Districts	
Keystone School District No. 12 Keystone, NE	<p>The Keystone school district, a Class One district, includes two buildings both located within the Village of Keystone. The first building is the original brick, 1949 school. The building includes one room for K-2nd grade, one for 3rd-5th grade, a multipurpose room, furnace room and utility room. The library is located along the main hallway of the building.</p>
Description	<p>The second building is a wood framed building that was moved to Keystone in 1973. The building consists of one large room for 6-8th grades, a furnace room and restrooms. The buildings are served by septic and well systems.</p> <p>The district has three teachers and one aid.</p>
Evaluation	<p>Overall the building are in good condition with routine maintenance. Within the older brick building, the district has been updating the lighting systems in each room with only one room remaining to be updated. The roof is getting older and could need work during the planning period.</p> <p>The woodframe building was recently painted and is in good condition. The furnace duct work has recently been fixed and the septic system has been serviced.</p> <p>In approximately 1998 new playground equipment was purchased to add to the older equipment.</p>
Recommendations	<p>Continue routine maintenance.</p> <p>Continued state pressure for removal of Class One school districts will make the future of the district unpredictable. During the 1990's the county lost its superintendent and will likely continue to see decreases in enrollment. This will create funding issues that the district will need to closely monitor. For these reasons the district may need to consider consolidation.</p>

Table 6.1: Public Facilities Inventory

<p>Keith County School District #51 Lemoyne, NE</p> <p>Description</p>	<p>The Lemoyne school district is located along Highway 92 almost 6 miles from the Highways 92 and 61 intersection. The cinder block building was moved to its present location when the village of Lemoyne was moved in the late 1930's/early 1940's. During the 1980's one room was added to the building.</p> <p>The school is a Class One school with one room for grades k-3rd and a second room for grades 4-8. The building also includes a library, restrooms and coatroom. At the end of the 2001-2002 school year the district had two teachers and one aid.</p>
<p>Evaluation</p>	<p>Overall the building is in good condition. Only one of the bathrooms is handicap accessible. The classrooms have recently been carpeted.</p> <p>The district is facing severe budget cuts and will likely have to eliminate the teachers aid position. In addition the district has faced drastically fluctuating enrollments and is expected to drop from 12 students in 2001-2002 school year to 8 in 2002-2003.</p>
<p>Recommendations</p>	<p>Continue routine maintenance.</p> <p>Continued state pressure for removal of Class One school districts will make the future of the district unpredictable. During the 1990's the county lost its superintendent and will likely continue to see decreases in enrollment. Growth among school age children within the lake area will likely occur on the south side of the lake. These children would more likely be attracted to the Ogallala district. The school should prepare for the likely consolidation with the Ogallala school district.</p>

Table 6.1: Public Facilities Inventory

<p>Keith County School District #007 Road East 50</p> <p>Description</p>	<p>School District 007 is the only school located south of Interstate 80 and the South Platte River in Keith County. The one story framed building was opened in the mid 1960's. The building includes one class room, two restrooms, a stage that is also used for a computer room, an enclosed balcony area and a small basement for the furnace room. During the 2002-2003 school year the district had an enrollment of nine students all of which optioned into the district. The district employs one teacher.</p>
<p>Evaluation</p>	<p>Overall the building is in good to excellent condition. Routine maintenance is all this originally temporary building should need.</p>
<p>Recommendations</p>	<p>Continue routine maintenance.</p> <p>Continued state pressure for removal of Class One school districts will make the future of the district unpredictable. The District is currently working with District 1 on consolidation. Because of low attendance it would be more cost effective for District 1 to provide services to the students. The school is meeting state educational requirements, however, because of continued pressure from the state the school should prepare for the likely consolidation with the Ogallala school district.</p>

CHAPTER SEVEN



PLAN IMPLEMENTATION

IMPLEMENTATION SCHEDULE

A Timetable for Implementation of the Keith County Plan

The previous chapters, with their narratives and maps, are the core of the Keith County Plan. This section addresses the scheduling of plan implementation by both public agencies and private decision-makers. These key areas include:

Plan Maintenance. This section outlines a process for maintaining and evaluating Keith County's progress in meeting the goals set in this plan.

Development Policies and Actions. This section summarizes the policies and actions proposed in the Keith County Plan, and presents projected time frames for the implementation of these recommendations.

Plan Maintenance

The scope of the Keith County Plan is both ambitious and long-term. Each of the many actions and policies described in the plan can contribute to the betterment of the county. Yet, presenting a twenty-year development program at one time can appear daunting. Therefore, the county should implement an ongoing planning process that uses the plan to develop year-to-year improvement programs. In addition, this process should evaluate the plan on an annual basis in relation to the development events of the past year.

Such a process may include the following features:

- *Annual Action and Capital Improvement Program.* The Planning Commission and County Commissioners should use the plan to define annual strategic work programs of policies, actions, and capital investments. This program should be coordinated with Keith County's existing capital improvement planning and budgeting process, although most of the plan's recommendations are not capital items. This annual process should be



completed before the beginning of each budget year and should include:

- *A specific work program for the upcoming year.* This program should be specific and related to the county's projected financial resources. The work program will establish the specific plan recommendations that the county will accomplish during the coming year.
- *A three-year strategic program.* This component provides for a multi-year perspective, in forming the preparation of the annual work program. It provides a middle-term implementation plan for the county.
- *A six-year capital improvement program.* This is combined with Keith County's current capital improvement program.
- *Annual Plan Evaluation.* In addition, this process should include an annual evaluation of the comprehensive plan. This evaluation should occur at the end of each calendar year. Desirably, this evaluation should include a written report that:
 - Summarizes key land use developments and decisions during the past year and relates them to the comprehensive plan.
 - Reviews actions taken by the county to implement plan recommendations during the past year.
 - Defines any changes that should be made in the comprehensive plan.



The plan should be viewed as a dynamic changing document that is used actively by the county.

Development Policies and Actions

The following tables in this chapter present a concise summary of the recommendations of the Keith County Plan. These recommendations include various types of efforts:

- *Policies*, indicating continuing efforts over a long period to implement the plan. In some cases, policies include specific regulatory or administrative actions.

- *Action Items*, including specific efforts or accomplishments by the county.

- *Capital Investments*, including public capital projects that will implement features of the Keith County Plan.

Each recommendation is listed according to its section in the Keith County Plan. In addition, a time frame for implementing each recommendation is indicated. Some recommendations require ongoing implementation. Short-term indicates implementation within five years, medium-term within five to ten years, and long-term within ten to twenty years.

Development Trends

	Type	On-going	Short	Medium	Long
<p>MAINTENANCE OF RURAL CHARACTER <i>The area of the County outside of community jurisdictions should maintain the rural character that is so much a part of life in the area.</i></p>	Policy	●			
<p>VALUE OF RESOURCE CONSERVATION <i>Development policies and review in Keith County's jurisdiction should be defined on the basis of their suitability for development and the presence or absence of major natural resources and features.</i></p>	Policy	●			
<p>GRADIENT OF DEVELOPMENT <i>Development categories should include a spectrum of development, generally avoiding placing uses with conflicting characteristics adjacent to one another.</i></p>	Policy Action	●			
<p>CONSERVATION DEVELOPMENT <i>In environmentally sensitive areas, land use policy should require the development of conservation subdivisions, preserving major open space assets as common or open area while providing developers with the same density permitted under conventional development.</i></p>	Policy Action	●	●		
<p>MIXED USE NODES <i>Commercial services in the county should occur within well-defined mixed use nodes, rather than decentralized along linear highway strips.</i></p>	Policy	●			
<p>REGIONAL RECREATION AND NATIONAL HISTORY <i>County planning policy should continue to enhance recreational and historic resources, protect the integrity of these features, and capitalize on the economic opportunities that they create.</i></p>	Policy	●			

Lake McConaughy Specific Corridor Plan

	Type	On-going	Short	Medium	Long
<p>COMMUNITY CLUSTERS <i>Development along the corridor should avoid a continuous strip character.</i></p>	Policy	●			
<p>IDENTIFIABLE COMMUNITIES <i>Define specific communities along the corridor by using graphics, signs, gateways, and landscaping.</i></p>	Action Capital		●	●	
<p>COMMERCIAL FOCUSES <i>Commercial development should be focused at specific locations.</i></p>	Policy	●			
<p>MAJOR CENTERS <i>Major mixed use centers should develop at two strategic locations: the Kingsley Lodge area and the Martin Bay area.</i></p>	Policy	●			
<p>PLANNED DEVELOPMENT DISTRICTS <i>More linear commercial development along segments of the Lake Corridor should occur within planned development districts.</i></p>	Policy	●			
<p>COMMERCIAL TYPES <i>Specific types of corridor commercial development should be defined and directed toward the most appropriate settings.</i></p>	Policy	●			
<p>GENERAL COMMERCIAL STANDARDS <i>Good design standards should be applied to commercial development outside of special overlay district.</i></p>	Policy	●			
<p>NO INDUSTRIAL DEVELOPMENT IN THE LAKE CORRIDOR <i>Industrial development should be directed to other opportunity areas in Ogallala and Keith County, and away from the Lake Corridor.</i></p>	Policy	●			
<p>CORRIDOR RESIDENTIAL DEVELOPMENT <i>Residential development in the Lake Corridor should follow specific standards and practices to upgrade subdivision quality.</i></p>	Policy	●			

Lake McConaughy Specific Corridor Plan

TRANSPORTATION ALTERNATIVES
In order to avoid overloading the highway corridor, the lake transportation and circulation system should provide alternative routes to users.

Type	On-going	Short	Medium	Long
Policy Capital			●	●



Transportation, Infrastructure, and Public Facilities

TRANSPORTATION PLAN

The Transportation Plan identifies the following major changes in road classification:

- Upgrade of the Keystone Lake Road and the Keystone-Roscoe Road to "other arterial" status.
- Upgrade of Road 120 to "other arterial" status between the Keystone- Roscoe Road and Highway 61.
- Designation of the Mako Chi Mni (Road West B North) access to collector status.
- Designation of Road 130 as a collector between the Keystone-Roscoe Road and the Mako Chi Mni Road.
- Designation of Lakeview West Road, extending from Lakeview to Eagle Canyon, as a collector.

Transportation System Development

- Enhance warning signage and railroad crossing warning equipment at designated crossing points.
- Create of greater street interconnectedness among subdivisions north of Highway 92.

Short-term road improvements include paving or upgrading of :

- K1 Cabin Road, connecting to Highway 61 on Road 130.
- Ogallala Beach Road from the "Y" to the lakefront.
- Mako Chi Mni access from Highway 26 to the lakefront.
- Lakeview West Road, west from Lakeview access.

Type	On-going	Short	Medium	Long
Capital			●	
Capital				●
Action			●	
Action				●
Action				●
Capital			●	
Policy Capital	●			
Capital			●	

Transportation, Infrastructure, and Public Facilities

TRANSPORTATION PLAN

Short-term road improvements include paving or upgrading of:

- Road 80 from Road West B to Road East H.

Long-term road improvements include:

- Road 120 from the Highway 61 curve to Keystone-Roscoe Road.
- Road 130 from the Mako Chi Mni access to Keystone-Roscoe Road.
- The farm-to-market road system south of Interstate 80, generally composed of Roads West 40, West 60, West 70 and West 80 from the Deuel County line to Highway 61.
- Connections to Highway 30 at Interstate 80 crossings including Road West H (Brule exit), Road East H (Roscoe exit), and Road East T (Paxton exit).
- Additional interchange at the Highway 26 bypass and Interstate 80.
- Extension of Road West 70 from Road A to Highway 61.
- Upgrade of Road 30, Road K and Road 40 in southern Ogallala as an improved collector within the county's southern tier.

Trail Development

- Development of an extensive trail system through a cooperative effort between the County, NGPC, and Central.

Type	On-going	Short	Medium	Long
Capital			●	
Capital				●
Capital	●			

Transportation, Infrastructure, and Public Facilities

	Type	On-going	Short	Medium	Long
INFRASTRUCTURE PLAN					
<i>Wastewater</i>					
- The county should monitor the operation of septic systems in rural subdivisions.	Policy	●			
<i>Water Systems</i>					
- Utilize community water systems in new subdivisions developed at higher densities.	Policy	●			
PUBLIC FACILITIES PLAN					
<i>Parks and Recreation</i>					
- Incorporating parkland and open spaces into new developments by using the conservation subdivision concepts.	Policy	●			
- Develop a detailed implementation plan for the North and South Platte River corridors.	Action			●	
- Complete of regional parks, trail linkages, and river and trail access sites as laid out in previous plan.	Capital	●			
<i>Keith County Courthouse</i>					
- Replace single pane windows with more energy efficient windows.	Capital		●		
- Budget for replacement of the boiler system within the next 5 to 10 years.	Capital			●	
- Complete space needs assessment to determine best use of the facility.	Action Capital		●		

Transportation, Infrastructure, and Public Facilities

PUBLIC FACILITIES PLAN

Keith County Sheriffs Department

- Install a ramp at the front door of the sheriff's office to make the building handicap accessible.

Capital

•

- Updates to jail including motorized doors and intercom system.

Capital

•

- Establish a routine replacement program for department vehicles and equipment.

Policy

•

Keith County Roads Shops

- Reestablish routine replacement program for all road equipment.

Policy

•

- Budget for replacement of the maintainers at each of the Districts.

Capital

•

- Identify location for future expansion of Paxton Shop.

Action

•

Keith County School Districts 12 and 51

- The school should prepare for the likely consolidation

Action

•

	Type	On-going	Short	Medium	Long
<i>Keith County Sheriffs Department</i>					
- Install a ramp at the front door of the sheriff's office to make the building handicap accessible.	Capital		•		
- Updates to jail including motorized doors and intercom system.	Capital			•	
- Establish a routine replacement program for department vehicles and equipment.	Policy	•			
<i>Keith County Roads Shops</i>					
- Reestablish routine replacement program for all road equipment.	Policy		•		
- Budget for replacement of the maintainers at each of the Districts.	Capital		•		
- Identify location for future expansion of Paxton Shop.	Action			•	
<i>Keith County School Districts 12 and 51</i>					
- The school should prepare for the likely consolidation	Action			•	

APPENDIX A



THE KEITH COUNTY COMPREHENSIVE PLAN

Prime Farmland Soils

(If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Bayard very fine sandy loam, 1 to 3 percent slopes
Bridget silt loam, 0 to 1 percent slopes (where irrigated)
Bridget loam, 1 to 3 percent slopes (where irrigated)
Chapell fine sandy loam, 0 to 3 percent slopes (where irrigated)
Duroc loam, terrace, 0 to 1 percent slopes (where irrigated)
Duroc loam, terrace, 1 to 3 percent slopes (where irrigated)
Duroc silt loam, 0 to 3 percent slopes (where irrigated)
Duroc silt loam, 1 to 3 percent slopes (where irrigated)
Keith loam, 1 to 3 percent slopes (where irrigated)
Keith loam, 3 to 6 percent slopes (where irrigated)
Kuma loam, 0 to 1 percent slopes (where irrigated)
Kuma loam, 1 to 3 percent slopes (where irrigated)
Lex loam, 0 to 2 percent slopes (where drained)
Merrick loam, 0 to 2 percent slopes (where irrigated)
Norwest loam, 0 to 2 percent slopes (where drained)
Rosebud loam, 1 to 3 percent slopes (where irrigated)
Satanta loam, 0 to 1 percent slopes (where irrigated)
Satanta loam, 1 to 3 percent slopes (where irrigated)
Satanta loam, 3 to 6 percent slopes (where irrigated)
Wann fine sandy loam, 0 to 2 percent slopes (where irrigated)

Source: Soil Survey of Keith County, Nebraska, Natural Resource Conservation Service, November 1995, Table 5 - Prime Farmland, page 135.

Sanitary Facilities

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfills	Area sanitary landfill	Daily cover for landfill
Ad----- Alda	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy.
AwF*----- Altvan	Severe: poor filter.	Severe: seepage, slope.	Severe: too sandy	Moderate: slope.	Poor: seepage, too sandy.
Dix	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.
Bb, Bc----- Bankard	Severe: poor filter	Severe: seepage.	Severe: too sandy.	Moderate: flooding.	Poor: seepage, too sandy.
Bd----- Bankard	Severe: flooding poor filter	Severe: seepage, flooding.	Severe: flooding too sandy.	Severe: flooding.	Poor: seepage, too sandy.
BeB----- Bayard	Slight	Severe: seepage.	Severe: seepage.	Severe: seepage.	Good:
Bo----- Boel	Severe: wetness, poor filter	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Poor: seepage, too sandy
Bs----- Bridget	Moderate: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
BtB----- Bridget	Moderate: percs slowly.	Moderate: seepage slope	Slight	Slight	Good.
ChB----- Chappell	Severe poor filter.	Severe: seepage	Severe: too sandy.	Slight	Poor: Seepage, too sandy small stones
Cu----- Cullison	Severe: wetness	Severe: wetness.	Severe: wetness.	Severe: wetness.	Poor: wetness.
Cz----- Cullison	Severe: ponding	Severe: seepage, ponding	Severe: seepage, ponding	Severe: seepage, ponding.	Poor: ponding.
DfE----- Dix	Severe: poor filter, slope.	Severe; seepage, slope.	Severe: seepage, slope, too sandy	Severe: seepage, slope.	Poor: seepage, too sandy, small stones

Sanitary Facilities

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfills	Area sanitary landfill	Daily cover for landfill
DsG*: Dix-----	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.
Sully-----	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
Sarben-----	Severe: slope.	Severe: seepage, slope.	Severe: seepage, slope.	Severe: seepage, slope.	Poor: slope.
Dt----- Duroc	Moderate: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
DtB----- Duroc	Moderate: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.
Du----- Duroc	Moderate: percs slowly.	Moderate: seepage.	Slight	Slight	Good.
DuB----- Duroc	Moderate: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.
Fu*----- Fluvaquents	Severe: flooding, ponding.	Severe: seepage, flooding, ponding.	Severe: flooding, ponding.	Severe: flooding, seepage, ponding.	Poor: ponding.
Go----- Gothenburg	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, wetness.
IpB----- Ipage	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too sandy.	Severe: seepage, wetness.	Poor: seepage, too sandy.
Ja----- Janise	Severe: flooding wetness.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, wetness.	Poor: excess sodium.
Jd----- Janise	Moderate: flooding, percs slowly.	Moderate: seepage.	Severe: excess sodium, excess salt.	Moderate: flooding.	Poor: excess sodium.
KeB, KeC----- Keith	Moderate: percs slowly.	Moderate: seepage, slope.	Slight	Slight	Good.

Sanitary Facilities

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfills	Area sanitary landfill	Daily cover for landfill
Ku----- Kuma	Moderate: percs slowly.	Moderate: seepage.	Moderate: too clayey	Slight	Fair: too clayey.
KuB----- Kuma	Moderate: percs slowly.	Moderate: seepage, slope.	Moderate: too clayey	Slight	Fair: too clayey
La----- Lawet	Severe: wetness, percs slowly.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: wetness.	Poor: wetness.
Le----- Lex	Severe: wetness, percs slowly.	Severe: seepage, wetness.	Severe: seepage, wetness	Severe: seepage, wetness.	Poor; seepage, too sandy.
Lp----- Lodgepole	Severe: ponding, percs slowly.	Severe: seepage, ponding.	Severe: seepage, ponding, too clayey	Severe: ponding.	Poor: too clayey, hard to pack, ponding.
Ma----- Marlake	Severe: ponding, poor filter.	Severe: seepage, ponding.	Severe: seepage, ponding, too sandy	Severe: seepage, ponding.	Poor: seepage, too sandy, ponding.
Me----- Merrick	Moderate: flooding, wetness, percs slowly	Moderate: seepage, wetness.	Severe: wetness.	Moderate: flooding, wetness.	Fair: too clayey.
No----- Norwest	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: too clayey, too sandy, wetness.
Pp*----- Pits & dumps	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: seepage, slope, too sandy.	Severe: seepage, slope.	Poor: seepage, too sandy, small stones.
Pt----- Platte	Severe: flooding, wetness, poor filter.	Severe: seepage, flooding, wetness.	Severe: flooding, seepage, wetness.	Severe: flooding, seepage, wetness.	Poor: seepage, too sandy, wetness.
RtB, RtD----- Rosebud	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock	Slight	Poor: depth to rock.
SaB, SaC----- Sarben	Slight	Severe: seepage.	Severe: seepage.	Severe: seepage.	Good.
SaD----- Sarben	Slight	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Good.

Sanitary Facilities

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfills	Area sanitary landfill	Daily cover for landfill
SaE----- Sarben	Moderate: slope.	Severe: seepage, slope.	Severe: seepage.	Severe: seepage.	Fair: slope.
Sb, SbB, SbC----- Satanta	Moderate: percs slowly.	Severe: seepage	Slight	Slight	Good.
ScD*----- Satanta	Moderate: percs slowly	Severe: seepage.	Slight	Slight	Good.
ScD*----- Dix	Severe: poor filter	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
SfD----- Sully	Moderate: percs slowly.	Severe: slope.	Slight	Slight	Good.
SfG----- Sully	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
SkE* Sully-----	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
Dix-----	Severe: poor filter.	Severe: seepage, slope.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy, small stones.
SmE2* Sully-----	Moderate: percs slowly, slope.	Severe: slope	Moderate: slope.	Moderate: slope.	Fair: slope.
McConaughy	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
SmF* Sully-----	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Poor: slope.
McConaughy	Moderate: percs slowly, slope.	Severe: slope.	Moderate: slope.	Moderate: slope.	Fair: slope.
TaG* Tassel-----	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.
Otero-----	Severe: slope.	Severe: seepage, slope.	Severe: slope.	Severe: slope.	Poor: slope.
Rock outcrop	Severe depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.

Sanitary Facilities

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfills	Area sanitary landfill	Daily cover for landfill
VdB, VdD----- Valent	Severe: poor filter	Severe: seepage.	Severe: too sandy.	Slight	Poor: seepage, too sandy.
VdE----- Valent	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope. too sandy.	Severe: slope.	Poor: Seepage, too sandy, slope
VdF*: Valent-----	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope, too sandy.	Severe: slope.	Poor: seepage, too sandy, slope.
Valent-----	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope, too sandy.	Severe: slope.	Poor: seepage, too sandy, slope.
VgG----- Valent	Severe: poor filter, slope.	Severe: seepage, slope.	Severe: slope, too sandy.	Severe: slope.	Poor: seepage, too sandy, slope.
VtG*: Valent-----	Severe: poor filter.	Severe: seepage, slope.	Severe: too sandy.	Moderate: slope.	Poor: seepage, too sandy.
Tassel-----	Severe: depth to rock, slope.	Severe: seepage, depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope.	Poor: depth to rock, slope.
Rock outcrop	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Poor: area reclaim, slope.
VwB----- Vital	Slight	Severe: seepage.	Severe: seepage.	Severe: seepage.	Fair: thin layer.
Wa----- Wann	Severe: wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Severe: seepage, wetness.	Fair: wetness, thin layer.

Source: Soil Survey of Keith County, Nebraska; Natural Resources Conservation Service; Table 13--Sanitary Facilities pages 166-170.

Some terms that describe restrictive soil features are defined in the "Glossary" of the Soil Survey of Keith County, Nebraska. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation.

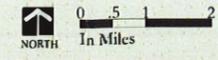
* See description of the map unit for composition and behavior characteristics of the map unit in the Soil Survey of Keith County.

Keith County Nebraska

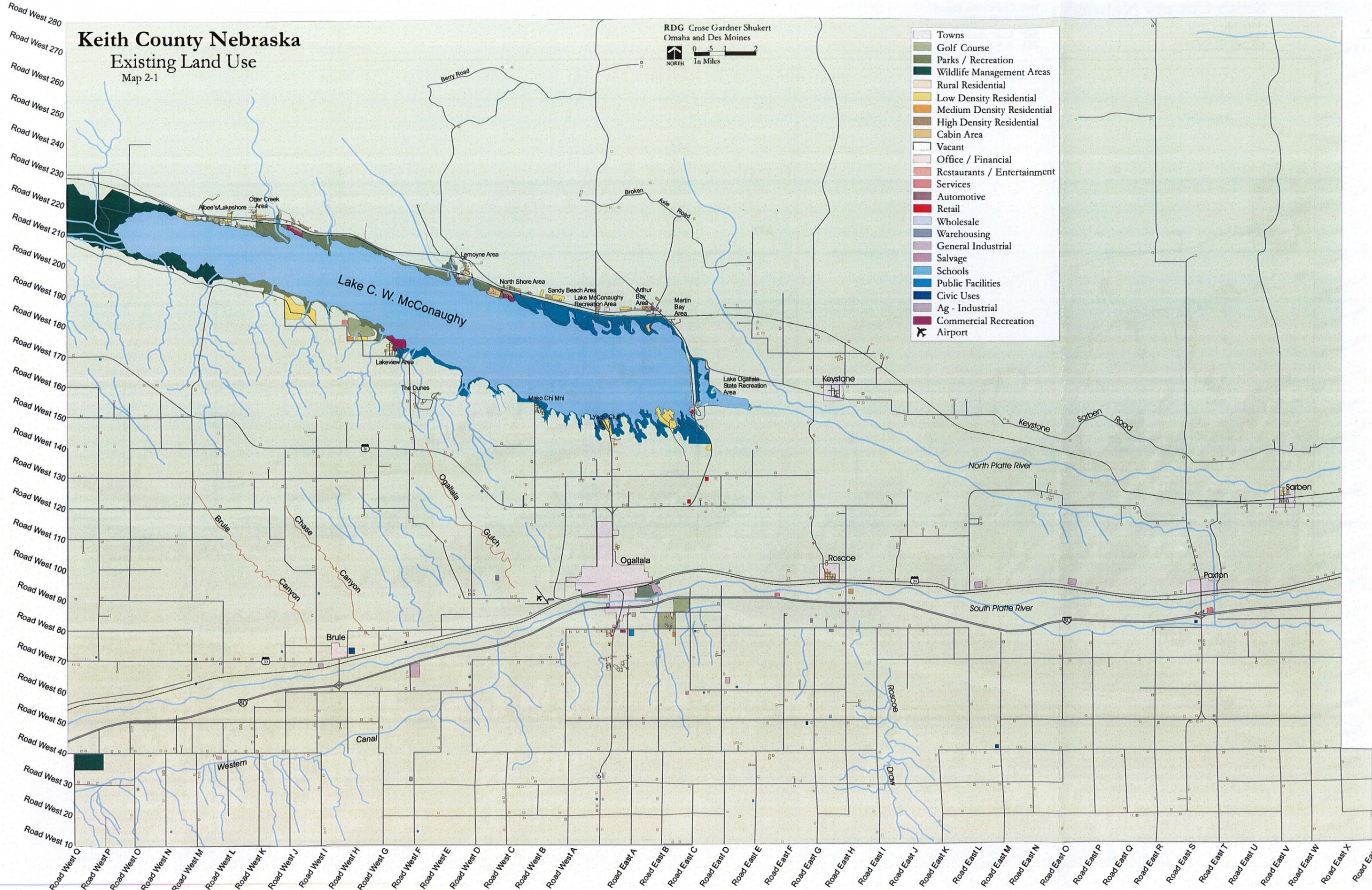
Existing Land Use

Map 2-1

RDG Crose Gardner Shukert
Omaha and Des Moines



- Towns
- Golf Course
- Parks / Recreation
- Wildlife Management Areas
- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Cabin Area
- Vacant
- Office / Financial
- Restaurants / Entertainment
- Services
- Automotive
- Retail
- Wholesale
- Warehousing
- General Industrial
- Salvage
- Schools
- Public Facilities
- Civic Uses
- Ag - Industrial
- Commercial Recreation
- Airport

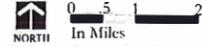


Keith County Nebraska

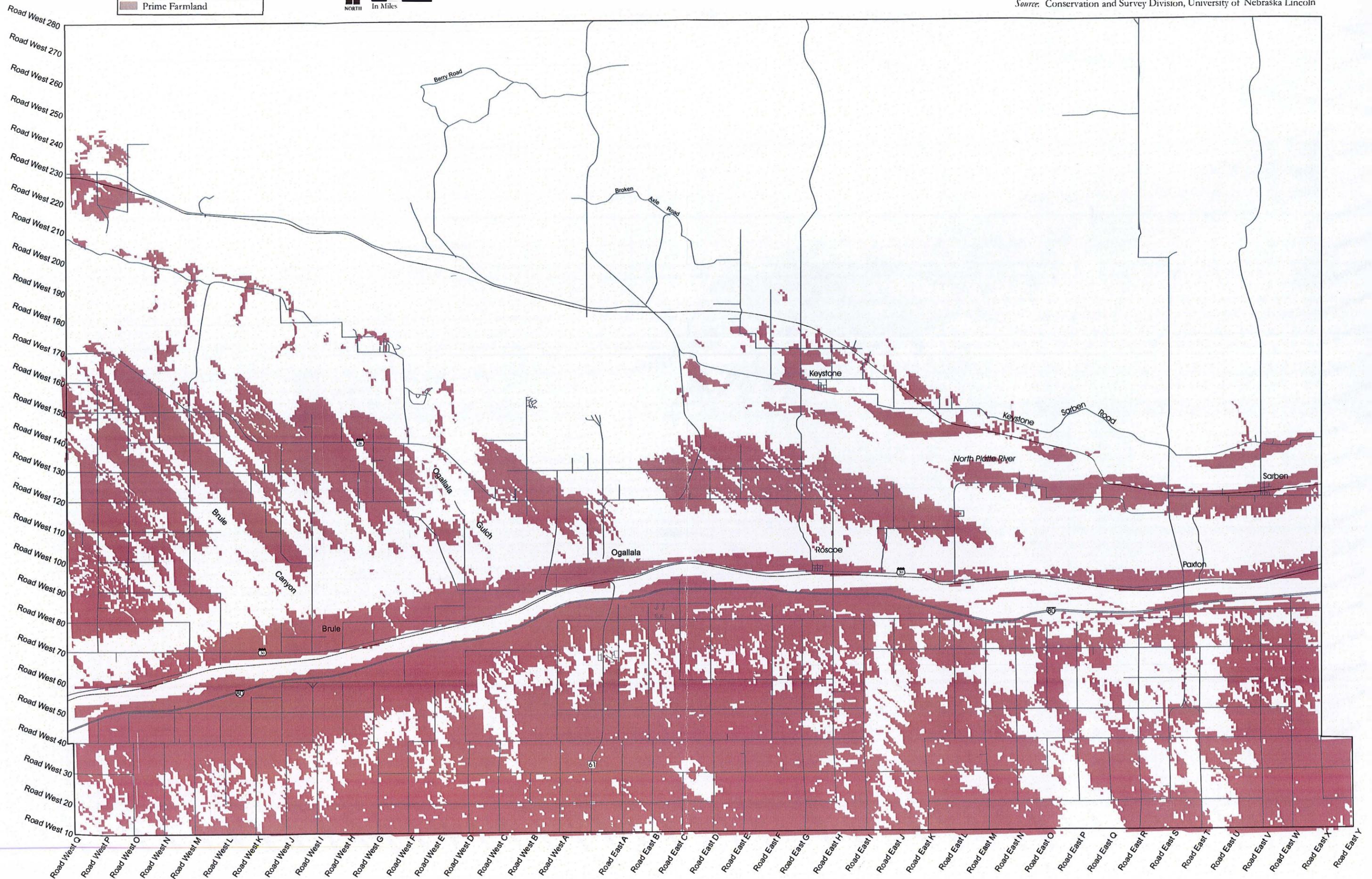
RDG Crose Gardner Shukert
Omaha and Des Moines

Map 3-1

Prime Farmland



Source: Conservation and Survey Division, University of Nebraska Lincoln



Keith County Nebraska

RDG Crose Gardner Shukert
Omaha and Des Moines

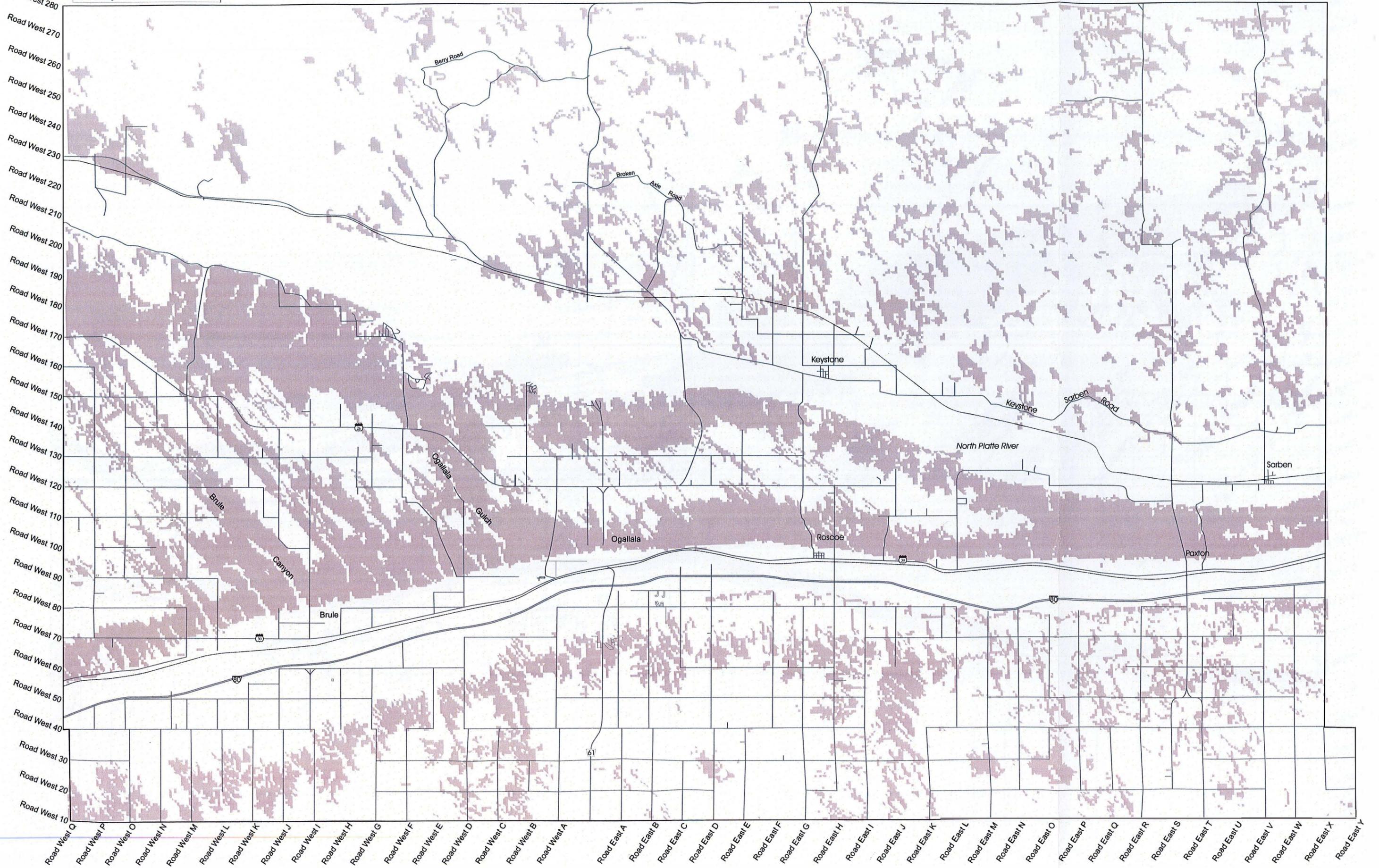
Map 3-2

Slopes > 6%



0 5 1 2
In Miles

Source: Conservation and Survey Division, University of Nebraska Lincoln

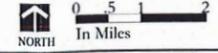


Keith County Nebraska

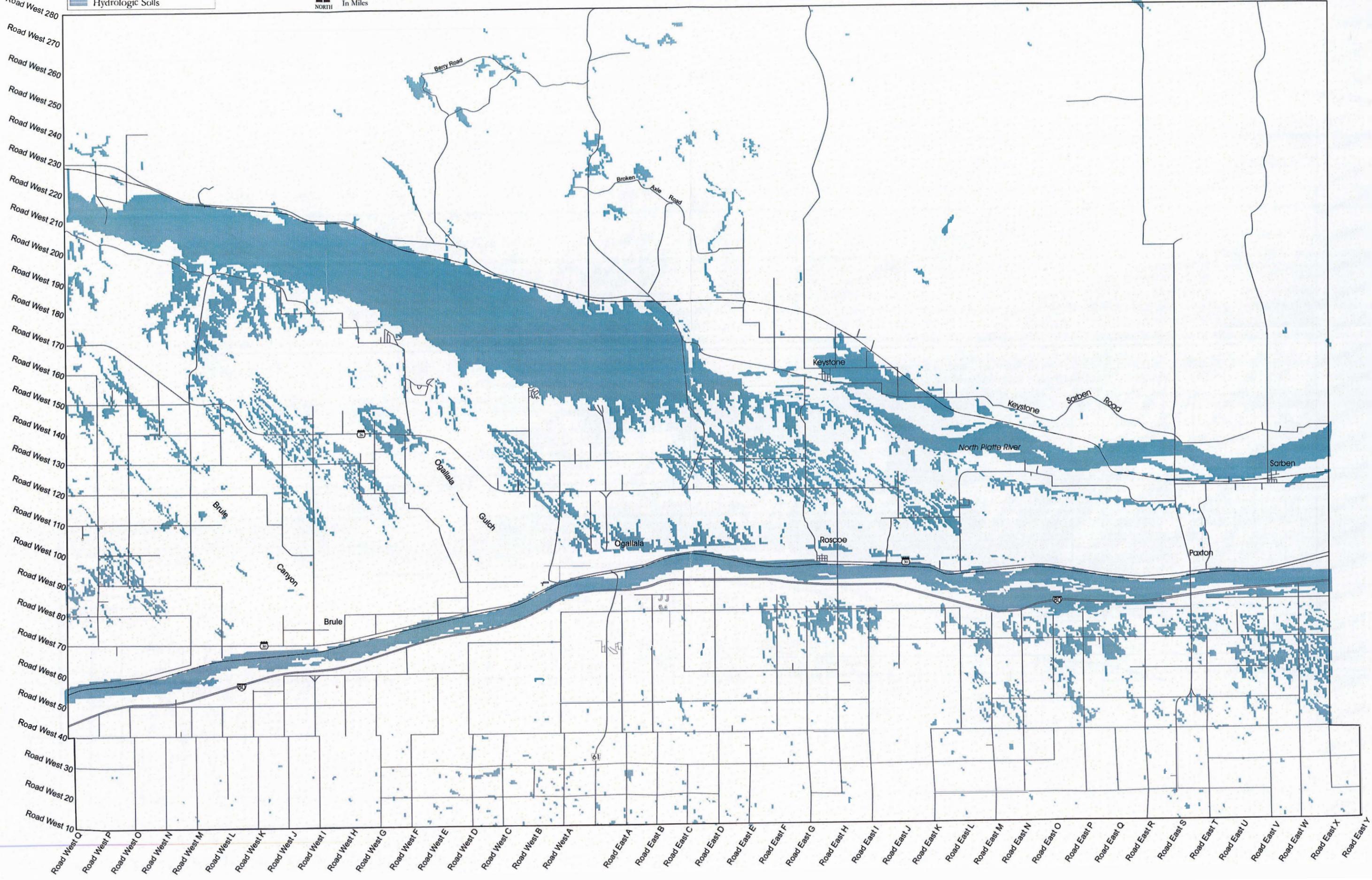
RDG Crose Gardner Shukert
Omaha and Des Moines

Map 3-3

Hydrologic Soils



Source: Conservation and Survey Division, University of Nebraska Lincoln

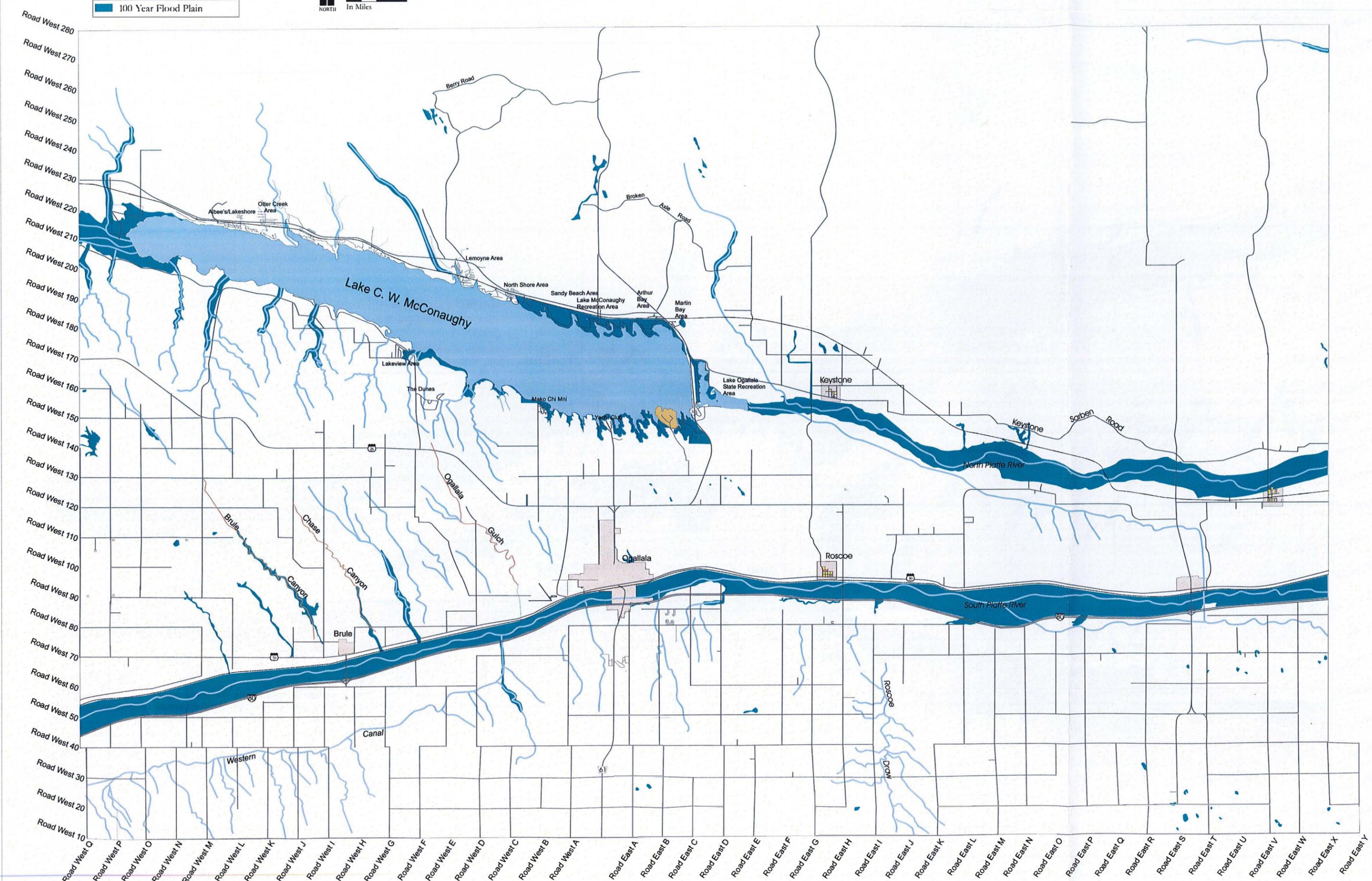


Keith County Nebraska

RDG Crose Gardner Shukert
Omaha and Des Moines

Map 3-4

100 Year Flood Plain



Keith County Nebraska

RDG Crose Gardner Shukert
Omaha and Des Moines

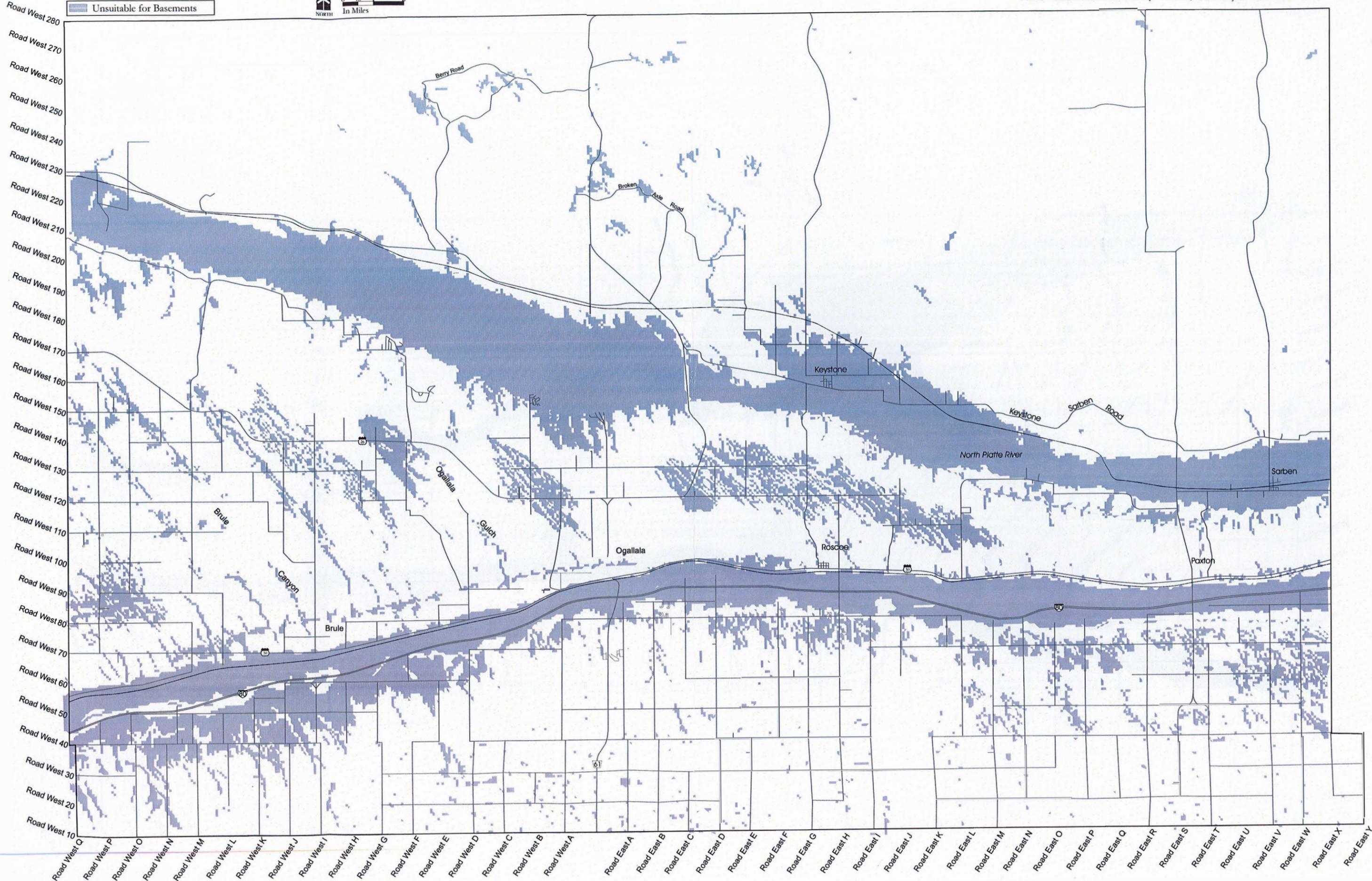
Source: Conservation and Survey Division, University of Nebraska Lincoln

Map 3-5

Unsuitable for Basements



0 5 1 2
In Miles



Keith County Nebraska

RDG Crose Gardner Shukert
Omaha and Des Moines

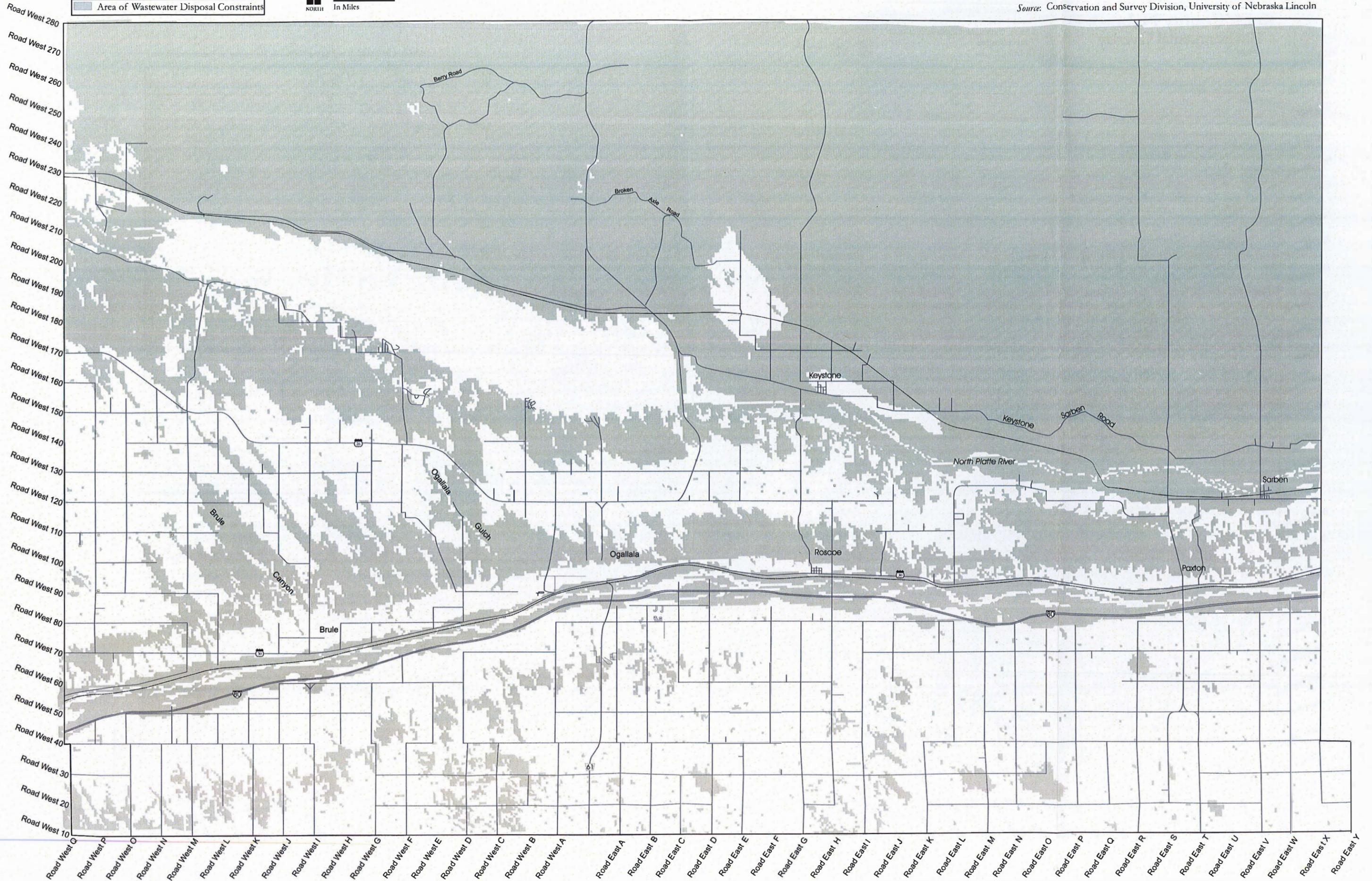
Map 3-6

Area of Wastewater Disposal Constraints



0 .5 1 2
In Miles

Source: Conservation and Survey Division, University of Nebraska Lincoln



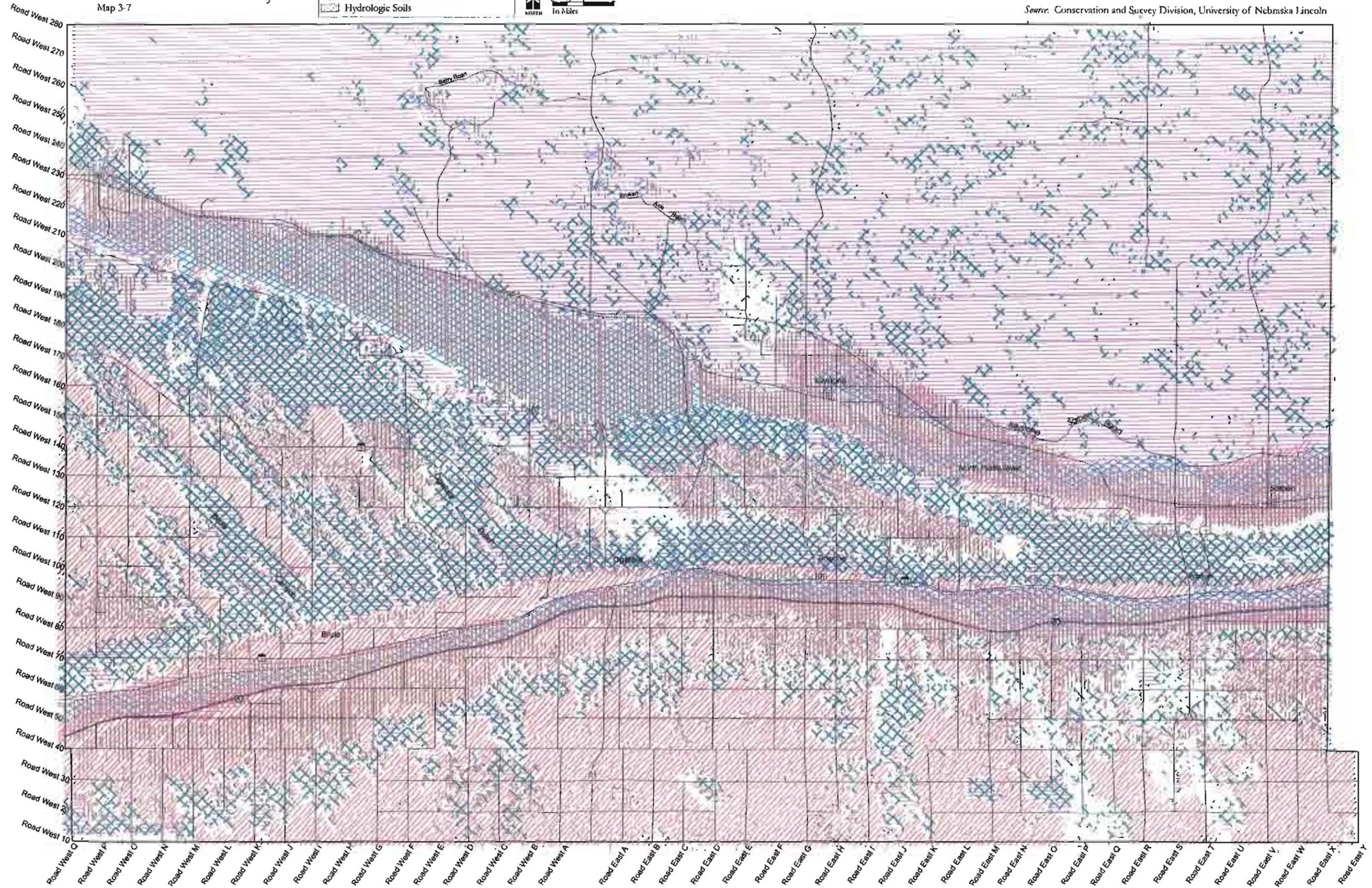
Keith County Nebraska Environmental Overlay Map 3-7

- Unsuitable for Basements
- Slopes > 6%
- Area of Wastewater Disposal Constraints
- Prime Farmland
- Hydrologic Soils

RDG Crose Gardner Shukert
Omaha and Des Moines



Source: Conservation and Survey Division, University of Nebraska Lincoln



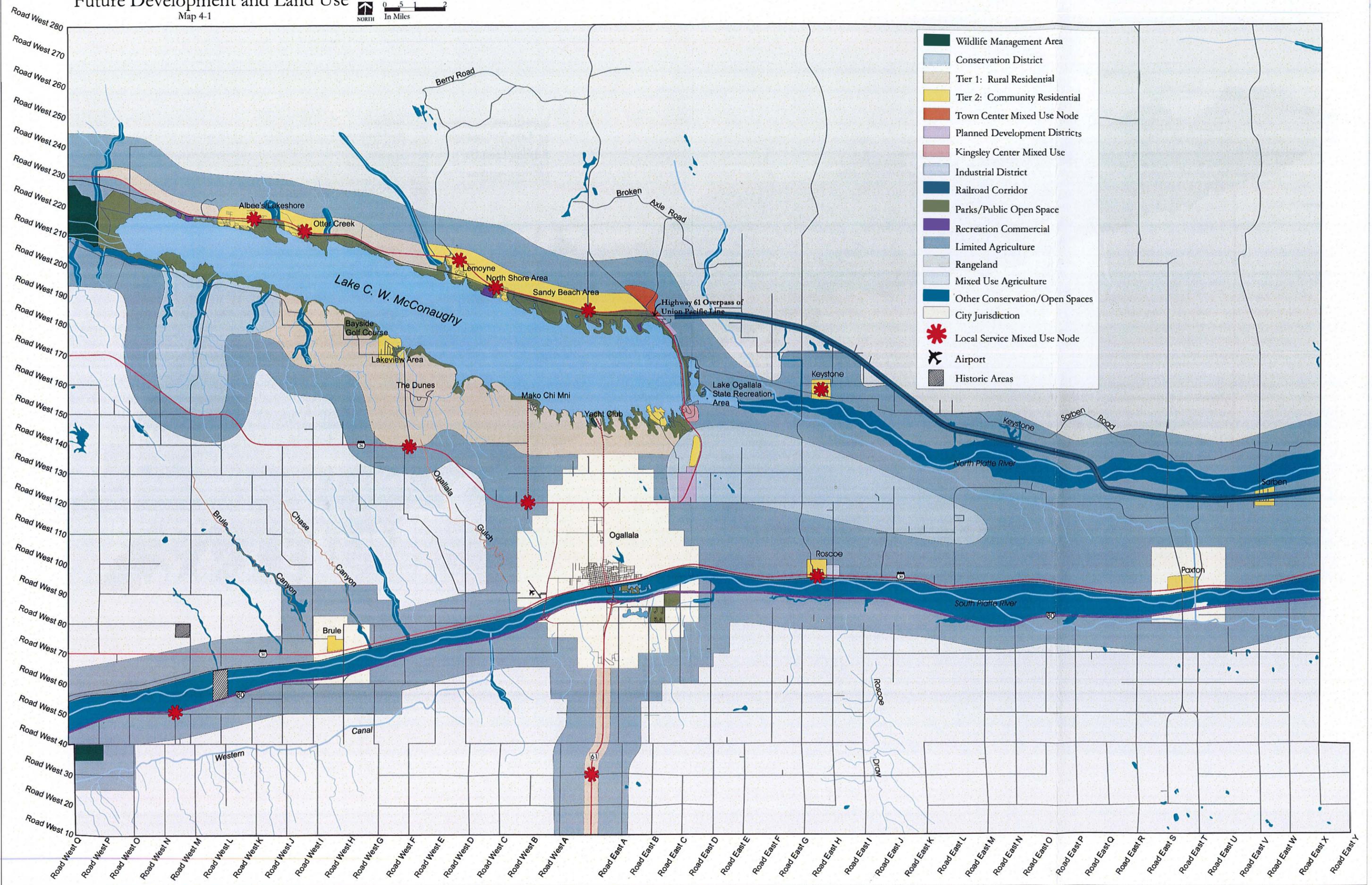
Keith County Nebraska

Future Development and Land Use

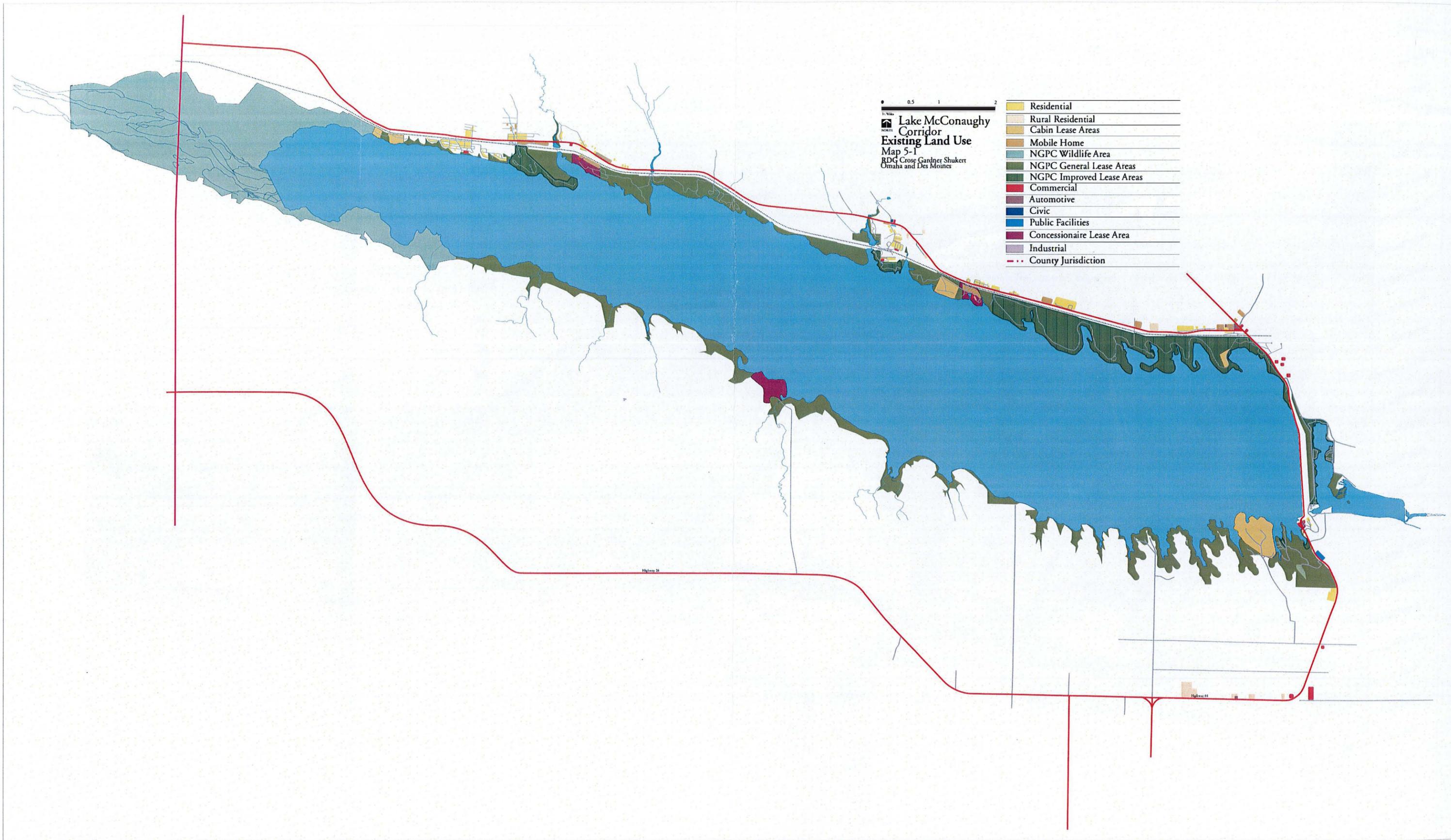
Map 4-1

RDG Crose Gardner Shukert
Omaha and Des Moines

0 .5 1 2
In Miles

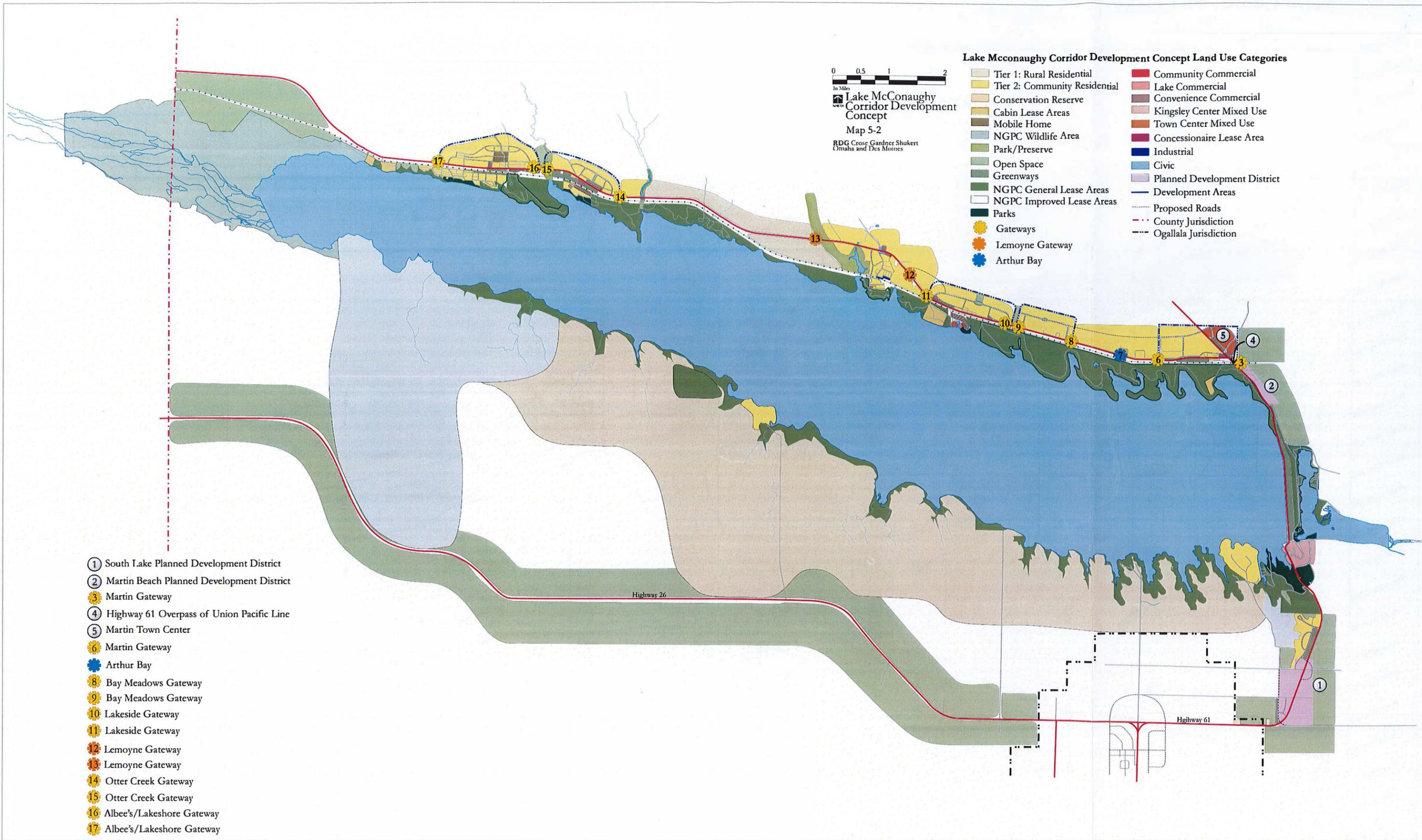


- Wildlife Management Area
- Conservation District
- Tier 1: Rural Residential
- Tier 2: Community Residential
- Town Center Mixed Use Node
- Planned Development Districts
- Kingsley Center Mixed Use
- Industrial District
- Railroad Corridor
- Parks/Public Open Space
- Recreation Commercial
- Limited Agriculture
- Rangeland
- Mixed Use Agriculture
- Other Conservation/Open Spaces
- City Jurisdiction
- Local Service Mixed Use Node
- Airport
- Historic Areas



0 0.5 1 2
 Lake McConaughy
 Corridor
 Existing Land Use
 Map 5-1
 RDG Cross Gardner Shukert
 Omaha and Des Moines

- Residential
- Rural Residential
- Cabin Lease Areas
- Mobile Home
- NGPC Wildlife Area
- NGPC General Lease Areas
- NGPC Improved Lease Areas
- Commercial
- Automotive
- Civic
- Public Facilities
- Concessionaire Lease Area
- Industrial
- County Jurisdiction



0 0.5 1 2
In Miles

**Lake McConaughy
Corridor Development
Concept**

Map 5-2

RDG Crose Gardner Shukert
Omaha and Des Moines

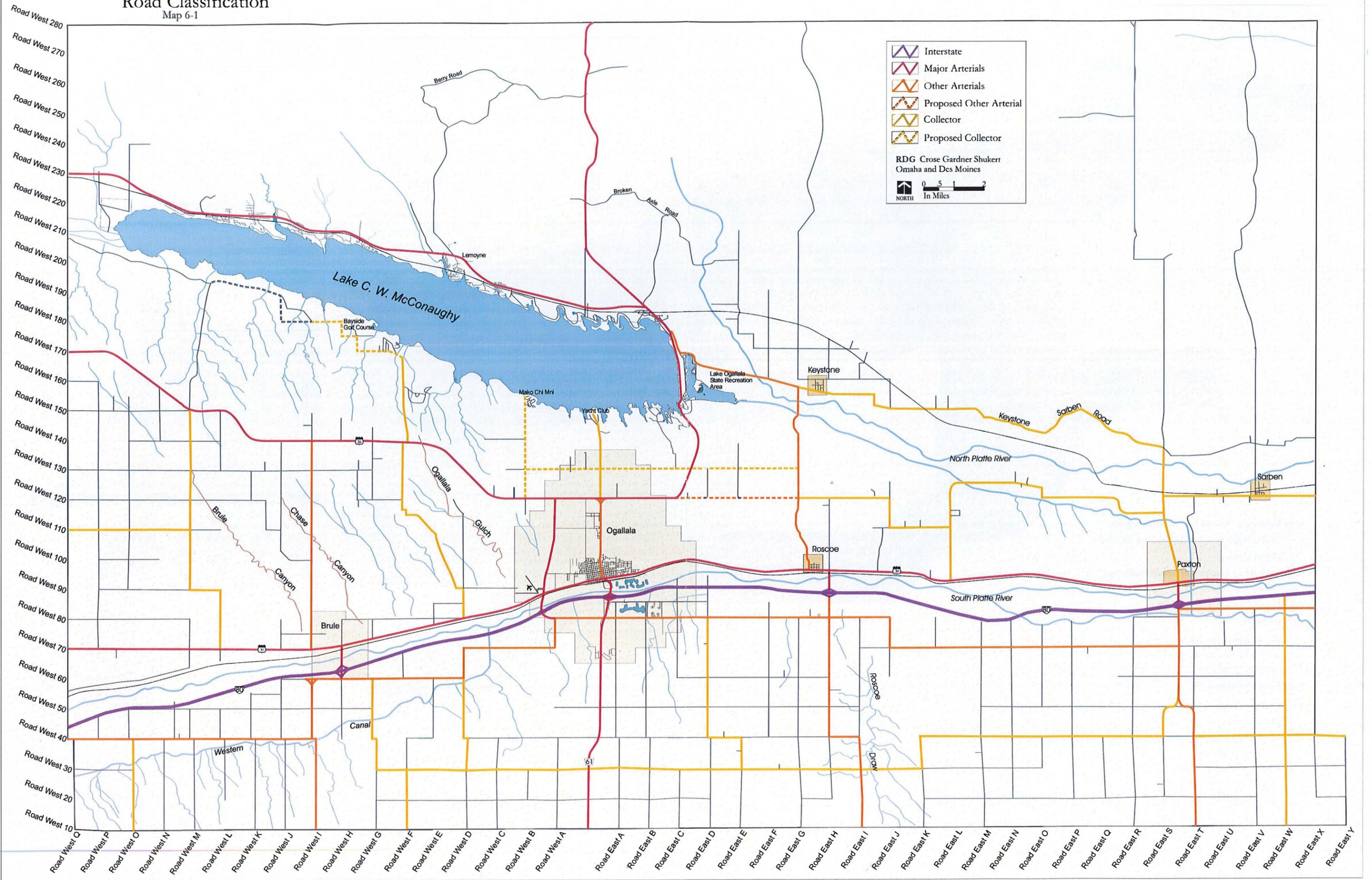
- Lake McConaughy Corridor Development Concept Land Use Categories**
- Tier 1: Rural Residential
 - Tier 2: Community Residential
 - Conservation Reserve
 - Cabin Lease Areas
 - Mobile Home
 - NGPC Wildlife Area
 - Park/Preserve
 - Open Space
 - Greenways
 - NGPC General Lease Areas
 - NGPC Improved Lease Areas
 - Parks
 - Gateways
 - Lemoyne Gateway
 - Arthur Bay
 - Community Commercial
 - Lake Commercial
 - Convenience Commercial
 - Kingsley Center Mixed Use
 - Town Center Mixed Use
 - Concessionaire Lease Area
 - Industrial
 - Civic
 - Planned Development District
 - Development Areas
 - Proposed Roads
 - County Jurisdiction
 - Ogallala Jurisdiction

- ① South Lake Planned Development District
- ② Martin Beach Planned Development District
- ③ Martin Gateway
- ④ Highway 61 Overpass of Union Pacific Line
- ⑤ Martin Town Center
- ⑥ Martin Gateway
- Arthur Bay
- ⑧ Bay Meadows Gateway
- ⑨ Bay Meadows Gateway
- ⑩ Lakeside Gateway
- ⑪ Lakeside Gateway
- ⑫ Lemoyne Gateway
- ⑬ Lemoyne Gateway
- ⑭ Otter Creek Gateway
- ⑮ Otter Creek Gateway
- ⑯ Albee's/Lakeshore Gateway
- ⑰ Albee's/Lakeshore Gateway

Keith County Nebraska

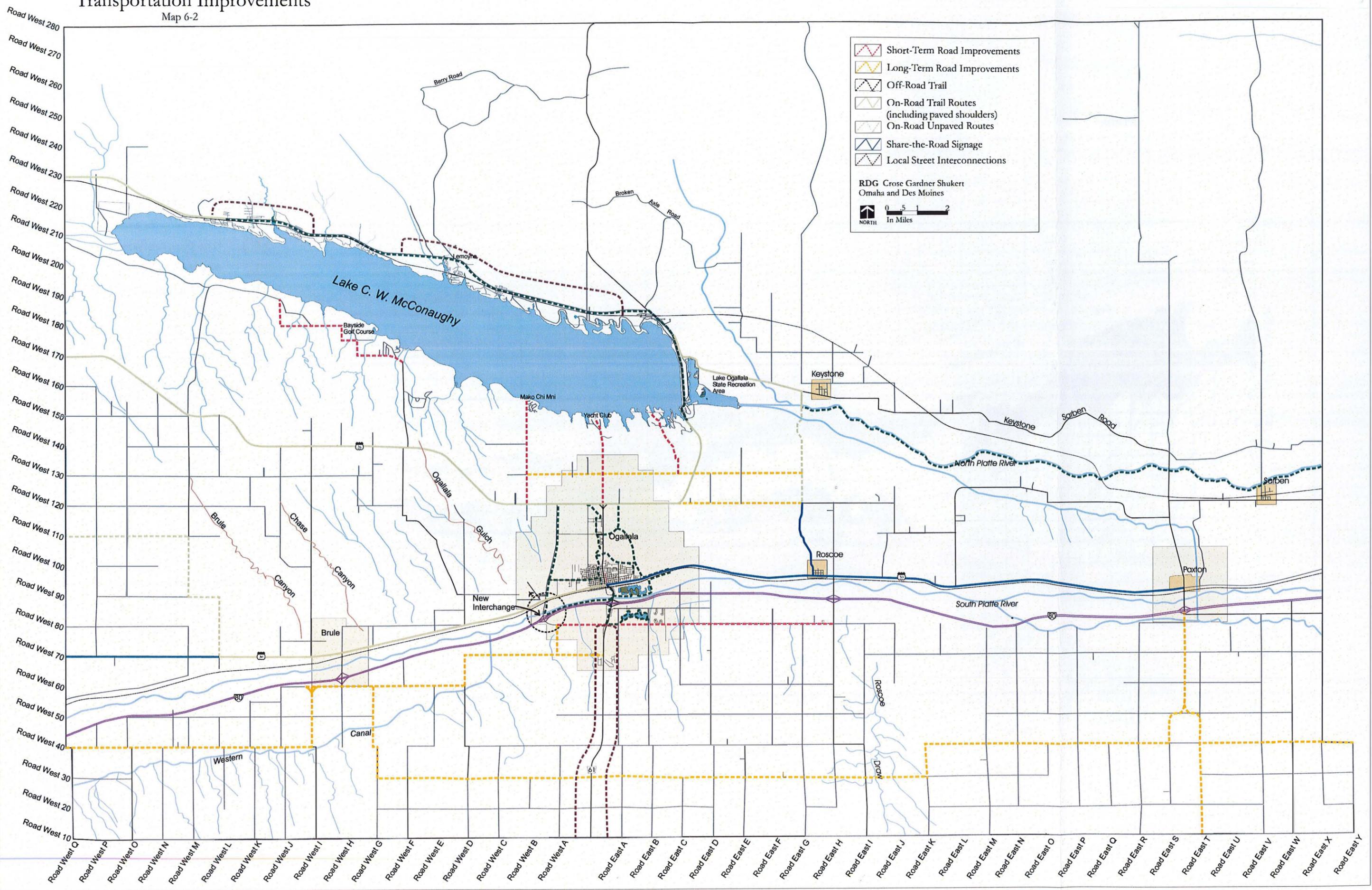
Road Classification

Map 6-1



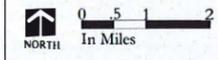
Keith County Nebraska Transportation Improvements

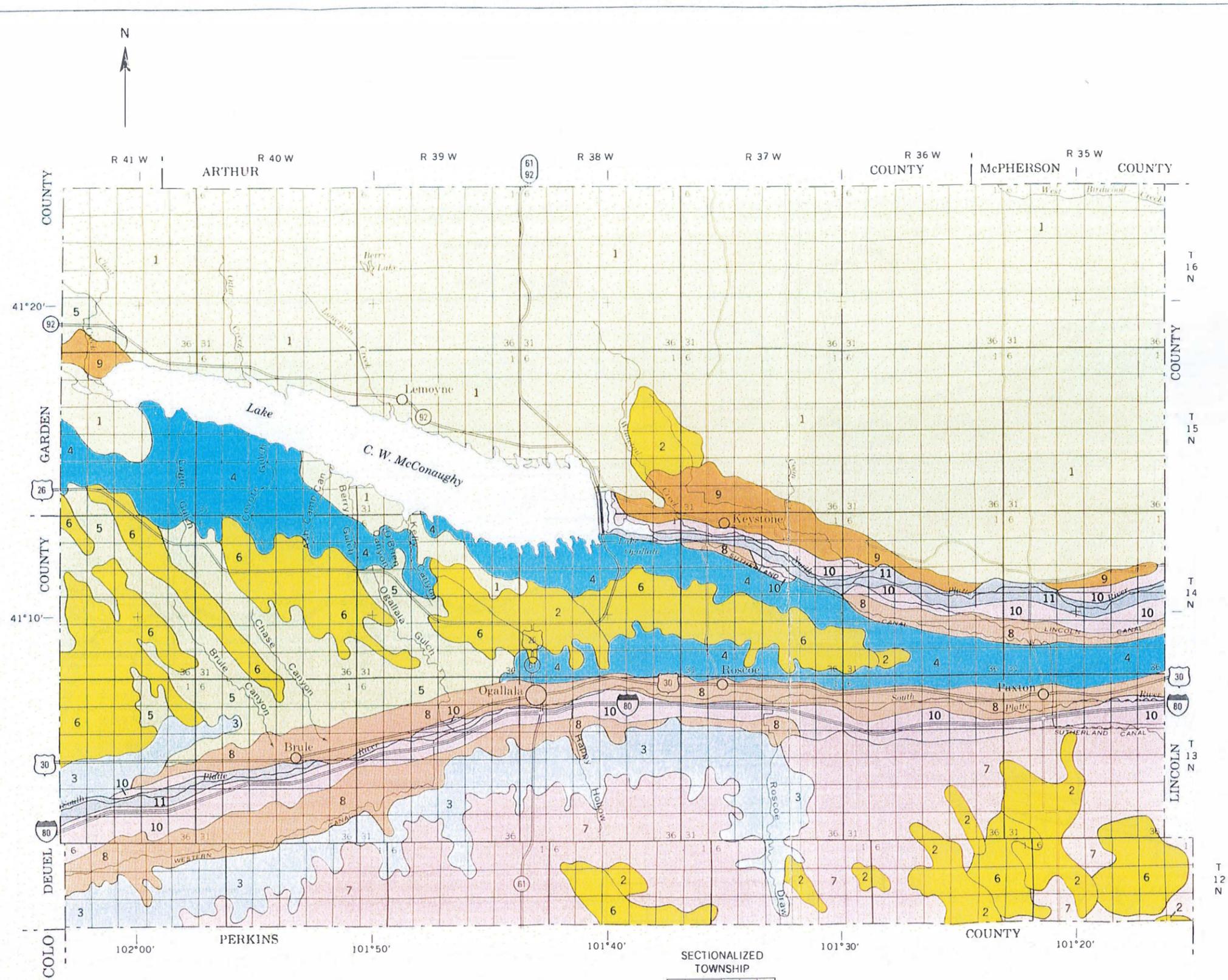
Map 6-2



-  Short-Term Road Improvements
-  Long-Term Road Improvements
-  Off-Road Trail
-  On-Road Trail Routes (including paved shoulders)
-  On-Road Unpaved Routes
-  Share-the-Road Signage
-  Local Street Interconnections

RDG Crose Gardner Shukert
Omaha and Des Moines





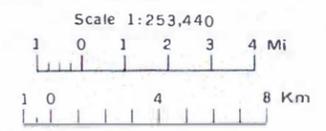
SOIL LEGEND*

- 1 Valent association
- 2 Sarben-Vetal association
- 3 Satanta-Dix-Altvan association
- 4 Sully-Dix-Tassel association
- 5 Sully-McConaughy association
- 6 Kuma-Duroc-Keith association
- 7 Satanta-Kuma association
- 8 Bayard-Duroc-Bridget association
- 9 Janise-Boel-Lawet association
- 10 Lex-Norwest-Alda association
- 11 Gothenburg-Platte association

* The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 1994

UNITED STATES DEPARTMENT OF AGRICULTURE
 NATURAL RESOURCES CONSERVATION SERVICE
 UNIVERSITY OF NEBRASKA
 CONSERVATION AND SURVEY DIVISION
GENERAL SOIL MAP
 KEITH COUNTY, NEBRASKA



SECTIONALIZED TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.