1

Introduction

Location

Colfax County is located in northeast Nebraska along the Platte River. The county has a number of highways crossing the area including US Highway 30, Nebraska Highways 15, 91 and 57 Colfax County is also along the main line of the Union Pacific Railroad. The county is home to the communities of Schuyler (county seat), Clarkson, Howell, Leigh, Richland and Rogers.

History of Colfax County

The history of Colfax County right has been taken directly from http:// colfaxne.com/webpages/about/ history.html

Few Nebraska countries can make the claims Colfax County can. When the Legislature created the county and subsequently established the county seat in 1869, it looked like Washington, D.C. for a name. Schuyler Colfax was vice president at the time, and Colfax was selected for the county name, while Schuyler was chosen for the county seat. Ironically, just fifteen years earlier Colfax was a vocal supporter of a group that opposed the creation and settlement of the Nebraska Territory.

Colfax County was established fifty-six years after the first documented report of white men traveling through the Platte River Valley. Seven members of a John Jacob Astor exploration party are said to have been returning from the Pacific Northwest when they came upon the broad valley that was inhabited by the Pawnee tribe. Over the ensuing thirty years an increasing number of traders, trappers, gold miners, and Mormon settlers passed through the area.

Farmer Daniel Hashberger settled near the future site of Schuyler in 1864. Within two years the Union Pacific Railroad was pushing westward and the Shell Creek station, later to become Schuyler, was established. By 1869, when the site was selected as the county seat, the railroad was the sole owner of the property at the site. Schuyler was incorporated in 1870.

Upon Colfax County creation it was withdrawn from Platte County, whose inhabitants objected to the split. An agreement was worked out whereby Colfax County would assume its proportionate share of county indebtedness that existed at the time.

As Schuyler and the surrounding area began to develop, it became apparent that a courthouse was needed. By 1872 a two-story brick and stone building was completed, complete with a tin roof and an ornamental tower. An interesting note is that the first floor was used for apartments for county officers, as well as for cells for prisoners. The second floor housed the court room. This building would serve Colfax County until 1922, when the present brick and terra cotta trim courthouse replaced it.

Purpose of the Comprehensive Development Planning

The Colfax County Comprehensive Development Plan is designed to promote orderly growth and development for the county, as well as providing policy guidelines to enable citizens and elected officials to make informed decisions about the future of the county.

The Comprehensive Development Plan will provide a guideline for the location of future developments and uses within the planning jurisdiction of Colfax County. The Comprehensive Development Plan is intended to encourage a strong economic base for the City so all goals can be achieved.

The Comprehensive Development Plan is intended as an information and management tool for County leaders to use in their decision-making process when considering future developments. The Comprehensive Development Plan is not a static document; it should evolve as changes in the land-use, population or local economy occur during the planning period.

Introduction

The Planning Process

The Comprehensive Development Plan begins with the development of general goals and policies, based upon current and future issues faced by the County and its residents. These are intended to be practical guidelines for addressing existing conditions and guiding future growth.

In conjunction, with the Comprehensive Development Plan a data collection phase will be necessary. Data are collected to provide a snapshot of the past and present conditions within the community. Analysis of data provides the basis for developing forecasts for future land use demands, as well as future needs regarding housing and facilities.

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

The Comprehensive Development Plan identifies the tools, programs, and methods necessary to carry out the recommendations. Nevertheless, the implementation of the development policies contained within the Comprehensive Development Plan is dependent upon the adoption of the Plan by the governing body, and the leadership exercised by the present and future elected and appointed officials of the County.

Plan Preparation

The Plan was prepared under the direction of Colfax County Planning Commission, with the assistance and participation of the Colfax County Board of Commissioners, County staff, the Plan Review Committee and citizens of Colfax County. The time period for achieving the goals, programs, and developments identified in the Colfax County Comprehensive Development Plan is twenty years. However, the County should review the Plan annually and update the document every 10 years (2023), or when an anticipated opportunity arises. Completing updates approximately every ten years or so will allow the County to incorporate ideas and developments that were not known at the time of the present comprehensive planning process.

Comprehensive Plan Components

Nebraska State Statutes require the inclusion of certain elements in a Comprehensive Plan. A "Comprehensive Development Plan," as defined in Neb. Rev. Stat. § 23-114.02 (Reissue 1997), "shall consist of both graphic and textual material and shall be designed to accommodate anticipated long-range future growth." The Comprehensive Plan is comprised of the following chapters and sections: Colfax County Introduction Chapter

•Public Participation Chapter
•Population Statistics Chapter
•Housing Chapter
•Economics/Economic Development Chapter
•County Facilities Chapter
•Natural Resources/Environmental Chapter
•Energy Chapter
•Land Use Chapter
•Transportation Chapter
•Implementation Chapter

Analyzing past and existing demographic, housing, economic and social trends allow the projection of likely conditions in the future. Projections and forecasts are useful tools in planning for the future; however, these tools are not always accurate and may change due to unforeseen factors. Also, past trends may be skewed or the data may be inaccurate, creating a distorted picture of past conditions. Therefore, it is important for Colfax County to closely monitor population, housing and economic conditions that may impact the County.

Through periodic monitoring, the County can adapt and adjust to changes at the local level. Having the ability to adapt to socio-economic change allows the County to maintain an effective Comprehensive Development Plan for the future, to enhance the quality of life, and to raise the standard of living for all residents.

The Plan is only one of several tools within the toolbox that helps guide the community into the

The Comprehensive Development Plan develops a record of the Colfax County past, present, and future developments. Having this record in the Comprehensive Development Plan will serve to keep County officials as much as possible. The Comprehensive Development Plan is an information and management tool for County leaders to use in their decision-making process when considering future developments. The Comprehensive Development Plan is not a static document; it should evolve as changes in the land-use, population or local economy occur during the planning period. This information is the basis for Colfax County's evolution as it achieves its physical, social, and economic goals.

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

GOVERNMENTAL AND JURISDICTIONAL ORGANIZATION

The Colfax County Board of Commissioners is a board of elected officials perform the governmental functions for the County. Each incorporated community in Colfax County also has elected officials and officers that oversee how the individual community is governed.

The planning and zoning jurisdiction of Colfax County, pursuant to Neb. Rev. Stat. § 23-114 (Reissue 1997), includes all of the unincorporated includes all of the unincorporated portions of the County, excluding the established extraterritorial jurisdiction of each incorporated city or village.

Pursuant to Neb. Rev. Stat. § 17—1002 (Reissue 1997), the planning and zoning jurisdiction for the incorporated communities in Colfax County that have adopted Comprehensive Planning and Zoning Ordinances, include the area within one mile of their corporate limits. The City of Schuyler has the authority to exercise planning and zoning jurisdiction throughout a two-mile extraterritorial jurisdiction. As these communities grow and annex land into their corporate limits, their extraterritorial jurisdiction will extend further into the County.

2

Community Engagement

PUBLIC PARTICIPATION

Public participation is critical to a successful planning effort. Without the use of public participation it is difficult to have a clear understanding of how the residents feel regarding different parts of the community. Solid public participation includes the uses of multiple types of community engagement techniques.

Solid public participation provides a solid foundation to develop policies concepts. The more public participation a community offers, the better the odds that the general public will buy into the policies and concepts derived throughout the process when development and progress occur.

The following paragraphs outline the different community engagement techniques used during the Colfax County project.

COMMUNITY ENGAGEMENT

A major component of the project is community engagement in Colfax County was a major component of the project and the process included multiple approaches. It was structured in a manner that allowed for stakeholders to be involved in numerous ways throughout the process. Some key elements will include:

- Education: Planning 101
- Use of a steering committee
- Town Hall meetings
- Public hearings

Planning 101

Planning 101 forms the educational foundation for the entire project. In this process, there is a workshop held addressed:

- What is a Comprehensive Plan?
- How the plan is used?
- How does the plan impact me?

Steering Committee Meetings

With the assistance of the Colfax County Planning and Zoning office, a steering committee was formed to provide regular input on all phases of the planning project. This group also provided the internal assistance the planning effort needed to get more people involved in the process.

The steering committee also acts as a sounding board during the entire process, which allows all pieces/Chapters of the plan to be reviewed and commented on at regularly scheduled meetings. The steering committee is one of the more critical components of the process.

Public Hearings

The Public Hearings are the final opportunity to for the public and staff to comment on the Comprehensive Plan prior to approval of the plan.

Town Hall Meetings

Town hall meetings focused on collecting input from community residents about the future of Colfax County. Our team used a modified SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis.

Four Town Hall Meetings on May 22, 2013, May 23,2013, May 29,2013, and May 30,20136 were held in Howells, Clarkson, Schuyler, and Leigh respectively. All of the meetings began at 8:00 p.m.

Public Participation

At each meeting, the attendees were asked to break into different groups and to come up with comments for the following three topic areas:

- What needs to be improved in Colfax County
- What are the positives in Colfax County

The following is a brief summary of the Town Hall Meetings.

Meeting 1 - Howells Meeting

Improvements

1. Bridges
2. County Roads
    - Enlarge intersections
    - Paint stripes on the black top roads
3. Open up agriculture related businesses
4. More awareness to the other forms of farming
    - Organic farming
5. Flood Control
    - Dike

Positives/Important Issues

1. Agriculture friendly
    - Livestock
    - Grain rural located businesses
    - Water
2. People
    - Religious community
    - Strong social interactions
    - Active community
    - Youth returning
    - Lifestyle
    - Work ethic
3. Recreation
    - Leigh Dam
    - Platte River
    - Community parks
    - Golf course

3. Strong education
4. Location
    - Proximity to larger cities (central to Omaha, Lincoln and Norfolk)
5. Strong volunteerism
6. Cargill
7. Railroad and highways (expressway)

Meeting Number 2 - Clarkson

Improvements

1. Conservation Easements
2. Lodges
3. Infrastructure
    - Roads

- Highways
- Bridges

4. Minimum lot sizes
   - Look at alternatives
5. Examine community/industrial uses that need to be allowed in agricultural districts (ag. Related businesses)
6. Economic Development Efforts
7. Examine issues with trucking

Positives/Important Issues

1. Agriculture based
2. Livestock friendly
3. Location
4. Recreation
5. Strong school system
6. UPRR
7. Highway system
8. Volunteers
9. Hospital
10. Clinics
11. Fire/Rescue
12. Industries i.e. Cargill, Blue Bird, NE Automation, Howells Fab.
13. Parks throughout county
14. Golf Courses

Meeting Number 3 - Leigh

Improvements

1. Trees in R.O.W.
2. Right of way issues
3. County Roads
4. More districts to encourage economic development i.e. community and industry
5. Need a community/industry corridor
6. Protect Wellhead areas
7. Highway/Bridges

Positives/Important Issues

1. Heritage
2. Agriculture base
3. People
4. Community
5. Proximity to each other (Community/Neighbors)
6. Proximity to larger communities
7. UPRR
8. Highways system
9. Agriculture based businesses
10. Recreation
11. Cemeteries
12. Proximity of Columbus/industries
13. Small industries in smaller communities
14. Volunteers
15. Large open areas
16. Maple Creek Recreation Area (NRD)
17. Schools
18. Community cooperation

19. Law enforcement
20. Churches

Goals and Policies

The public participation process is critical to soliciting public input as well as establishing goals and policies for the community. Planning for the future land uses of the community is an ongoing process incorporating goal setting and problem solving aimed at encouraging and enhancing a better community with a better quality of life. Planning focuses upon ways of solving existing problems within the community, and providing a management tool enabling Colfax County citizens to achieve their vision for the future.

Overall vision is a process of evaluating present conditions, identifying problem areas, and bringing about consensus on how to overcome existing problems and manage change. By determining Colfax County's vision, the community can decide where it wants to be in the future, and then develop a "roadmap" guiding decisions of the community. However, the plan cannot only be based upon the "vision" and "road map" concept. The residents of Colfax County must also act or implement the necessary steps involved in achieving the "vision".

Change is continuous, therefore Colfax County must decide specific criteria that will be used to judge and manage change. Instead of reacting to development pressures after the fact, the community along with their strategic vision, can better reinforce the desired changes, and discourage negative impacts that may undermine the vision. A shared vision allows Colfax County to focus its diverse energies and minimize conflicts in the present and in the future.

Key components of the Comprehensive Plan are goals and policies. The issues and concerns of the citizens are molded into a vision statement. This statement can then be further delineated and translated into action statements and/or policies and used to guide, direct, and base decisions for future growth, development and change within Colfax County. Consensus on "good land use" and "managing change to provide the greatest community benefit to its residents" is formed. Colfax County's goals and policies attempt to address various issues regarding the questions of "how" to plan for the future.

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

Policies are measurable, definable steps that lead to the eventual completion of the goal. They are specific statements of principle or actions that imply a direction that needs to be undertaken.

These policies will synthesize the information from the goals, as well as the responses from the participants of the various input processes. Policies play an important role in the Comprehensive Development Plan because they direct the different actions that will need to be taken to meet the goals.
The goals and policies assure the Comprehensive Development Plan accomplishes the desires of the residents. This section of the Plan is therefore, a compilation of local attitudes collected through public meetings and surveys. When followed, development proposals in the community should be evaluated as to their relationship with the citizens' comments. Therefore, goals and policies should be referred to as diligently as the future land use map or any other part of the Comprehensive Development Plan. Likewise, they should be current, in order to reflect the attitudes and desires of the County and its residents.

It is important for communities to establish their goals and policies in a manner that allows for both long-term and short-term accomplishments. The short-term goals and policies serve several functions:

- Allow for immediate feedback and success, which fuels the desire to achieve additional goals and better policies.
- Allow for the distribution of resources over time thus assuring a balanced use of public investment.
- Establish certain policies that need to be followed before the long-term goals will be accomplished.

Colfax County Vision and the Plan

The Colfax County Comprehensive Plan provides a broad picture for the community's future. The vision statement and goals describe the desired future conditions and provide guidance for land use decisions and other actions, both public and private that will collectively determine the future of Colfax County.

The core premise of the Colfax County Plan 2014 is to maintain and enhance the heath, safety, and welfare of the community during times of change, to promote ideals and values as changes occur, and to meet the needs of today without sacrificing the ability to meet the needs of future generations. The plan acknowledges the importance of the connections between economic, environmental, and social components of the community. The plan is a combination of practicality and vision, and provides guidelines for sustaining the rich fabric of the Colfax County community.

Colfax County Plan Goals and Policies

The goals and policies for the Colfax County Comprehensive Plan are listed in the following Chapters. Each Chapter shall contain the pertinent goals and polices.
Goals are intended to be long-range, however, as the Plan is implemented and the world changes, the goals will need to be modified to address any new direction and factors. Therefore, goals need to be flexible to ensure success and positive outcomes.

3

Population

Demographic Profile

Demographics aid in understanding the past and existing conditions while applying these to the future. It is critical for Colfax County and decision-makers to understand the county's past, present and future trends.

Population drives the major components of the county including housing, employment, economic, and fiscal stability. Population trends assist in developing projections for the future, which in turn assists in determining future housing, retail, medical, employment and educational needs within Colfax 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 3.1 indicates the population for Colfax County and the incorporated communities in Colfax County, and the unincorporated areas, between 1980 and 2010. This information provides Colfax County with a better understanding of its past and present population trends and changes.

The Colfax County population count in 2010 was 10,515, which was a increase of 74 or 0.7% from the 2010 population of 10,441. Overall Colfax County had an increase of population between 1980 and 2010. An increase of 6.3% occurred due to the count in 1980 of 9,890 to 10,515 in 2010. One decade (1990) had a decrease in population, with a change of –7.6%.

Table 3.1: Population Trends and Analysis
Colfax County and Communities 1980 to 2010

Community	1980	1990	% Change 1980 to 1990	2000	% Change 1990 to 2000	2010	% Change 2000 to 2010	% Change 1980 to 2010
Clarkson	812	699	-13.9%	685	-2.0%	658	-3.9%	-19.0%
Howells	677	615	-9.2%	632	2.8%	561	-11.2%	-17.1%
Leigh	509	447	-12.2%	442	-1.1%	405	-8.4%	-20.4%
Richland	114	96	-15.8%	89	-7.3%	73	-18.0%	-36.0%
Rogers	89	89	0.0%	95	6.7%	95	0.0%	6.7%
Schuyler	4,151	4,052	-2.4%	5,371	32.6%	6,211	15.6%	49.6%
Incorporated Areas	6,352	5,998	-5.6%	7,314	21.9%	8,003	9.4%	26.0%
Unincorporated Areas	3,538	3,141	-11.2%	3,127	-0.4%	2,512	-19.7%	-29.0%
Colfax County	**9,890**	**9,139**	**-7.6%**	**10,441**	**14.2%**	**10,515**	**0.7%**	**6.3%**

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

Overall population increases in Colfax County have been driven by the population increase in Schuyler. From 1980 to 2010 Schuyler experienced an increase of 2,060 an increase 49.6%. The only other community within Colfax County that showed an increase in population from 1980 to 2010 was Rogers, which grew by six people or 6.7%.

All other communities and the unincorporated areas had decreases in population between 1980 and 2010. Close to two of every five people left the community of Richland, one of every five people left Leigh, and during the same period Clarkson and Howells each had less than one of every five people leave.

Migration Analysis

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

Table 3.2: Migration Analysis
Colfax County 1980 to 2010

Time Period	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1980-1989	(759)	284	(1,043)
1990-1999	1,302	357	945
2000-2009	74	1,027	(953)
Total	**617**	**1,668**	**(1,051)**

Sources: U.S. Census Bureau 1980 – 2010
Nebraska DHHS, Vital Statistics Reports, 1980 –2009

Based upon Table 3.2, Colfax County population has been impacted equally by migration as well as natural change (births and deaths). Overall between 1980 and 2010 the population increased by 617 people, however, there were 1,668 more births than deaths, resulting in an actual migration-out of 1,051 people during the 30 year period.

The decade of the most migration-in was between 1990 and 1999, with 945 people moving to Colfax County. The decade with the greatest migration-out was between 1980 and 1989 with 1,043 people moving from the county.

The overall natural change (births minus deaths) for Colfax County has increased continually since 1980. The decade of 2000 to 2010 had the greatest increase with 1,975 births and 948 deaths by resident, netting a positive natural change of 1,027 new children in the county during the 2000's.

Age Structure Analysis

Age structure is an important component of population analysis. By analyzing age structure, one can determine which age groups within Colfax County are being affected by population shifts and changes.

Each age group affects the population in a number of different ways. For example, the existence of larger young age groups (20-44 years) would mean a greater ability to sustain future population growth than with larger older age groups. If the larger young age group maintains their relative size, but do not increase the population as expected, they will as a group, tend to strain the resources of an area as they age. Understanding what is happening within the age groups of the community's population is necessary to effectively plan for the future

TABLE 3.3: AGE AND SEX CHARACTERISTICS COLFAX COUNTY 2000 TO 2010

Age	2000		2010		2000-2010		2000-2010	
	Male and Female	% of Total	Male and Female	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	748	7.2%	980	9.3%	232	31.0%	980	-
5-9	872	8.4%	888	8.4%	16	1.8%	888	-
10-14	809	7.7%	720	6.8%	-89	-11.0%	-28	-3.7%
15-19	889	8.5%	756	7.2%	-133	-15.0%	-116	-13.3%
20-24	590	5.7%	663	6.3%	73	12.4%	-146	-18.0%
25-29	661	6.3%	712	6.8%	51	7.7%	-177	-19.9%
30-34	655	6.3%	639	6.1%	-16	-2.4%	49	8.3%
35-44	1,596	15.3%	1,242	11.8%	-354	-22.2%	-74	-5.6%
45-54	1,142	10.9%	1,436	13.7%	294	25.7%	-160	-10.0%
55-64	807	7.7%	1,051	10.0%	244	30.2%	-91	-8.0%
65-74	786	7.5%	629	6.0%	-157	-20.0%	-178	-22.1%
75 & older	886	8.5%	799	7.6%	-87	-9.8%	-873	-52.2%
Total	**10,441**	**100.0%**	**10,515**	**100.0%**	**74**	**0.7%**	**74**	**0.7%**

2000		2010		Total Change	
Under 18 years of age	3,017	Under 18 years of age	3,063	18 and under	**46**
% of total population	28.9%	% of total population	29.1%	% change	**1.5%**
Total 65 yrs and older	1,672	Total 65 yrs and older	1,428	65 and older	**-244**
% of total population	16.0%	% of total population	13.6%	% change	**-14.6%**
Median Age	35	Median Age	34.2	Median Age	**-0.8**
Total Females	5,059	Total Females	5,089	Total Females	**30**
Total Males	5,382	Total Males	5,426	Total Males	**44**
Dependency Ratio	0.82	Dependency Ratio	0.75		
Total Population	**10,441**	**Total Population**	**10,515**	**Total Change**	**74**

Source: U.S Census Bureau 2000, 2010

Table 3.3 exhibits the age group structure for Colfax County in 2000 and 2010. Examining population age structure may indicate significant changes affecting the different population segments within the community.

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 3.3, significant changes between 2000 and 2010 occurred within a number of different age groups.

One method of analyzing age group movement in a population involves comparing the number of persons aged between 0 and 4 years (2000) with the number of persons in the same group 10 years later, or ages 10 and 14 years (2010) in 2010. For example, in Colfax County, there were 748 children between the ages of 0 and 4 in 2000, and in 2010 there were 720 children between the ages of 10 and 14, a decrease of 28 children. 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.

TABLE 3.4: POSITIVE AGE GROUPS COLFAX COUNTY 2000 TO 2010

2000 Age Group	Number	2010 Age Group	Number	Change
NA	NA	0 - 4 years	980 persons	+ 980 persons
NA	NA	5 - 9 years	888 persons	+ 888 persons
20 - 24 years	590 persons	30 - 34 years	639 persons	+ 49 persons
Total Change				**+ 1,917 persons**

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

Colfax County saw growth in three 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 only other increase was the 30-34 (2010). Overall, there was an increase of 1,913 persons in these three age groups.

From 2000 to 2010 nine age groups declined. The 75 years + age group had the greatest loss of 873 persons (2010) over the period. The majority of this loss is likely attributed to two causes;
1) people 65 years and older moving to other communities and senior care facilities, or
2) 2) a population base declining due to death.

TABLE 3.5: NEGATIVE AGE GROUPS COLFAX COUNTY 2000 TO 2010

2000 Age Group	Number	2010 Age Group	Number	Change
0-4 years	748 persons	10-14 years	720 persons	-28 persons
5 - 9 years	872 persons	15 - 19 years	756 persons	- 116 persons
10 - 14 years	809 persons	20 - 24 years	663 persons	-146 persons
15 - 19 years	889 persons	25 - 29 years	712 persons	- 177 persons
25 - 34 years	1,316 persons	35 - 44 years	1,242 persons	-74 persons
35 - 44 years	1,596 persons	45 - 54 years	1,436 persons	- 160 persons
45 - 54 years	1,142 persons	55 - 64 years	1,051 persons	- 91 persons
55–64 years	807 persons	65–74 years	629 persons	- 178 persons
65 years +	1,672 persons	75 years +	799 persons	- 873 persons
Total Change				**- 1,843 persons**

Source: U.S. Census Bureau 2000, 2010

The median age in Colfax County decreased from 35.0 years in 2000 to 34.2 years in 2010. This decrease equaled 0.8 years or an decrease of 2.3%.

TABLE 3.6: POPULATION BY ETHNICITY COLFAX COUNTY 1990 TO 2010

Race	1990		2000		2010		1990-2010	
	Number	%of total	Number	% of total	Number	% of total	Net Change	% change
White, not Hispanic	8,878	97.1	7,617	73.0	6,031	57.4	-2,847	-32.1
Black	3	0.0	7	0.1	89	0.8	86	2866.7
Am. Indian & AK. Native	32	0.4	20	0.2	114	1.1	82	256.3
Asian & Pacific Islander	9	0.1	36	0.3	33	0.3	24	266.7
Other, not Hispanic	93	1.0	3	0.0	2,431	23.1	2,338	2,514.0
Hispanic	224	2.5	2,732	26.2	4,315	41.0	4,091	1826.3
Mexican	203	2.2	1,791	17.2	2,644	25.1	2,441	1202.5
Puerto Rican	0	0.0	31	0.3	45	0.4	45	-
Cuban	0	0.0	3	0.0	35	0.3	35	-
Other Hispanic	21	0.2	907	8.7	1,591	15.1	1,570	7,476.2

Source: US Census 1990, 2000, and 2010

ETHNICITY

Colfax County and the community of Schuyler during the past decades have seen major shifts in the ethnicity of the county and community. A predominate part of this is related directly to the meat packing facilities located in Schuyler.

Ethnicity adds to the dynamic of the population, can be complex and cause considerable growing pains and cultural shifts, regardless of the ethnic background. This dynamic is one that Colfax County and Schuyler have been dealing with since the 1990's. The shifts experienced in Colfax County are tremendous and have appeared to make significant changes to the cultural aspects of the area.

Table 3.6 examines the ethnicity of Colfax County for 1990, 2000, and 2010, and utilizes data from the US Census. In 1990, 97.1% of Colfax County's population was considered to be White not of Hispanic origin, and 2.5% were considered to be of Hispanic origin. In 2010, this dynamic shifted to 57.4% of the County's population being White not of Hispanic origin, and 41.0% of Hispanic origin.

Overall, in 1990, there were 8,878 people considered White not of Hispanic origin, and 224 people that were of Hispanic origin. By 2010 the number of White not of Hispanic population changed by -32.1% to 6,031; while the of Hispanic origin population increased by 1,826.3% to 4,091.

Dynamic changes such as these have significant impacts on all aspects of the County including schools, athletics, culture, language, and consumerism to name a few. This issue needs to be continually monitored in order to stay in front of other potential issues that may arise.

In a number of Nebraska communities immigration of Sudanese and Somalis populations have increased. These two cultures from eastern Africa add to the dynamic change in culture.

DEPENENDCY RATIO

The dependency ratio examines the portion of a community/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 to the left for details on calculating the ratio.

Table 3.3 indicates the dependency ratios for 2000 and 2010 in Colfax County. The proportion of

persons less than 18 years of age increased by 1.5% between 2000 and 2010; while those aged 65 years and older decreased by 14.6% overall.

In 2000, Colfax County had a Dependency Ratio of 0.82 (44.9%/55.1%); however, by 2010 the Ratio had decreased to 0.75 (42.7%/57.3%). This is supported by the substantial decrease in the 65+ age group.

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

Population Projections

Population projections are estimates based upon past and present circumstances. The use of population projections allows Colfax 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 indicator Colfax County has for predicting future population changes. There are many methods to project the future population trends, the two projection techniques used below are intended to give Colfax 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 Colfax County, four different trend lines were reviewed: 1960 to 2010, 1990 to 2010, 1980 to 2010, and 2000 to 2010. A review of these trend lines indicates Colfax County will see varied scenarios during the coming twenty-seven years. The following projections summarize the decennial population for Colfax County through 2040.

Colfax County Trend Analysis

Year	1960 to 2010	1990 to 2010	2000 to 2010	1980 to 2010
2010	10,515 persons	10,515 persons	10,515 persons	10,515 persons
2020	10,717 persons	11,312 persons	10,590 persons	10,736 persons
2030	10,992 persons	12,169 persons	10,665 persons	10,963 persons
2040	11,132 persons	13,091 persons	10,740 persons	11,194 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 Colfax County's population will decline slightly in 2020 and then begin a steady increase each decade through 2040. The following projection for Colfax County is based on applying survival rates to age cohorts, but does not consider the effects of either migration-in or migration-out.

Colfax County Cohort Survival Analysis

Year	Cohort Survival Model
2020	9,783 persons
2030	10,733 persons
2040	12,445 persons

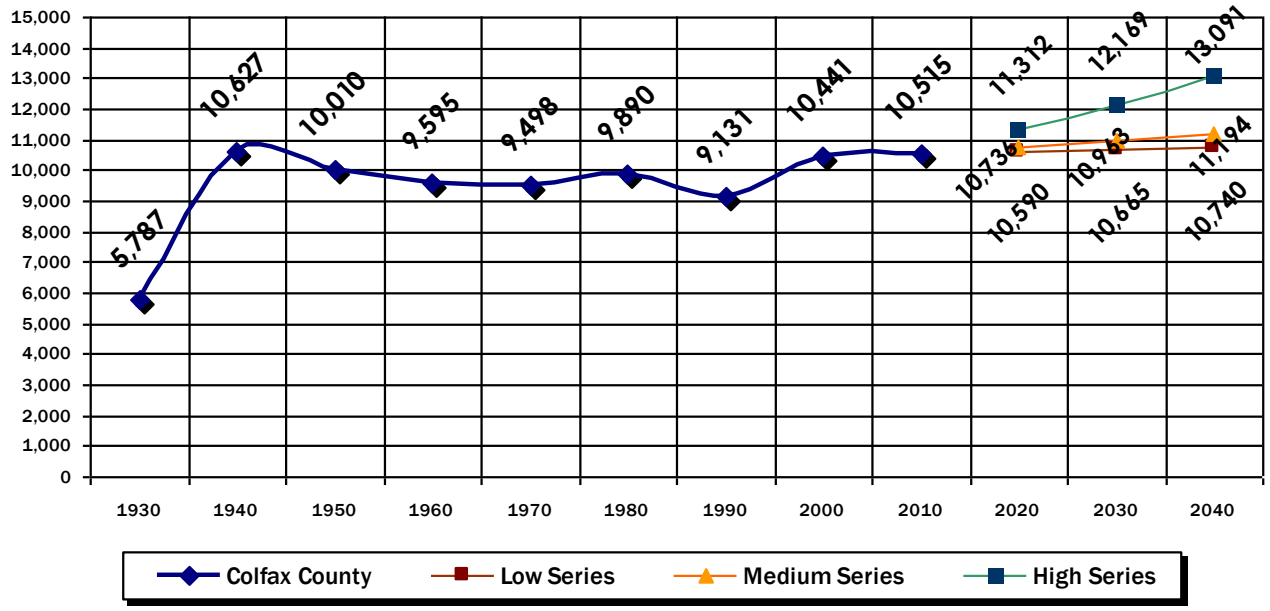
Summary of Population Projections

Using the modeling techniques discussed in the previous paragraphs, a summary of the two population projections for Colfax County through the year 2040 is shown in Figure 3.1. 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 Colfax County through the year 2040.

Year	Low = *2000 to 2010*	Med = *1980 to 2010*	*High = 1990 to 2010*
2010	10,515 persons	10,515 persons	10,515 persons
2020	10,590 persons	10,736 persons	11,312 persons
2030	10,665 persons	10,963 persons	12,169 persons
2040	10,740 persons	11,194 persons	13,091 persons

Figure 3.1 reviews the population history of Colfax County between 1930 and 2010, and identifies the three population projection scenarios into the years 2020, 2030 and 2040. Figure 3.1 indicates the peak population for Colfax County occurred in 1950 with 6,203 people. Beginning in 1960, Colfax County has seen a continuous decline in the overall population. However, the most critical declines appear to have occurred between 1950 and 1960 as well as 1980 and 1990.

Figure 3.1: Population Trends and Projections Colfax County 1930 to 2040



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

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. Colfax County should monitor population trends, size and composition periodically in order to understand in what direction their community is heading. Colfax 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.

4

Housing Chapter

HOUSING PROFILE

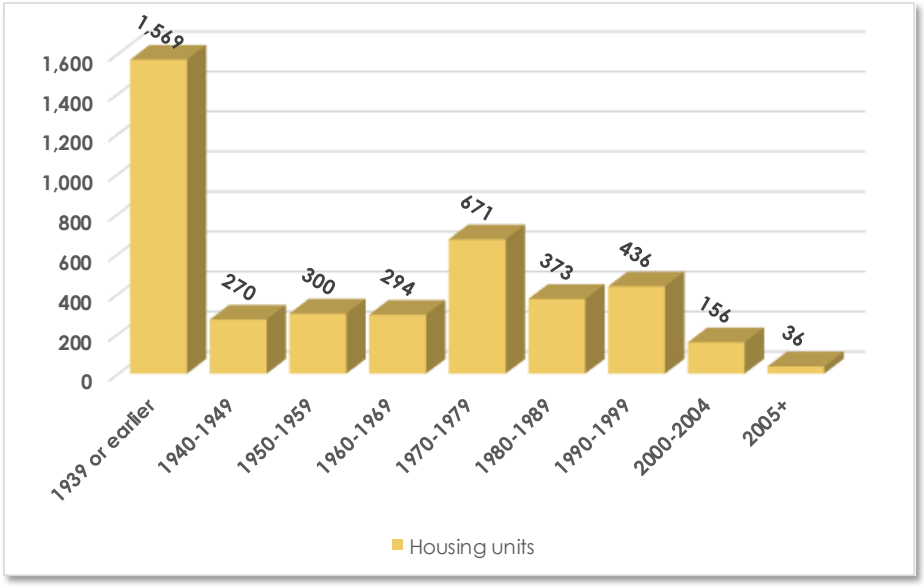
AGE OF EXISTING HOUSING STOCK

An analysis of the age of Colfax County's housing stock reveals a great deal about population and economic conditions of the past. The age of the housing stock may also indicate the need for rehabilitation efforts, or new construction within the community. Examining the housing stock is important in order to understand the overall quality of housing and the quality of life in Colfax County.

Figure 4.1 indicates 1,569 homes or 38.2% of Colfax County's 4,105 total housing units, were constructed prior to 1940. This consists of a mixture of older well-kept homes as well as several homes that are in need of repair or demolition. These homes will need to be maintained into the future; while, those in need of repair or demolition are addressed in the appropriate manner.

Construction of homes in Colfax County between 1970 and 1980 saw 671 (16.4%) new homes built during the decade, which was more than the previous three decades combined. This indicates that economically this was a good decade.

FIGURE 4.1: AGE OF EXISTING HOUSING STOCK COLFAX COUNTY 2010



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

Approximately 75% of all housing units in Colfax County were constructed prior to 1980. To bring these homes up to current energy efficiency standards, there may be a need for special weatherization programs due to their age.

Finally, limited housing units have been built since 2000 (based upon data from the American Community Survey). This represents a major slowdown in construction and is reflective in the economy of the past decade.

Housing Trends

Table 4.1 identifies several different housing trends in Colfax County, which indicates the breakdown between owner- or renter-occupied housing as well as the number of people living in Group Quarters. Examining housing trends allows an understanding of the overall diversity of the population and their quality of life within Colfax County.

Persons in Households/Group Quarters

In 2010, ninety-eight additional people were living in households as compared to 2000, representing an increase of 1.0%. The increase in persons in households is slightly more than the actual population increase as seen between 2000 and 2010.

Between 2000 and 2010, the number of people living in group quarters decreased from 132 people in 2000 to 108 in 2010, a change of -18.2%.

Group Quarters identifies people that are living in special housing conditions such as a nursing home facility. It is not evident what caused this sharp of a decline in the Group Quarters category, but could be due to a losses in the older population groups.

TABLE 4.1: COMMUNITY HOUSING TRENDS COLFAX COUNTY 2000 TO 2010

Selected Characteristics	2000	2010	% Change 2000-2010
Population	10,441	10,515	0.7%
Persons in Household	10,309	10,407	1.0%
Persons in Group Quarters	132	108	-18.2%
Persons per Household	2.8	2.88	2.9%
Total Housing Units	4,088	4,097	0.2%
Occupied Housing Units	3,682	3,618	-1.7%
Owner-occupied units	2,769	2,686	-3.0%
Renter-occupied units	913	932	2.1%
Vacant Housing Units	406	479	18.0%
Owner-Occupied vacancy rate	1.8%	1.7%	-5.6%
Renter-Occupied vacancy rate	8.6%	9.6%	11.6%
Single-family Units	3,291	3,408	3.6%
Duplex/Multiple-family units	412	414	0.5%
Mobile Homes, trailer, other	385	292	-24.2%
Median Contract Rent - 2000 - 2010			
Colfax County	$410	$618	**50.7%**
Nebraska	**$491**	**$632**	**28.7%**
Median Value of Owner-Occupied Units - 2000-2010			
Colfax County	$57,800	$85,400	**47.8%**
Nebraska	**$88,000**	**$119,700**	**36.0%**

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

Persons per Household

Table 4.1 also indicates the number of persons per household increased from 2.8 to 2.88 persons. The trend nationally has been towards a declining household size; however, the person per household in Colfax County is higher than surrounding counties:

- Butler County has 2.42 persons per household
- Platte County has 2.51 persons per household
- Stanton County has 2.57 persons per household
- Dodge County has 2.38 persons per household
- Cuming County has 2.40 persons per household
- Saunders County has 2.54 persons per household
- Boone County has 1.80 persons per household
- Polk County has 1.70 persons per household

Some of the trend in Colfax County can be attributed to the increases in the Hispanic populations since 1990. These populations tend to have larger families sizes as well as extended families living within the same household.

Occupied vs. Vacant Housing Units

Table 4.1 also indicates the number of occupied housing units decreased from 3,682 in 2000 to 3,618 in 2010, or -1.7%. During this same period, vacant housing units increased, going from 406 in 2000 to 479 in 2010, or 18.0%. Renter-occupied units were the highest vacancy type for both 2000 and 2010 at 8.6% and 9.6% respectively. The increase in vacant units was nearly equal to the decrease in occupied units which in turn is nearly equal to the decrease in the owner-occupied units.

Median Contract Rent

Median contract rent in Colfax County increased from $410 per month in 2000 to $618 per month in 2010, or 50.7%. The State's median monthly contract rent increased by 28.7%. This indicates Colfax County has seen contract rent increase at a much higher rate than the state and is within 2.3% of the state's median contract rent.

Comparing changes in monthly rents between 2000 and 2010 with the Consumer Price Index (CPI) enables the local housing market to be compared to national economic conditions. Inflation between 2000 and 2010 increased at a rate of 23.6%, indicating Colfax County's rents exceeded the rate of inflation for the 10-year period. Thus, Colfax County tenants were paying more in monthly rents in 2010 on average in terms of real dollars, than they were in 2000. Landlords were also making more on their investment.

Median Value of Owner-occupied Units

The Median value of owner-occupied housing units in Colfax County increased from $57,800 in 2000 to $85,400 in 2010 and represents an increase of 47.8%. The median value for owner-occupied housing units in the state showed an increase of 36.0%. Housing values in Colfax County again far exceeded the statewide trends.

In comparison to the CPI, the local value of owner-occupied housing increased at a rate that was over 2.0 times higher than the CPI. This indicates housing values in the community actually were worth more in 2010 compared to 2000 dollars.

Table 4.2 shows tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Analyzing these data gives Colfax County the opportunity to determine where there may be a need for additional housing. In addition, Colfax County may target efforts for housing rehabilitation and construction at those segments of the population exhibiting the largest need.

2000

Based upon the number of persons the largest section of owner-occupied housing in Colfax County in 2000, was two person households, with 994 units, or 35.9% of the total owner-occupied units. By comparison, the largest household size for rentals was the single person households which had 310 renter-occupied housing units, or 34.0% of the total renter-occupied units.

Colfax County was comprised of 2,124 one or two person households, or 57.7% of all households. Households having 5-or more persons comprised only 15.5% of the owner-occupied segment, and 20.8% of the renter-occupied segment. Countywide, households of 5-or more persons accounted for 620 units, or 16.8% of the total.

In 2000, the age cohorts representing the largest home ownership group was 35-44 years. Of the total residents living in owner-occupied housing units, 21.9% were between 35 and 44 years of age. This group

was closely followed by the 75 years and over with 19.1%. Overall, 66.5% of all owner-occupied units were owned by individuals 45 years and older.

Renter occupied housing was dominated by two cohort groups: 25 to 34 years (28.5%), and the 35 to 44 years (22.2%). These two cohorts represent 50.7% of all the renter-occupied units in 2000.

2010

The two-person household was the largest section of owner-occupied housing in Colfax County with 942 units, or 35.1% of the total owner-occupied units, a decrease of 5.2% over 2000. By comparison, the largest household size for rentals were the single person households with 275 renter-occupied housing units, or 29.5% of the total renter-occupied units, a change of -1.9% over 2000. The renter-occupied group that had the largest percentage increase was the 6-person or more household with an increase of 22.8%

TABLE 4.2: TENURE OF HOUSEHOLDS BY SELECTED CHARACTERISTICS COLFAX 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	635	22.9%	310	34.0%	623	23.2%	275	29.5%	-1.9%	-11.3%
2 persons	994	35.9%	185	20.3%	942	35.1%	171	18.3%	-5.2%	-7.6%
3 persons	350	12.6%	113	12.4%	356	13.3%	140	15.0%	1.7%	23.9%
4 persons	360	13.0%	115	12.6%	327	12.2%	139	14.9%	-9.2%	20.9%
5 persons	241	8.7%	99	10.8%	206	7.7%	99	10.6%	-14.5%	0.0%
6 persons or more	189	6.8%	91	10.0%	232	8.6%	108	11.6%	22.8%	18.7%
TOTAL	**2,769**	**100.0%**	**913**	**100.0%**	**2,686**	**100.0%**	**932**	**100.0%**	**-3.0%**	**2.1%**
Tenure by Age of Householder (Occupied Housing Units)										
15 to 24 years	34	1.2%	126	13.8%	57	2.1%	117	12.6%	67.6%	-7.1%
25 to 34 years	286	10.3%	260	28.5%	253	9.4%	272	29.2%	-11.5%	4.6%
35 to 44 years	606	21.9%	203	22.2%	431	16.0%	179	19.2%	-28.9%	-11.8%
45 to 54 years	500	18.1%	99	10.8%	642	23.9%	138	14.8%	28.4%	39.4%
55 to 64 years	402	14.5%	59	6.5%	521	19.4%	80	8.6%	29.6%	35.6%
65 to 74 years	411	14.8%	54	5.9%	342	12.7%	43	4.6%	-16.8%	-20.4%
75 years and over	530	19.1%	112	12.3%	440	16.4%	103	11.1%	-17.0%	-8.0%
TOTAL	**2,769**	**100.0%**	**913**	**100.0%**	**2,686**	**100.0%**	**932**	**100.0%**	-3.0%	2.1%

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

In 2010 the 45 to 54 age cohort represented the largest home ownership group. Of the total residents living in owner-occupied housing units, 23.9% were between 45 and 54 years of age. The 55 to 64 age cohort was a close second with 19.4% of the total owner-occupied units.

Colfax County was comprised of 2,011 1-or 2-person households, or 55.6% of all households; which represents an increase of nearly 7.5% from 2000. Households having 5-or more persons comprised only 16.3% of the owner-occupied segment, and 22.2% of the renter-occupied segment. Countywide, households with 5-or more persons accounted for 645 units, or 17.8% of the total. The total number of units increased by 25 units or 4.0%.

Renter occupied housing was dominated by two different cohort groups; aged 25 to 34 (29.2%), and aged 35 to 44 (19.2%). These two cohorts represent 48.4% of all the renter-occupied units in 2010, a slight decrease from 2000.

TABLE 4.3: SELECTED HOUSING CONDITIONS COLFAX COUNTY 2000 TO 2010

Housing Profile	Colfax County		State of Nebraska	
	Total	% of Total	Total	% of Total
2000 Housing Units	4,088		722,668	
2000 Occupied Housing Units	3,682	90.1%	666,184	92.2%
2000 Owner-occupied Units	2,769		449,317	
2000 Renter-occupied Units	913		216,867	
2010 Housing Units	4,097		788,218	
2010 Occupied Housing Units	3,618	88.3%	711,771	90.3%
2010 Owner-occupied Units	2,686		488,034	
2010 Renter-occupied Units	932		223,737	
Change in Number of Units 2000 to 2010				
Total Change	9	0.2%	65,550	9.1%
Annual Change	0.9	0.0%	6,555	0.9%
Total Change in Occupied Units	-64	-1.7%	45,587	6.8%
Annual Change in Occupied Units	-6.4	-0.2%	4,559	0.7%
Total Change in Owner-occupied Units	-83	-3.0%	38,717	8.6%
Total Change in Renter-occupied Units	19	2.1%	6,870	3.2%
Characteristics				
2000 Units Lacking Complete Plumbing Facilities	10	0.2%	6,398	0.9%
2000 Units with More Than One Person per Room	236	5.8%	17,963	2.5%
2010 Units Lacking Complete Plumbing Facilities	6	0.1%	2,540	0.3%
2010 Units with More Than One Person per Room	215	5.2%	12,201	1.5%
Substandard Units				
2000 Total	246	6.0%	24,361	3.4%
2010 Total	221	5.4%	14,741	1.9%

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

Occupied Units

Table 4.3 indicates changes in housing conditions and includes an inventory of substandard housing for Colfax County. The household occupancy rate in Colfax County decreased slightly from 90.1% of all housing in 2000 to 88.3% of all housing in 2010.

The County saw an annual average change in housing units of 0.9 housing units between 2000 and 2010. The occupied units saw a change of -6.4 units per year. During this period the type of housing the greatest change were owner-occupied units decreasing by 83 units.

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 are more than 1.0 persons per room, the housing unit is considered overcrowded, thus substandard.

When these criteria are applied to Colfax County data indicates 246 housing units, or 6.0% 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 were based on overcrowding.

In 2010 the total number of substandard housing units decreased to 221 units. However, the primary contributing factor was overcrowding which accounted for 97.3% of the substandard problem. Comparing Colfax County to the state of Nebraska as a whole, the percent of substandard housing units in Colfax County was greater for both time periods.

What these data fail to consider are housing units that have met both criterion and were counted twice. Even so, the County should not assume these data overestimate the numbers 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 the 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

Goal 4.1

Provide quality housing throughout the county.

Housing Policies and Strategies

H-4.1.1 The county should work with local agencies to provide quality housing.

H-4.1.2 A program to identify substandard housing units throughout Colfax County should be a priority and substandard housing units should be repaired or demolished.

Goal 4.2

Affordable housing should be available throughout the county.

Housing Policies and Strategies

H-4.2.1 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-4.2.2 The county should continue to focus on affirmatively furthering fair housing throughout the entire county area.

H-4.2.3 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-4.2.4 Support all funding mechanisms available to effectively lower the cost of development and housing.

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5

Economy and Economic Development

Economic and Employment Profile

Economic data are collected to understand local changes in economic activity and employment needs and opportunities within Colfax County. In this section, employment by industry, household income statistics, commuter analyses, and agricultural data were reviewed for Colfax 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 Colfax County in comparison to the state. 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 5.1 indicates the number of households in each income range for Colfax County for 2000 and 2010. In 2000, the most commonly reported household income range of $35,000 to $49,999 accounted for 21.7% of all households. However statewide the $50,000 to $74,999 range was most commonly reported.

By 2010, the income range reported most was the $50,000 to $74,999 which accounted for 20.4% of the total. By 2010 the statewide income range most often reported was still the $50,000 to $74,999 range.

Those households earning less than $15,000 decreased from 16.1% in 2000 to 14.0% in 2010. These household groups account for the poorest of the poor in the County. However, the decrease between 2000 and 2010 of only 13.0% indicated only marginal improvement.

Table 5.1: Household Income
Colfax County 2000 to 2010

Household Income Ranges	2000				2010			
	Colfax County	% of Total	State of Nebraska	% of Total	Colfax County	% of Total	State of Nebraska	% of Total
Less than $10,000	323	8.8%	55,340	8.3%	235	6.3%	47,902	6.8%
$10,000 to $14,999	268	7.3%	43,915	6.6%	284	7.7%	41,039	5.8%
$15,000 to $24,999	585	15.9%	98,663	14.8%	337	9.1%	82,906	11.8%
$25,000 to $34,999	608	16.5%	97,932	14.7%	503	13.6%	83,822	11.9%
$35,000 to $49,999	798	21.7%	122,654	18.4%	609	16.4%	109,525	15.6%
$50,000 to $74,999	676	18.4%	136,141	20.4%	949	25.6%	146,852	20.9%
$75,000 to $99,999	250	6.8%	58,361	8.7%	427	11.5%	87,734	12.5%
$100,000 to $149,999	122	3.3%	36,565	5.5%	251	6.8%	69,882	9.9%
$150,000 to $199,999	21	0.6%	8,551	1.3%	61	1.6%	17,498	2.5%
$200,000 or more	23	0.6%	8,873	1.3%	50	1.3%	15,477	2.2%
Total	**3,674**	**100.0%**	**666,995**	**100.0%**	**3,706**	**100.0%**	**702,637**	**100.0%**

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

The median household income for Colfax County was $35,849 in 2000, nearly $600 more than the State median income. By 2010, the median household income increased to $48,133 or an increase of 34.3% and increased the gap compared to the state average. The CPI for this period was 23.6%, which indicates household incomes in Colfax County exceeded the rate of inflation. Households were actually earning more in real dollars in 2010 than in 2000.

Income Source and Public Assistance

The table below shows personal income by source for Colfax County and the State. These data are compared to the CPI, in order to determine if increases are consistent with inflation and in terms of real dollars. Between 1970 and 2010, the CPI was 426.0%.

TABLE 5.2: INCOME BY SOURCE
COLFAX COUNTY AND THE STATE OF NEBRASKA 1970 TO 2010

Income Characteristics	1970	1980	1990	2000	2010	% Change 1970-2010	% Annual Change
Colfax County							
Total Personal Income	$31,913,000	$73,177,000	$159,700,000	$265,342,000	$369,231,000	1057.0%	26.4%
Non-farm Income	$26,807,000	$79,318,000	$121,214,000	$233,923,000	$324,987,000	1112.3%	27.8%
Farm Income	$5,106,000	-$6,141,000	$38,486,000	$31,419,000	$44,244,000	766.5%	19.2%
Per Capita Income	$3,357	$7,398	$17,433	$25,387	$35,025	943.3%	23.6%
State of Nebraska							
Total Personal Income	$5,643,652,000	$14,394,940,000	$28,388,321,000	$48,997,941,000	$72,189,707,000	1179.1%	29.5%
Non-farm Income	$5,643,111,944	$14,296,494,000	$26,201,453,000	$47,577,270,000	$68,743,169,000	1118.2%	28.0%
Farm Income	$540,056	$98,446,000	$2,186,868,000	$1,420,671,000	$3,446,538,000	638081.6%	15952.0%
Per capita income	$3,793	$9,155	$17,948	$28,590	$39,445	939.9%	23.5%

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

Non-farm and Farm Income

Non-farm income increased from $31,913,000 in 1970 to $369,231,000 in 2010, or an increase of 1057.0%, which was nearly 2 $^1/_2$ times the CPI. By 2010, farm income had risen from $5,106,000 to $44,244,000, or 1112.3%, which is approximately 2$^1/_2$ times the CPI.

Per Capita Income

The per capita income in Colfax County increased from $3,357 in 1970 to $35,025 in 2010, or an increase of 943.3%, which was nearly twice the CPI. Unfortunately, Colfax County's per capita income was only 89% of the state's per capita income level of $39,445.

Transfer Payments

Another income source deserving examination is the amount of Transfer Payments to individuals in Colfax County from 1970 to 2010, which is provided in Table 5.3. 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 Colfax County were $3,415,000, and the State were $497,553,000. By 2010, Total Transfer Payments to Colfax County were $63,417,000, or an increase of 1,712.9% or 42.8% annually, and the State total was $11,563,462,000, or an increase of 2,224.1% which was an increase of 55.6% annually. In 2010, transfer payments per capita in Colfax County were $6.262, and the State were $6,318.

Total transfer payments between 1970 and 2010 have shown an increase in each reporting period. Retirement, disability insurance benefits, and medical payments comprised the majority of total transfer payments. The largest percentage increase occurred within Medical Payments, which increased by over $35 million, or 5,868.8% (146.7% annually). Income Maintenance Payments also

increased dramatically; these payments include SSI, AFDC, and food stamps, with an increase of $5.2 million, or 5,582.6% (139.6% annually) since 1970.

TABLE 5.3: TRANSFER PAYMENTS
COLFAX COUNTY AND THE STATE OF NEBRASKA 1970 TO 2010

Payment Type	1970	1980	1990	2000	2010	% Change 1970 to 2010	% Change Per Year
Colfax County							
Government payments to individuals	$3,415,000	$11,444,000	$21,745,000	$38,024,000	$63,417,000	1757.0%	43.9%
Retirement, Disability & Insurance Benefits	$2,267,000	$7,660,000	$14,164,000	$15,325,000	$18,549,000	718.2%	18.0%
Medical Payments	$603,000	$2,377,000	$5,785,000	$19,390,000	$35,992,000	5868.8%	146.7%
Income Maintenance Benefits (SSI, AFDC, Food	$92,000	$416,000	$699,000	$1,978,000	$5,228,000	5582.6%	139.6%
Unemployment Insurance Benefits	$49,000	$221,000	$111,000	$212,000	$1,639,000	3244.9%	81.1%
Veteran's Benefits	$328,000	$630,000	$729,000	$674,000	$808,000	146.3%	3.7%
Federal Education and Training Assistance	$76,000	$140,000	$253,000	$427,000	$925,000	1117.1%	27.9%
Payment to Non-profit Institutions	$117,000	$364,000	$434,000	$869,000	$1,363,000	1065.0%	26.6%
Business Payments	$100,000	$275,000	$644,000	$1,181,000	$1,063,000	963.0%	24.1%
Total	$3,632,000	$12,083,000	$22,823,000	$40,074,000	$65,843,000	1712.9%	42.8%
Transfer Payments Per Capita	$382	$1,221	$2,491	$3,839	$6,262	1538.9%	38.5%
Total Per Capita Income	$3,357	$7,398	$17,433	$25,387	$35,025	943.3%	23.6%
Per Capita Transfer Payments as % of Per Capita Income	**11.4%**	**16.5%**	**14.3%**	**15.1%**	**17.9%**	**57.1%**	**1.5%**
State of Nebraska							
Total	$497,553,000	$1,693,794,000	$3,365,241,000	$6,088,074,000	$11,563,462,000	2224.1%	55.6%
Transfer Payments Per Capita	$334	$1,077	$2,128	$3,553	$6,318.34	1791.7%	47%
Total Per Capita Income	$3,793	$9,155	$17,948	$28,598	$39,007	928%	24%
Per Capita Transfer Payments as % of Per Capita Income	**8.8%**	**11.8%**	**11.9%**	**12.4%**	**16.2%**	**83.9%**	**2.1%**

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

The trend for transfer payments per capita between 1970 and 2010 indicates payments increased significantly to individuals in Colfax County, increasing by 1,538.9% in 40 years or 38.5% annually. However, transfer payments, in proportion of per capita income, increased at a much lower rate between 1970 and 2010. In 1970 transfer payments comprised 11.4% of total per capita income, and in 2010, transfer payments were 17.9% of total per capita income, an annual increase of 1.5%.

Transfer payments per capita are increasing at a rate approximately 1.5 times greater than the total per capita income. In addition, the per capita transfer payments in Colfax County are increasing at a slightly lower rate than the State of Nebraska.

Industry Employment

Analyzing employment by industry assists a community in determining the key components of the labor force. The section indicates the type of industries making up the local economy, as well as identifying particular occupations employing residents. Table 5.4 indicates employment size by industry for Colfax County and the State of Nebraska for 2000 and 2010 (these data indicate the types of jobs residents have, not the number of jobs locally).

Table 5.4 indicates the employment sector with the greatest number of employees was Manufacturing. This sector employed 1,753 people or 33.3% of the total employed residents in 2000. By 2010, this sector had grown to 1,885 employees or 36.4% of the total. Colfax County, as a whole, has several variations compared to the state of Nebraska.

TABLE 5.4: EMPLOYMENT BY INDUSTRY
COLFAX COUNTY AND THE STATE OF NEBRASKA 2000 TO 2010

Industry Categories	Colfax County				State of Nebraska			
	2000	% of Total	2010	% of Total	2000	% of Total	2010	% of Total
Agriculture, Forestry, Fishing and Hunting and Mining	596	11.3%	474	9.1%	48,942	5.6%	41,216	4.4%
Construction	293	5.6%	305	5.9%	56,794	6.5%	56,187	6.0%
Manufacturing	1,753	33.3%	1,885	36.4%	107,439	12.2%	93,719	10.0%
Wholesale Trade	137	2.6%	144	2.8%	31,265	3.6%	26,945	2.9%
Retail Trade	526	10.0%	363	7.0%	106,303	12.1%	108,253	11.6%
Transportation and warehousing and utilities	265	5.0%	193	3.7%	53,922	6.1%	54,858	5.9%
Information	71	1.3%	31	0.6%	21,732	2.5%	18,424	2.0%
Finance, insurance, real estate, and rental and leasing	196	3.7%	233	4.5%	67,370	7.7%	72,320	7.7%
Professional, scientific, management, administrative, and waste management	132	2.5%	260	5.0%	63,663	7.3%	78,524	8.4%
Educational, health, and social services	721	13.7%	776	15.0%	181,833	20.7%	228,470	24.4%
Arts, entertainment, recreation, accommodation and food services	283	5.4%	152	2.9%	63,635	7.3%	73,724	7.9%
Other services (except public administration)	205	3.9%	214	4.1%	40,406	4.6%	42,997	4.6%
Public Administration	90	1.7%	154	3.0%	33,933	3.9%	39,467	4.2%
Total Employed Persons	5,268	100.0%	5,184	100.0%	877,237	100.0%	935,104	100.0%

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

Overall the top five industries in Colfax County stayed the same from 2000 to 2010. These five sectors are:

1. Manufacturing
2. Educational, health, and social services
3. Agriculture, forestry, fishing and hunting and mining
4. Retail Trade
5. Construction

The top five sectors make sense when the major employers in Colfax County are added to this list:

- Cargill
- Schuyler Community Schools
- Frontier Cooperative
- Schuyler Lumber
- Several mechanical contractors
- Businesses located in Schuyler and the other smaller communities

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 Colfax County is seeing exports from the state as a whole.

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

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

TABLE 5.5: BASIC/NON-BASIC EMPLOYMENT COLFAX 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
Colfax County	21.9%	11.1%	14.4%	**13.4%**	**39.2%**	**2.48**
Butler County	30.3%	14.2%	18.0%	13.6%	23.9%	**6.35**
Platte County	26.7%	13.1%	24.9%	10.6%	24.7%	**7.77**
Stanton County	25.5%	17.7%	21.9%	14.9%	19.9%	**7.06**
Dodge County	25.2%	16.2%	26.4%	11.8%	20.5%	**9.2**
Cuming County	35.4%	13.2%	20.6%	15.1%	15.6%	**12.5**
Nebraska	**34.8%**	**16.2%**	**25.0%**	**10.1%**	**13.8%**	**NA**

Source: American Community Survey 2006-2010

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. This rationale is based on analysis of basic jobs bringing new money into a local economy, and the money then becomes the wages for workers. 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. Colfax County's percentage exceeds the state's percentage, thus there is basic employment. Table 5.5 indicates there are two categories that have basic employment with the largest being production, transportation, and material moving occupations.

This is not unexpected considering Schuyler is the county seat and the largest community in the area and serves as a regional trade center for items, especially the service industry. The other category that contains Basic Employment is:

- Natural Resources, construction and maintenance occupations

Overall, 28.7% of the employment base in Colfax County is connected to the exportation of goods or services. The County needs to continually work on their business retention and expansion process in order to retain employers.

Base Multiplier

The information in Table 5.5 shows Colfax County has a base multiplier of 2.48, which means that for every job that falls into the basic category, 2.48 other jobs in the county are supported and/or impacted. This is illustrated by comparing the basic and non-basic percentages against each other.

This indicates for every job tied to exportation of goods or services, there are 2.48 jobs created/ supported by dollars coming into the County. Therefore, if Colfax County lost just one of job tied to exports then there is a potential to lose approximately 2.48 jobs from the non-basic employment side.

There is no magical multiplier that a county can aim to achieve. Every county is different and the dynamics involved are different. The unique and ever-changing dynamics are what make a particular county unique and attractive to different employers.

One concern displayed in Table 5.5 is the large amount of basic employment found in production, transportation, and material moving occupations. This area has 88.5% of all the basic employment in Colfax County. Major decisions, such as the closing of a plant tied to this occupational area could have major economic impacts on the County. Future economic development efforts need to focus on improving the basic activity found in the other four categories.

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 the next big catch and forget about the opportunities existing employers can offer through expansion of their operations.

Basic/Non-basic relative to Employment by Industry

Table 5.6 shows the relationship of Colfax County's employment industries compared to the state as a whole. For example, examining the basic and non-basic percentages shows that Colfax County meets or exceeds employment by industry in seven industry categories. Those industries are:

- Agriculture, forestry, fishing and hunting and mining
- Manufacturing

TABLE 5.6: BASIC/NON-BASIC EMPLOYMENT BY INDUSTRY COLFAX COUNTY 2010

Industry Categories	Colfax County		State of Nebraska		Colfax County minus State of Nebraska	Basic	Non-Basic
	2010	% of Total	2010	% of Total			
Agriculture, forestry, fishing and hunting and mining	474	9.14%	44,982	4.80%	4.35%	4.35%	4.80%
Construction	305	5.88%	61,002	6.51%	-0.62%	0.00%	5.88%
Manufacturing	1,885	36.36%	102,617	10.94%	25.42%	25.42%	10.94%
Wholesale Trade	144	2.78%	28,960	3.09%	-0.31%	0.00%	2.78%
Retail Trade	363	7.00%	108,772	11.60%	-4.60%	0.00%	7.00%
Transportation and warehousing, and utilities	193	3.72%	56,344	6.01%	-2.29%	0.00%	3.72%
Information	31	0.60%	19,308	2.06%	-1.46%	0.00%	0.60%
Finance and insurance, and real estate and rental and leasing	233	4.49%	72,370	7.72%	-3.22%	0.00%	4.49%
Professional, scientific, and management, and administrative and waste management services	260	5.02%	76,370	8.15%	-3.13%	0.00%	5.02%
Educational services, and health care and social assistance	776	14.97%	216,939	23.14%	-8.17%	0.00%	14.97%
Arts, entertainment, and recreation, and accommodation, and food	152	2.93%	71,022	7.58%	-4.64%	0.00%	2.93%
Other services, except public administra	214	4.13%	41,913	4.47%	-0.34%	0.00%	4.13%
Public Administration	154	2.97%	36,982	3.94%	-0.97%	0.00%	2.97%
Total	5,184	100.00%	937,581	100.00%		29.76%	
Basic Multiplier	2.36	-	N/A	-			

Source: American Community Survey 2005-2009

Examining the base multiplier from this perspective, the number 2.36 is very close to the base multiplier of the other approach. It is critical to remember these numbers are not specifically jobs in Colfax County, but jobs held by residents may be in other locations of the state or region like Columbus. The data in Table 5.6 represents the potential for the importation of income as opposed to exportation of a good or service. Therefore, when examining the data in both Table 5.5 and 5.6, the true base multiplier is likely somewhere in-between the 2.36 and 2.48.

COMMUTER TRENDS

Table 5.7 shows the commuter characteristics for Colfax County in 2000 and 2010. Travel time to work is another factor used to gauge where Colfax County's workforce is employed. Table 5.7 shows how many residents of Colfax County travel to work in each of several time categories.

Table 5.7 indicates there was an overall decrease in the number of people from Colfax County working in 2010 compared to 2000. The number of people working fell from 5,199 in 2000 to 5,136 in 2010 or a change of –1.2%.

The –1.2% change in persons working compared to an overall population change of 0.7% would suggest the overall population change is directly due to new births in the County, and the county has experienced a slight decline in the workforce.

Table 5.7 indicates in 2010 the workforce spent nearly the same amount of time traveling to work than in 2000. The average travel time increased from 18.6 minutes in 2000 to 18.8 minutes in 2010. The largest increase occurred with those traveling 30 to 44 minutes, which increased by 369 people or 85.4%. The second biggest increase was in the 45 to 59 minute category, which increased by 54 persons, or 28.3%.

A possible reason to explain the increase is a segment of the population that is willing to travel further to work than to work locally. A second scenario, is that there is a population in Colfax County that has different employment qualifications than are available in Colfax County.

TABLE 5.7: TRAVEL TIME TO WORK COLFAX COUNTY 1990 TO 2010

Travel Time Categories	2000	% of Total	2010	% of Total	% Change
Less than 10 minutes	1,821	35.0%	1,384	59.3%	-24.0%
10 to 14 minutes	805	15.5%	928	14.1%	15.3%
15 to 19 minutes	606	11.7%	561	2.4%	-7.4%
20 to 29 minutes	681	13.1%	786	3.0%	15.4%
30 to 44 minutes	432	8.3%	801	12.0%	85.4%
45 to 59 minutes	191	3.7%	245	3.4%	28.3%
60 minutes or more	268	5.2%	133	5.8%	-50.4%
Worked at home	395	7.6%	298	5.8%	-24.6%
Total	**5,199**	**100.0%**	**5,136**	**100.0%**	**-1.2%**
Mean Travel Time (minute	**18.6**		**18.8**		**1.1%**

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

Agricultural Profile

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

TABLE 5.8: AGRICULTURAL PROFILE COLFAX COUNTY 1992 TO 2007

Agricultural Characteristics	1992	1997	2002	2007	% Change 1992-2007
Number of Farms	694	604	589	519	-25.2%
Land in Farms (acres)	228,988	230,403	244,361	213,220	-6.9%
Average size of farms (acres)	330	381	415	411	24.5%
Total area for ColfaxCounty	1,648,064	1,648,064	1,648,064	1,648,064	0.0%
Percentage of land in farm production	13.9%	14.0%	14.8%	12.9%	-6.9%
Total cropland (acres)	203,808	478,892	214,487	187,650	-7.9%
Harvested cropland (acres)	177,389	184,181	198,445	178,697	0.7%
Estimated Market Value of Land & Bldg (avg./farm)	**$330,620**	**$478,892**	**$627,679**	**$1,007,713**	**204.8%**
Estimated Market Value of Land & Bldg (avg./acre)	**$1,026**	**$1,417**	**$1,629**	**$2,453**	**139.1%**

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

Agriculture Trends

Table 5.8 identifies key components affecting Colfax County's agricultural profile. This Table examines the number of farms, size of the farm, cropland data, and certain value criteria, the data are for 1992 through 2007.

Number of Farms

Table 5.8 shows the number of farms in Colfax County decreased between 1992 and 2007. This is a normal trend throughout the entire state, fewer but larger farms. In 1992 there were 694 farms in the County, by 2007 the number decreased to 519 or a change of –25.2%. The state of Nebraska, for the same period, saw a decrease of over 5,200 farms for a total change of -9.8%.

The average size of each farm increased from 330 acres in 1992 to 411 acres in 2007. However, the peak was in 2002 with 425 acres per farm. This trend has been the norm across Nebraska and the United States for the last several decades. The overall increase from 1992 to 2007 was 24.5%. Colfax County's farms are considerably smaller on average than the state of Nebraska. The average farm in Nebraska was 839 acres in 1992 and increased to 953 acres in 2007, an increase of 13.6%.

TABLE 5.9: NUMBER OF FARMS BY SIZE
COLFAX COUNTY 1992 TO 2007

Farm Size (acres)	1992	1997	2002	2007	% Change 1992-
1 to 9	71	52	38	30	-57.7%
10 to 49	64	71	87	95	48.4%
50 to 179	163	129	140	118	-27.6%
180 to 499	241	181	141	122	-49.4%
500 to 999	117	116	120	93	-20.5%
1,000 or more	38	55	63	61	60.5%
Total	**694**	**604**	**589**	**519**	**-25.2%**

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

The total cropland in Colfax County decreased from 203, 808 acres in 1992 to 178,697 acres in 2007. However, in 1992 only 13.9% of the land in Colfax County was considered to be in farm production and it also decreased to 12.9% in 2007, the peak came in 2002 when it hit 14.8%.

The next term/data for review is harvested cropland, which is cropland that was harvested and yielded a crop. In 1992 the Harvested Cropland in Colfax County was 177,389 (87.0.7% of Total Cropland and only 77.5% of the Total Land in Farms). By 2007 the Harvested Cropland increased to 178,697 acres (95.2% of Total Cropland and 83.8% of the total land in farms).

Estimated Market Value

Table 5.8 also shows the Estimated Market Values of Land and Buildings, both by average per farm and average per acre. In 1992 the average value per farm acre was $1,026. The average value increased in every Census of Agriculture until it reached an average per acre of $2,453 in 2007, an increase of 139.1% from 1992. The CPI for this same period was approximately 50%, therefore the average value per acre increased at over 2 1/2 times the rate of inflation in Colfax County.

The increase in the average per acre also translates into an increase in the average per farm. The average value per farm in 1992 was $330,620 and increased to $1,007,713 in 2007, an overall increase of 204.8%. Again, this increase exceeded the CPI and the rate of inflation for the period. The average per farm, statewide, was $429,188 in 1992 and $1,104,392 in 2007, an increase of 157.3%. Therefore, the average farm value in Colfax County is higher than the state average and the value has been increasing at rate greater than the state.

Table 5.9 shows the number of farms by size (in acres) in 1992, 1997, 2002, and 2007. The table between 1992 and 2007 shows a mixed change with regard to farm size. Farms 1 to 9 acres in size saw a –57.7% change while those 10 to 49 acres saw an increase of 48.4%. Furthermore, the number of farms between 180 acres and 499 acres decreased dramatically from 241 farms to 122 (-49.4%). Ironically as farms are getting larger on average, the number of farms between 500 and 999 acres decreased by 24 for a change of –20.5%. Finally, those farms over 1,000 acres had a considerable increase (23 farms) which accounted for an overall increase of 60.5%.

TABLE 5.10: NUMBER OF FARMS AND LIVESTOCK BY TYPE COLFAX COUNTY 1992 TO 2007

Type of Livestock	1992	1997	2002	2007	% Change 1992 to 2007
Cattle and Calves					
farms	364	332	285	231	-36.5%
animals	82,454	88,327	79,677	75,589	-8.3%
average per farm	227	266	280	327	44.5%
Beef Cows					
farms	232	217	186	158	-31.9%
animals	6,537	8,482	8,554	6,825	4.4%
average per farm	28	39	46	43	53.3%
Milk cows					
farms	16	10	3	5	-68.8%
animals	719	515	377	497	-30.9%
average per farm	45	52	126	99	121.2%
Hogs and Pigs					
farms	271	196	100	70	-74.2%
animals	25,198	91,553	112,513	147,220	484.3%
average per farm	93	467	1,125	2,103	2161.9%
Sheep and lambs					
farms	33	21	16	13	-60.6%
animals	1,383	681	697	773	-44.1%
average per farm	42	32	44	59	41.9%
Chickens (layers and pullets)					
farms	26	21	16	20	-23.1%
animals	(D)	(D)	(D)	1,282	-
average per farm	-	-	-	64	-

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

Table 5.10 indicates the number of farms and livestock by type for Colfax County between 1992 and 2007. The predominant livestock raised in Colfax County are hogs and pigs followed by cattle and calves. All livestock production showed a decline in the number of farms raising animals. Three categories showing an increase in the total number of livestock raised are beef cows, hogs and pigs and chickens (assumed since 1992, 1997, and 2002 had disclosure concerns).

Hog and pig operations have seen a –74.2% change in the number of farms; however, the number of animals have increased from 25,198 in 1992 to 147,220 in 2007 an increase of 484.3%. With these different changes, the number of animals per farm has increased from 93 in 1992 to 2,103 in 2007 an increase of 2,161.9%.

Cattle and calf operations have declined both in number of farms and animals. In 1992 there were 364 farms with cattle and calf operations and by 2007 the number of operations decreased 231 or –36.5%. During the same period, the number of animals raised went from 82, 454 to 75,589 or –8.3%, the peak number of animals came in 1997 with 88,327.

Beef cow operations have decreased from 232 farms in 1992 to 158 farms in 2007, a decrease of 31.9%. However, during the same period overall, the actual number of animals increased from 6,537 in 1992 to 6,825 in 2007 an increase of 4.4%. The peak in beef cow production occurred as per the 2002 Census of Agriculture with 8,554 animals.

The other livestock operations in Colfax County have experienced drastic declines from 1992 to 2007. The largest decline in terms of farms have been hogs and pigs which lost 74.2% of operations between 1992 and 2007. Followed closely by milk cows which lost 68.8% of the producers in Colfax County.

TABLE 5.11: NUMBER OF FARMS AND LIVESTOCK BY TYPE COLFAX COUNTY 1992 TO 2007

Type of Crop	1992	1997	2002	2007	% Change 1992 to 2007
Corn for Grain					
farms	519	440	397	321	-38.2%
acres	97,518	97,590	96,470	96,208	-1.3%
average per farm	188	222	243	300	59.5%
Corn for Silage					
farms	42	69	100	51	21.4%
acres	3,350	5,630	8,028	4,062	21.3%
average per farm	80	82	80	80	-0.1%
Sorghum					
farms	47	21	3	1	-97.9%
acres	2,447	869	(D)	(D)	-
average per farm	52	41	-	-	-
Wheat					
farms	45	24	9	29	-35.6%
acres	1,422	641	135	1,608	13.1%
average per farm	32	27	15	55	75.5%
Oats					
farms	122	70	37	22	-82.0%
acres	2,913	1,660	955	598	-79.5%
average per farm	24	24	26	27	13.8%
Soybeans					
farms	465	394	368	288	-38.1%
acres	57,354	62,634	73,803	62,871	9.6%
average per farm	123	159	201	218	77.0%

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

Table 5.11 indicates the number of farms and crop by type for the period from 1992 to 2007, which show the prominent crops grown in the County. In addition, the table indicates the total number of farms producing the specific crop and average per farm.

Corn and soybeans have been the two most frequently raised crops in Colfax County since 1992. Three of the six categories showed an increase in acres farmed, these included corn for silage, wheat, and soybeans. The crop with the largest percentage increase (acres) is corn for silage at 21.3%,

In 2007, the total acres harvested of corn for grain was 96,208 which accounted for 53.8% of all harvested cropland. Soybeans accounted for 62,871 acres of cropland in Colfax County during 2007, which was 35.2% of all harvested cropland. Finally, wheat had a total of 1,608 acres which was 0.9% of the harvested cropland. Corn for grain is the dominate crop in Colfax County by a large margin but still saw a –1.3% decrease in acres planted between 1992 and 2007.

Agriculture has been a major part of the Colfax 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.

Economic Development Goals, Objectives and Policies

Economic Development Goal 5.1
Promote Colfax County on a full-time basis

General Economic Development Policies and Strategies

ED-5.1.1 The county needs to develop a joint economic development board charged with promoting Colfax County and all of the communities in the county.

ED-5.1.2 The county along with the new economic development board should raise the necessary revenue to hire a full-time Executive Director to promote Colfax County.

Economic Development Goal 5.2
Promote a balanced economic development program that strives to add value to the agricultural base of the county.

General Economic Development Policies and Strategies

ED-5.2.1 Agriculture and agricultural employment, including value-added agricultural businesses, should be promoted throughout Colfax County.

ED-5.2.2 Colfax County should encourage economic development projects, which do not conflict with the agricultural character of the County.

ED-5.2.3 Work with businesses and agricultural operators to build new vertically integrated economic systems from the current agricultural uses in place.

ED-5.2.4 Work to establish new or existing public and/or private research facilities in Colfax County.

Economic Development Goal 5.3
Recruit or retain the youth of the county during or after college.

General Economic Development Policies and Strategies

ED-5.3.1 Develop programs and jobs to address the needs of the youth in order to attract them back to the area after completion of their post-secondary education.

ED-5.3.2 The youth of Colfax County should be involved in the identification and development of these projects.

Economic Development Goal 5.4
Develop new industrial sites within Colfax County that have rail access.

General Economic Development Policies and Strategies

ED-5.4.1 Work with Union Pacific Railroad to identify strategies for expanding rail access in Colfax County.

Economic Development Goal 5.5
Examine the potential and promote Colfax County as a great place to work and telecommute.

General Economic Development Policies and Strategies

ED-5.5.1 Develop a promotional campaign to promote the quality of life issues of Colfax County as a place to live and "Work from".

ED-5.4.2 Promote commercial and industrial uses that should add to and create a diverse economic base in Colfax County.

ED-5.4.3 Economic Development activities should focus on growing local businesses, established by county residents, as opposed to pursuing the ultimate "smokestack(s). Homegrown businesses and industries will contribute more to the local communities and county and will be a part of the community.

ED-5.4.4 Identify businesses and professions where telecommuting would be appropriate and functional.

6

Colfax County Facilities

COUNTY FACILITIES

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

Public facilities represent a wide range of buildings, utilities, and services that are built and maintained by the different levels of government. Such facilities are provided to ensure the safety, wellbeing and enjoyment of the residents of Colfax County. These facilities and services provide residents with social, cultural, educational, and recreational opportunities, as well as law enforcement and fire protection services designed to meet area needs.

It is important for all levels of government to anticipate the future demand for their services if they are to remain strong and vital. The analysis of existing facilities and future services are contained in the Facilities Plan. Alternatively in some instances there are a number of services that are not provided by the local or state governmental body, and thus are provided by non-governmental private or non-profit organizations for the community as a whole. These organizations are important providers of services and are in integral part of the community.

County Facilities Plan

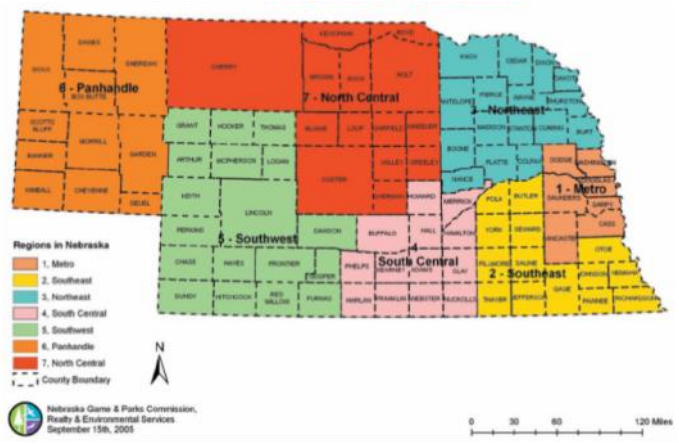
The Facilities Plan component of a Comprehensive Development Plan reviews present capacities of all public and private facilities and services.

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

- Recreation
- County Buildings
- Historic Sites and Places
- Education
- Fire/Law Enforcement
- Communication
- Public Utilities
- Health Care

Recreation

Colfax County is located in Nebraska's northeast Recreation Planning, Region 3, and a region within the Nebraska Department of Game and Parks system. The Region includes 15 counties in northeast Nebraska.



Community Parks and Facilities

The following facilities and programs can be found in the identified communities of Colfax County.

Clarkson City Park and Memorial Park

Clarkson has two parks covering approximately 26 acres. Facilities include a lighted basketball court, volleyball, sand volleyball, swimming pool and bath house, two ball diamonds, football fields, lighted tennis court, playground equipment, picnic tables and benches, rest rooms and shelters.

Howells Community Park and Memorial Park

There are two parks in Howells which cover approximately 27 acres. Facilities include a swimming pool, tennis courts, horseshoe pits, ball diamonds, horse arena, multi-purpose field, two sand volleyball courts, and three picnic shelters. Five playgrounds contain playground equipment. Organized baseball and softball programs are available for boys and girls through age 12.

Leigh Centennial Park

The Leigh community park is named Centennial Park in memory of the Leigh Centennial and is located in southwest Leigh. The facility, which covers approximately eighteen acres, includes the following: swimming pool, two sand volleyball courts, a regulation horse shoe court with sixteen pits, a three-acre stocked fishing lake, playground equipment, rest rooms complete with showers, and a lighted ballfield. Organized baseball and softball programs area available for all youth and are complemented by American Legion baseball programs for both Midgets and Juniors. The community of Leigh has a town baseball team which participates in the Dodge County Baseball League as well as a town team softball program which competes in an organized softball league composed of various communities in the area north and west of Leigh. Camping facilities with hookups are available in the park along with a dump station for recreational campers. Another feature of the park is an ISTEA funded walking trail. The Leigh community also maintains a mini-park along Main Street and a lighted tennis court with basketball goals in cooperation with Leigh Community Schools.

Schuyler City Lake

Schuyler City Lake is located just west of Nebraska Highway 15 on the southern edge of the community. The area contains an 18-acre lake that is stocked with bluegill, channel and flathead catfish and walleye.

Schuyler Campground

This municipal park is open from April 1 through October 1 and is located east of South Highway 15 across from the City Lake. The campground offers hookups, toilets, showers, fire grates, drinking water, fishing, and swimming. The campgrounds contain approximately 34 acres.

Schuyler Community Park

Schuyler Community Park is located due north and west of the City Lakes. The Park is home to the Historic Oak Ballroom, the city swimming pool, the American Legion Ball field, and open space. The park has approximately 16 acres of space.

Schuyler North Park

Schuyler North Park is bounded by "D" and "B" Streets and 20th and 22 Streets and contains approximately 7.4 acres. The park contains one playground area, four playing fields, four basketball courts and a public restroom and picnic shelter.

Schuyler Railside Green
Schuyler Railside Green is located in downtown Schuyler and covers approximately two acres. The "pocket park" contains a small green space with trail and benches.

Schuyler Soccer Fields
The Schuyler Soccer Fields are located on East 9th Street, and cover approximately four acres and have six fields.

Regional Recreation
Whitetail Wildlife Management Area
Whitetail Wildlife Management Area, located approximately 3 1/2 miles southwest of Schuyler, is the only state managed area in Colfax County. The Wildlife Management Area consists of a 216-acre tract along the Platte River that is available for public use. This acreage includes approximately 93 acres of wooded river bottom and 123 acres of islands and river. The WMA area offers hunting, fishing, hiking and canoe access. There are no facilities currently provided.

Maple Creek Recreation Area
Located northwest of Leigh along Highway 91, there are fifty RV camping sites with fifty amp service and ten primitive tent sites. The area includes shower house, restrooms, swimming beach, hiking, biking, and horseback riding trails, picnic and playground equipment. There are two boat ramps and the lake is stocked with Large-Mouth Bass, Blue Gill and Channel Catfish.
(Source: http://www.cityofleigh.com/attractions.htm)

Dead Timber State Recreation Area
This 200 acre area near Scribner on the Elkhorn River with fifty acres of water and offers primitive camping, picnicking, fishing and non powered boating. The area has seventeen pads with 30-amp electrical hookups, primitive camping, drinking water and latrines.

Dead Timber lies amidst the oxbow waters of the Elkhorn River. A neighboring wildlife management area also provides opportunity for fishing, hunting and wildlife viewing.
(Source: http://outdoornebraska.ne.gov/parks/guides/parksearch/showpark.asp?Area_No=59)

Fremont Lakes State Recreation Area
Fremont Lakes has about forty land acres and nearly 300 water acres in twenty sandpit lakes. Located three miles west of Fremont, this is a favorite area with campers, picnickers and water enthusiasts - from boating to fishing to water skiing. The swimming beach is unsupervised, and there is a PWC area, as well as a handicap accessible fishing pier.

Thousands of campers, anglers, boaters, swimmers, picnickers and other enthusiasts enjoy the outdoor recreation at Fremont Lakes State Recreation Area. Few areas offer more diversified recreation. Facilities include modern campgrounds with dump stations, picnic tables, shelter houses, fireplaces, playground equipment, water, lights, modern restrooms and boat launch sites.

Fremont Lakes is composed of twenty sandpit lakes that provide a place for just about any type of activity. The areas features three swimming beaches. The area also has a specially redesigned lake for use by personal water craft (PWC). A ramp has been installed to allow the PWCs to back in the water, and two new picnic/viewing shelters have been added to the PWC beach.
(Source: http://outdoornebraska.ne.gov/parks/guides/parksearch/showpark.asp?Area_No=78)

Golf Courses

The following is a brief description of the local golf courses in and around Colfax County.

Schuyler Golf Club

The Schuyler Golf Club covers seventy acres of south Schuyler. The course is a nine-hole public course.

Leigh Club 91 Golf

Club 91 is an executive 3,163 yard, 18-hole course with grass greens and complemented with a driving range, practice putting green, and a clubhouse. The golf course is located in the southwest corner of Leigh and is owned jointly by the communities of Leigh, Clarkson, Howells and Creston.

Other golf courses serving the Colfax County area include:

Course	Community
David City Golf Course	David City
North Bend Golf Course	North Bend
Van Berg Municipal Golf Course	Columbus
Quail Run Golf Course	Columbus
Country Shadows Golf Course	Columbus
Elks Country Club	Columbus
Elkhorn Acres Golf Course	Stanton
Steeple View Golf Course	Humphrey

Museums

Schuyler/Colfax County Museum

In 2012, the Schuyler Historical Society, Inc. celebrated the Schuyler/Colfax County Museum's 35th anniversary. Located at 309 E. 11th Street in downtown Schuyler, this large historical display appeals to the interests of all ages.

(Source: http://schuylernebraska.net/museum.asp)

Clarkson Historical Museum

This general museum displays collections of artifacts, musical instruments, horse drawn farm implements, photographs and clothing from Clarkson and surrounding areas.

Source: http://www.eventcrazy.com/Clarkson-NE/attractions/details/50049-Clarkson-Historical-Museum

Other Points of Interest

St. Benedict Center

St. Benedict Center is a non-profit, ecumenical retreat and conference center. It was completed in 1997. The Benedictines share their hospitality and spirituality with those who search for personal and spiritual growth. They welcome individuals and groups of all Christian denominations. Located 4 miles north of Schuyler on Highway 15

Benedictine Mission House - Christ the King Priory serves as the development and education office in the United States for the Benedictine Missionaries of St. Ottilien around the world. The monastery and mission office was dedicated in 1979. In 1985 the Benedictines celebrated 50 years in the States and in Schuyler.

Camp Luther

Camp Luther is located 12 miles northwest of Schuyler, on 160 acres. The camp offers summer and winter activities with a lake, three 20-person cabins, a small meeting room with kitchen, rest rooms and showers, and a multi-purpose building/dining hall/kitchen with a capacity of 300 people. The camp is a corporation formed by the Missouri Synod Lutherans.

Historical Sites

Oak Ballroom

The focal point of Schuyler is the Oak Ballroom. Listed on the National Register of Historic Places, this beautiful building was built by the WPA and completed in 1937. Its name was derived from the huge natural timbers and beams cut from native oak trees. A mural depicting a covered wagon on the Mormon trail is painted above the fireplace. The Oak Ballroom is used for receptions, dances, parties, cultural events and as a general community center.

(Source: http://schuylernebraska.net/oak.asp)

Colfax County Courthouse

Built in 1921 and 1922, the Colfax County Courthouse is a Second Renaissance Revival style building, which is an important landmark to the city of Schuyler and the County. George A. Berlinghof, a prolific designer of public buildings in Nebraska, was the architect.

(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Old Schuyler City Hall

The city council considered plans for a new city hall in July 1907. In December the plans of architect Joseph Guth were accepted, and C. F. Kaul was awarded the building contract. The building was completed in 1909 at a cost of $11,000. The two-story masonry building features a prominent clock/bell tower and houses a fire station on the first level and a council chamber on the second floor. The German nativity of the architect and the widespread use of this medieval town hall type in German and Italian cities suggest that Guth drew on this background to design the Schuyler City Hall.

(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

John Janecek House

John Janecek emigrated to the United States from Bohemia in 1870 and settled in Colfax County in 1873. He was best known in Schuyler as the builder and proprietor of the Janecek Opera House, the hub of social activity in the county around the turn of the century. The house was designed by Henry Voss, a German-born architect from Omaha, Nebraska. Constructed in 1885-86, the frame house was stuccoed in 1927.

(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Schuyler Carnegie Library

Located in Schuyler, the Carnegie Library was constructed in 1911 and 1912. The library is significant for its association with education in the community. The building retains a high degree of integrity.

(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Schuyler United States Post Office

The Schuyler United States Post Office, is a one-story, red brick building constructed in 1938 and 1939 in the Modernistic style. While the building retains a high degree of integrity, its historical significance derives from the mural painted on an interior wall.

Through New Deal programs such as the Public Works of Art Project and the WPA Federal Art Project, thousands of artists were employed. In 1934 the Section of Painting and Sculpture (renamed the Section of Fine Arts in 1938) was organized under the auspices of the Treasury Department to provide murals and sculpture for the many federal buildings constructed during the New Deal era.

Between 1938 and 1942 the Treasury Department's Section of Fine Arts (generally known as "the Section") commissioned twelve murals for twelve newly constructed post offices in Nebraska. Schuyler, along with the other eleven post office murals in Nebraska represent the Section's goal of making art accessible to the general population by reserving one percent of new building construction budgets for art.
(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Z.C.B.J Opera House

Located in Clarkson, the two-story brick building was constructed in 1915 as a combination opera house and Czech fraternal lodge hall. The opera house has a balcony with built-in wooden benches and a stage with prompt box and trapdoor. The building continues in use today as a lodge hall and community center.
(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Our Lady of Perpetual Help Catholic Church

Also known as the Wilson Church, the building is a fine example of the Gothic Revival style, constructed in 1918. The parish originated in the 1870s, and the church was a religious and social center for Czech and German immigrants who settled in the area near Schuyler.
(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Zion Presbyterian Church

Designed by M. D. Flechor, a Czech architect, the frame church was constructed near Clarkson in 1887-88 as the first Czech Presbyterian church in the state. The church cemetery was dedicated in 1875. Regular church services were held until December 1975.
(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

Wolfe and Grey Sites

These two adjacent sites overlook Shell Creek near Schuyler. These villages apparently date from A.D. 1500-1650, and they were probably occupied by ancestors of the Grand Band of the Pawnee. Even during this early period, Euro-American manufactured items were filtering into Pawnee life through intertribal trade networks. Archeologists have not determined if the sites were a single village.
(Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm)

EDUCATION

Public Schools

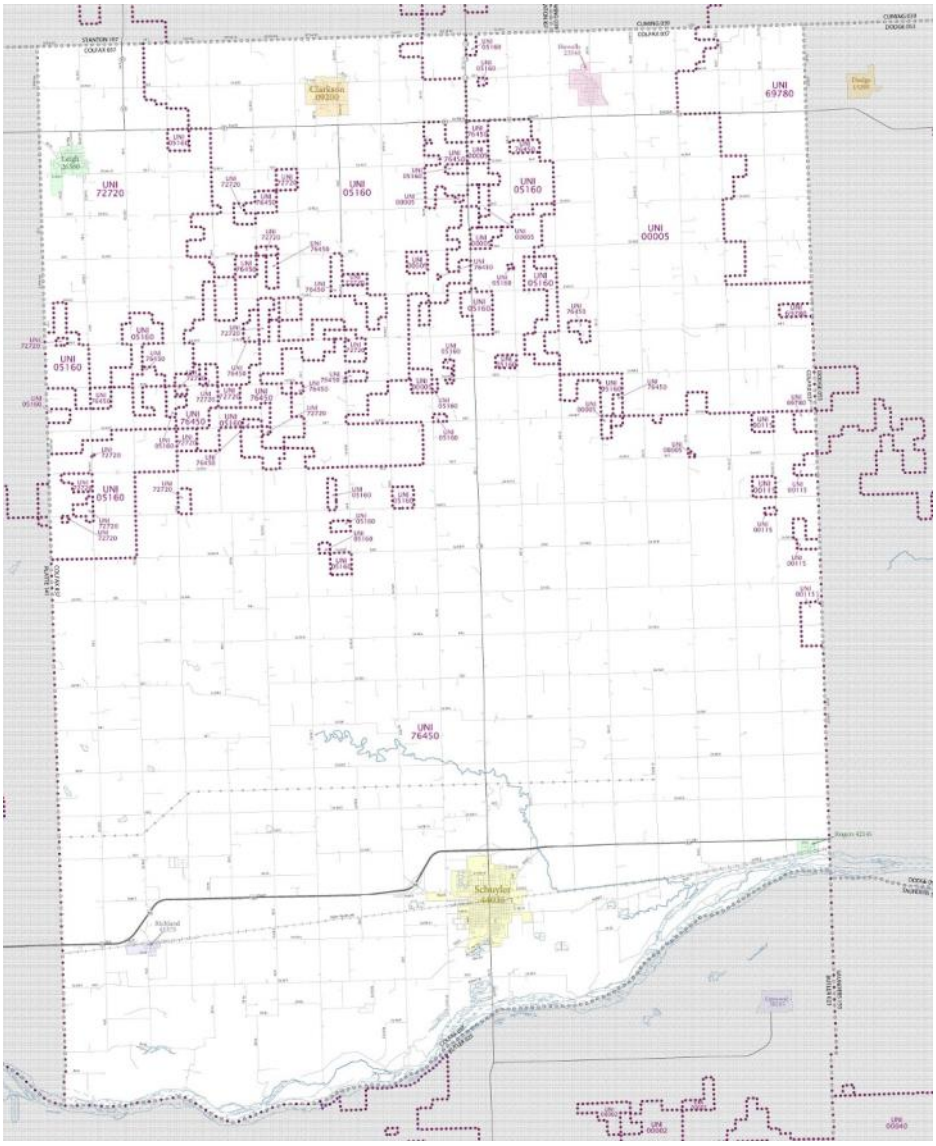
Depending upon the type of educational services provided and the size of the school district, the public schools in Nebraska are grouped into six classes defined by the State of Nebraska:

Class 1	*Any school district that maintains only elementary grades under the direction of a single school board. Recently dissolved by Legislative action*
Class 2	Any school district with territory having a population of 1,000 inhabitants or less that maintains both elementary and high school grades under the direction of a single school board.
Class 3	Any school district with territory having a population of more than 1,000 and less than 100,000 that maintains both elementary and high school grades under the direction of a single school board.
Class 4	Any school district with territory having a population of 100,000 or more and less than 200,000 inhabitants that maintains both elementary and high school grades under the direction of a single school board.
Class 5	Any school district with territory having a population of 200,000 or more that maintains both

elementary and high school grades under the direction of a single school board.

Class 6 — Any school district that maintains only a high school under the direction of a single school board. The territory of Class 6 district is made up entirely of Class 1 districts (or portions thereof) that have joined the Class 6.

FIGURE 6.1: SCHOOL DISTRICT MAP
COLFAX COUNTY PUBLIC SCHOOL DISTRICT 2010 CENSUS



Source: US Census 2010

Schuyler Community Schools

Education in Schuyler is provided to the public by the Schuyler Community Schools. SCS is accredited by the State of Nebraska and the North Central Association.

Enrollment is approximately 1800 students (K -12). Schuyler's school district covers 289.9 square miles. Schuyler Schools employs approximately 214 personnel (educators, support staff and administrators). There are six separate attendance centers and one high school, including:

- Schuyler Elementary School
- Richland School
- 4R School
- Fishers 24 Elementary
- Schuyler Middle School
- Schuyler Central High School

All attendance centers have maintained a favorable teacher / pupil ratio.
Sources: (http://www.scssatelliteschools.new.rschooltoday.com/ and http://schuylernebraska.net/schools.asp)

TABLE 6.1: ENROLLMENT BY DISTRICT
COLFAX COUNTY SCHOOL DISTRICTS 2012-2013

District	Pre K	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
Schuyler Community Schools	101	140	172	156	142	139	128	115	107	107	96	117	125	115	1,760
Clarkson Public Schools	20	15	10	8	13	11	12	5	8	14	20	15	20	11	182
Howells-Dodge Consolidated Schools	21	17	8	8	10	11	9	10	28	23	24	19	27	23	140
Leigh Community Schools	1	14	13	14	13	9	10	9	11	9	10	14	7	14	148
North Bend Central Public Schools	32	39	51	37	40	51	48	39	48	51	45	37	39	35	592

Source: Nebraska Department of Education 2012-2013

Clarkson Public Schools

Education in Clarkson is provided to the public by the Clarkson Public Schools. CPS is accredited by the State of Nebraska.

Enrollment as of the 2012-2013 school year was 182 students (PK -12). Clarkson's school district covers approximately 80 square miles. CPS employs approximately 40 educators and administrators. There are two attendance centers which include the elementary school and the junior-senior high school.

Howells-Dodge Consolidated Schools

Education in the Howells and Dodge areas is provided to the public by the Howells-Dodge Consolidated Schools. HDCS is accredited by the State of Nebraska.
Enrollment as of the 2012-2013 school year was 238 (PK -12). HDCS covers approximately 80 square miles. HDCS employs approximately 43 educators and administrators. There are three attendance centers which include the elementary school in Howells, the elementary school in Dodge and the junior-senior high school located in Howells.

Leigh Community Schools

Education in Clarkson is provided to the public by the Leigh Community Schools. LCS is accredited by the State of Nebraska.

Enrollment as of the 2012-2013 school year was 148 (PK -12). LCS employs approximately 32 educators and administrators. There are two attendance centers which include the elementary school and the junior-senior high school.

Post-Secondary Education

There are no post-secondary educational facility located in Colfax County.

The residents of Colfax County and the surrounding area have a large selection of in-state and out-of-state post-secondary schools to select. Some of these include:

Central Community College	Columbus
University of Nebraska	Lincoln
Nebraska Wesleyan	Lincoln
Union College	Lincoln
Southeast Community College	Beatrice, Milford, and Lincoln
Kaplan University	Lincoln
Doane College	Crete, Fairbury
Concordia University	Seward
University of Nebraska	Omaha
Creighton University	Omaha
Midland University	Fremont
Metropolitan Community College	Omaha

Fire and Rescue Protection

Fire and Rescue

Fire and rescue in Colfax County is handled through multiple volunteer departments. These departments are located in Schuyler, Howells, Clarkson and Leigh.

Clarkson Volunteer Fire Department

Clarkson Volunteer Fire Department & Rescue Squad is jointly operated thru the City of Clarkson and Colfax-Stanton Rural Fire District # 1. The facility is located at 220 Bryan Street in Clarkson. CVFD has 35 volunteer Firefighters, including 16 EMT's and 6 EMR's who man the Rescue Squad. The department is normally dispatched thru Colfax County 911.

The following table contains a breakdown of the major fire fighting equipment owned by the department.

TABLE 6.2: CLARKSON VOLUNTEER FIRE DEPARTMENT 2013

Unit	Year	Pump Capacity	Tank Capacity	Special Equipment
Freightliner Engine	2010	1250 GPM	1000 gal	
GMC Engine	1989	750 GPM	900 gal	
Ford Engine	1984	1000 GPM	500 gal	
GMC Tanker	1992	150 GPM	2000 gal	
GMC Tanker	1979	150 GPM	1500 gal	
Ford Ambulance	1995	Type III Ambulance (BLS) 2 patient capacity		
Ford Ambulance	2005	Type III Ambulance (BLS) 2 patient capacity		

Source: Clarkson Volunteer Fire Department

The department also has specialty equipment for rope rescues, grain bin rescues and 600 feet of 6 inch large diameter hose for relay pumping.

Howells Rural Fire Protection District/Volunteer Fire Department

The Howells Rural Fire Protection District and the Howells Volunteer Fire Department are located at 117 North 3rd Street in Howells, The Department has a total of 23 members in both departments.

The following table contains a breakdown of the major fire fighting equipment owned by the department.

TABLE 6.3: HOWELLS RFPD/VFD 2013

Unit	Year	Pump Capacity	Tank Capacity	Special Equipment
Engine 32	2006	1250 GPM	1000 gal	Ventilation, Extrication tools and Rope Rescue Equipment
Engine 31	1998	1000 GPM	1000 gal	Pump and roll, Grain Bin Rescue barriers, extrication equipment, and ventilation equipment
Tanker 43	2007	400 GPM	3000 gal	Salvage and overhaul supplies
Brush 24	2012	100 GPM	300 gal	Standard chainsaw and hand tools
Rescue 99-1	2005	Type III Ambulance (BLS) 2 patient capacity		
Rescue 99-2	1995	Type III Ambulance (BLS) 2 patient capacity		

Source: Howells Fire Protection District/Volunteer Fire Department

Leigh Volunteer Fire Department

The Leigh Volunteer Fire Department are located at 109 East Short Street in Leigh, The Department has a total of 30 members. The department has 13 EMT's and two-first responders.

The following table contains a breakdown of the major fire fighting equipment owned by the department.

TABLE 6.4: LEIGH VOLUNTEER FIRE DEPARTMENT 2013

Unit	Year	Pump Capacity	Tank Capacity	Special Equipment
Quick Response	2002	250 GPM	250 gal	Foam system
Pumper	1992	1000 GPM	950 gal	
Tanker	1988	300 GPM	2000 gal	
6x6 Tanker		300 GPM	1000 gal	
Grass Rig	1995	250 GPM	250 gal	
Pumper	2013	1250 GPM	1250 gal	Foam system
Ford E450 Osage Rescue	2006	2 patients		
Ford E350 Road Rescue	1996	2 patients		

Source: Leigh Volunteer Fire Department

Schuyler Volunteer Fire Department

The Schuyler Fire Department is located at are located at 302 East 16th Street in Schuyler, The Department has a total of 47 members. The membership breakdown is as follows 32 firefighters, eight firefighters/ EMTS/Paramedics, five EMT's and two cadets.

The department covers Schuyler, Richland and Rogers. The coverage area is approximately 250 square miles.

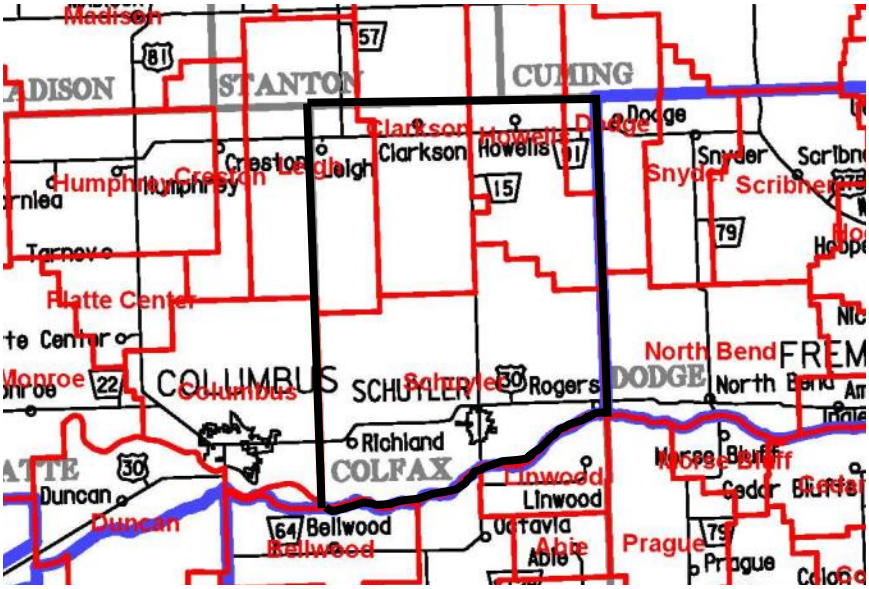
The following table contains a breakdown of the major fire fighting equipment owned by the department.

TABLE 6.5: SCHUYLER VOLUNTEER FIRE DEPARTMENT 2013

Unit		Model	Year	Pump Capacity	Tank Capacity	Special Equipment
E28	Hendrickson/ E One	Class A Pumper	1980	1000 GPM	500 gal	
E31	E One	Class A Pumper	1994	1250 GPM	750 gal	Holmatro Extrication Equipment/RIT Equipment
L55	Hendrickson/ Smeal	85' Aerial	1981	1250 GPM	300 gal	6K Gen Set/Acetylene Torch/Portable Lights
T45	Chevrolet/LDV	Equipment	1990			Rescue Struts/Cribbing/ Rescue Saws/4k Gen Set/Rope Rescue Equipment/Salvage Covers
T24	Kenworth/ Smeal	Tanker	1980/1988	200 GPM @ 90 psi	3000 gal	3000 gallon drop tank/ Low Flow Strainer/ Floating Strainer
T25	International/ Central States	Tanker	1995	200 GPM @ 90 psi	2000 gal	1200 gallon drop tank
T23	Ford/Danko	Grass Rig	2011	180 GPM @ 100 psi	300 gal	
T21	Ford/Danko	Grass Rig	2000	150 GPM @ 90 psi	225 gal	
U60	Chevrolet	Suburban	1999			
U61	Fire Prevention Trailer	H&H				
99-1	MedTec BLS Ambulance	Ford	1992	2 patients		
99-2	MedTec BLS Ambulance	Ford	2002	2 patients		

Source: Schuyler Volunteer Fire Department

FIGURE 6.2: FIRE DISTRICT MAP
COLFAX COUNTY 2013



Source: Nebraska Department of Roads

LAW ENFORCEMENT

Colfax County Sheriff's Department

Law enforcement in Colfax County is the responsibility of the Colfax County Sheriff. The office of the Colfax County Sheriff is located at 411 E. 11th Street in Schuyler.

TABLE 6.6: SWORN OFFICER COMPARISON
COLFAX COUNTY 2013

County	2009		2010		2011	
	Sworn Officers	Officers per 1,000 Population	Sworn Officers	Officers per 1,000 Population	Sworn Officers	Officers per 1,000 Population
Cuming	5	0.8	5	0.9	5	0.9
Stanton	7	1.1	7	1.1	7	1.1
Platte	18	1.7	20	2.0	21	2.1
Dodge	18	1.8	-	2.7	17	1.8
Butler	7	1.2	7	1.3	7	1.3
Colfax	**7**	**1.4**	**7**	**1.6**	**7**	**1.6**

Source: Nebraska Commission on Law Enforcement and Criminal Justice 2013

Based upon data from the Nebraska Commission on Law Enforcement and Criminal Justice, Colfax County had seven sworn officers in all three years of Table 6.6. When examining the number of sworn officers per 1,000 people, the Colfax County Sheriff's office had an average of 1.6 sworn officers per 1,000 people in the county during two of the three years.

Table 6.6 also shows the number of sworn officers and officers per 1,000 persons in the surrounding counties. Platte County to the west had the largest number of sworn officers as well as the largest number of sworn officers per 1,000 people.

The ratio of law enforcement officers per 1,000 persons in the population for any given area is influenced by many factors. Determination of law enforcement strength for a certain area is based on such factors as population density, size, and character of the community, geographic location, and other conditions existing in the area. Data indicate Colfax County has maintained a ratio of approximately 1.6 sworn officers per 1,000 people over a period of time, a good balance for Colfax County.

County Buildings

County Courthouse

The primary offices for Colfax County are located at 411 E. 11th Street. The courthouse houses the offices of the Clerk, Assessor, Treasurer, Register of Deeds, the County and District Courts and courtrooms, the detention center. planning and Zoning and others.

Built in 1921 and 1922, the Colfax County Courthouse is a Second Renaissance Revival style building, which is an important landmark to the city of Schuyler and the county. George A. Berlinghof, a prolific designer of public buildings in Nebraska, was the architect.
Source: http://www.nebraskahistory.org/histpres/nebraska/colfax.htm

County Highway Department

The County Highway Department/Shop is located at 466 Road 10. The facility houses the following offices:

- County Highway Superintendent
- County Emergency Manager

Senior Center

The Colfax County Senior Center located in Schuyler is known as "The Center", which is a combined meal site and focal point in Schuyler. "*The Center*" provides a place for health clinics, community events, school information, fellowship and many other activities.

Noon meal is served weekdays from 11:30 a.m. - 1:00 p.m. An evening meal is served on the *first* and *third* Mondays of each month at 5:30 p.m.
Source: (http://www.ci.schuyler.ne.us/center.asp)

COMMUNICATION

Telephone Services

There are numerous telephone providers serving Colfax County.

Radio Stations

There are several radio stations serving the Colfax County area. The nearest stations are based and broadcast from Columbus which is approximately 15 miles west of Schuyler. Other stations serving the area broadcast out of Omaha and Norfolk.

Television Stations

Presently there is no local television stations located in Colfax County. The over the air stations that serve the area originate out of Lincoln and Omaha in Nebraska.

Besides over the air television, USA Cable supplies Colfax County with Cable Television services.

Internet/World Wide Web Service Providers (ISP)

Internet services for the residents of Colfax County are provided by CenturyLink and USA Cable.

Newspapers

The residents of Colfax County are served locally by the Colfax County Press, Howells Journal, Leigh World and the Schuyler Sun. All newspapers are published weekly. Listed below are newspapers with daily circulation within the Colfax County area:

- Lincoln Journal Star
- Omaha World-Herald

PUBLIC UTILITIES

Electricity

There are two public power providers providing power distribution to the rural areas in the county including Cornhusker Public Power and Omaha Public Power District.

Natural Gas

Natural gas is supplied to parts of Colfax County by Black Hills Energy.

Solid Waste

Sanitation collection in Colfax County is provided by private haulers. Solid waste is then transported directly to the Stanton County and Butler County landfills.

Recycling Facility

The Colfax County Recycling Facility, West 16th Street (old Hwy 30), is open three days a week and serves the communities of Colfax County.

Acceptable items:

- Plastics including #1, #2, #3, #4, #5, #6, and #7
- Newspapers
- Magazines
- Mixed paper
- Paperboard
- Shredded paper
- Phonebooks
- Plastic bags and paper bags
- Corrugated cardboard
- Steel and aluminum cans

Health Care

Colfax County has the following health services in the county:

- 1 Hospital
- 4 Family Practice Clinics
- 2 Licensed/Skilled Nursing Homes
- 1 Assisted Living Facility

Alegent Creighton Hospital - Schuyler

Memorial Hospital is licensed for twenty-five critical access beds. As a critical access hospital in a rural setting, Memorial Hospital offers a wide variety of services to the residents of Colfax County; 24-hour emergency services, inpatient medical and surgical care, outpatient observation, outpatient surgical and skilled services are provided locally for patients of all ages.

A full complement of outpatient diagnostic and therapeutic services are also available such laboratory, radiology, physical therapy, occupational therapy, sleep studies and cardiac rehabilitation. Home Care professional services and durable medical equipment are available locally provided by Alegent Health at Home.

Outpatient specialty physicians supplement the local medical staff by providing specialty clinics in areas such as cardiology, ENT, gastrointestinal, general surgery, gynecology, nephrology, orthopedics, podiatry, and urology on a regular basis ensuring our patients receive services from the expertise of specialists in a service close to home.

Source: (http://www.alegentcreighton.com/memorial)

Nursing Home Facilities

Nursing home care is provided by five providers in the county. These include:

- Golden Living Center - Schuyler
- Whispering Pines - Schuyler
- Heritage Manor - Schuyler
- Golden Living Center - Clarkson
- Howells Retirement Center - Howells

Community Facilities Goals and Policies

Parks and Recreational Goals

Parks and Recreation Goal 1

Development of a county-wide trails system will aid in the long-term recreational and walkability needs as well as creating a tourism destination for the county.

Parks and Recreational Policies and Strategies

PR-1.1 The County should develop a county-wide trails master plan that examines possible routes and costs to construct the projects. This should be done in cooperation with the communities in and around the Colfax County area.

PR-1.2 Colfax County should work towards an achievable number of feet/miles that can be constructed annually and budget for the project.

Parks and Recreation Goal 2

Colfax County will continue to work closely with different entities including the community's and NRD's to maintain and enhance the existing parks, camps, and lakes.

Parks and Recreational Policies and Strategies

PR-2.1 The County should find approaches to help promote the area recreational destinations throughout the county.

Educational Goals

Educational Goal 1

Quality education is a vital component of positive growth. Although the County's role is limited, objectives and policies need to be established with regard to locating development to insure cost effective use of existing facilities.

Educational Policies and Strategies

EDU-1.1 Cooperate with the school systems in expanding public uses of educational facilities.

EDU-1.2 The school districts should review all new development proposed within the zoning jurisdiction of Colfax County so they can accommodate future school populations.

Educational Goal 2

The county will coordinate with the school districts to insure adequate areas for future educational needs. Above all, the main goal is to encourage excellence in the school curriculum and facilities.

Educational Policies and Strategies

EDU-2.1 Cooperate with school systems on any future expansion or the development of new joint facilities.

EDU-2.2 Work with students to continually identify new facilities that will be needed in the future.

Fire Protection, Law Enforcement, and Public Safety Goals

Safety (Fire Protection, Rescue and Ambulance) Goal 1

The goal of Colfax County is to maintain fire protection, rescue and ambulance programs by exploring programs and alternative services to insure optimum service levels and public costs.

Safety Policies and Strategies

SAFE -1.1 The County should continue to work with the different elements of the fire and rescue to maintain quality equipment levels.

SAFE-1.2 The fire departments should continue to expand fire safety education and prevention throughout the county.

Safety (Law Enforcement) Goal 2

The goal of Colfax County is to maintain quality law enforcement throughout the county.

Safety Policies and Strategies

SAFE -2.1 Continue to identify specific ways to work cooperatively with the different police departments and the County Sheriff regarding protection in Colfax County.

SAFE-2.2 Continue to support minimum standards regarding equipment used by law enforcement.

Safety (General Health and Safety) Goal 3

The goal of Colfax County is to maintain regulations to protect the general health and safety of all residents.

Safety Policies and Strategies

SAFE-3.1 Establish regulations protecting the City residents from the secondary effects of adult entertainment.

Historic and Cultural Resources Goals

Historic and Cultural Resources Goal 1

Promote and protect existing historical aspects of the county; while, promoting and protecting newer historical aspects of Colfax County.

Historic and Cultural Policies and Strategies

HIS-1.1 Continue working with other local organizations to maintain and promote the annual festivals that occur in the county.

HIS-1.2 Develop protective overlays, when necessary, to provide special protection of historic areas.

HIS-13 Support area historical, cultural and recreational activities. Colfax County should continue to build upon the historical structures, cultural heritage and recreational assets located throughout the County including the incorporated and unincorporated areas.

Public Works Goals

Public Works Goal 1

Colfax County should pursue programs and facilities to insure adequate utilities will be considered and will be compatible with the County's land use policies.

Public Works Policies and Strategies

PW-1.1 Promote development that utilizes existing facilities and capacities.

PW-1.2 Protect current and future water well fields and aquifers.

PW-1.3 Implement development/design standards that protect the area around municipal well fields located in the county.

PW-1.4 Utilize soil suitability data from this Plan and the Colfax County soils survey when evaluating development proposals proposing septic system or lagoons for sewage treatment.

PW-1.5 Decisions should be made based on the Soil Survey as well as actual soil data collected by a professional engineer and certifying laboratory.

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Natural Resources and the Environment

Natural Resources and the Environment

Introduction

In order to formulate a truly valid and "comprehensive" plan for the future development of Colfax County, it is first necessary to evaluate the environment and man-made conditions which currently exist to determine the impacts these factors may have on limiting future land uses in. This component of the Colfax County Comprehensive Plan provides a general summary of the environmental and man-made conditions, which are present in the County, and identifies and qualifies the characteristics of each which will directly or indirectly impact future land uses.

Natural Environmental Conditions

- Climate
- Geology
- Relief and Drainage
- Wildlife
- Wetlands
- Soil Association
- Capability Grouping
- Prime Farmland
- Soil Limitations

Natural Conditions

Climate

(This information was taken from the Colfax County Soil Survey by the United States Department of Agriculture – Soil Conservation Service – January 1982)

Colfax County is cold in winter and quite hot with occasional cool spells in summer. Precipitation occurring during the winter and frequently snowstorms. Precipitation during the warm months is chiefly showers, often heavy, that occur when warm moist air moves in from the south. The total annual rainfall is normally adequate for corn, soybeans, and small grain.

In winter the average temperature is 24 degrees F, and the average daily minimum temperature is 13 degrees. The lowest temperature on record, which occurred at Clarkson on January 12, 1974, is -31 degrees. In summer the average temperature is 73 degrees, and the average daily maximum temperature is 86 degrees. The highest recorded temperature, which occurred on August 11, 1954, is 111 degrees.

Growing degree days are equivalent to heat units, and during the month, accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F.). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

Of the total annual precipitation, twenty-one inches, or seventy-five percent, usually falls in April through September, which includes the growing season for most crops. In two years out of ten, the rainfall in April through September is less than seventeen inches. The heaviest one-day rainfall during the period of record was 3.65 inches at Clarkson on July 14, 1966. Thunderstorms occur on about fifty days each year and most occur in summer.

Average seasonal snowfall is twenty-five inches. The greatest snow depth at any one time during the period of record was twenty-seven inches. On the average, at least one inch of snow is on the ground thirteen days of the year, but the number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about fifty-five percent. Humidity is higher at night and averages about eighty percent at dawn. The sun shines seventy-five percent of the time possible in summer and fifty-five percent in winter. The prevailing wind is from the north-northwest from November through April and from the south-southeast from May through October. Average wind speed is highest at twelve miles per hour in spring.

Tornadoes and severe thunderstorms strike occasionally. These storms are local and of short duration and result in sparse damage in narrow belts. Hailstorms occur at times during the warmer part of the year in irregular patterns and in relatively small areas.

Geology

(This information was taken from the Colfax County Soil Survey by the United States Department of Agriculture – Soil Conservation Service – January 1982)

Loess, till, and alluvium are at or near the land surface in Colfax County. The bedrock is of Cretaceous age and lies 60 to 400 feet below the land surface. There are no known outcrops of bedrock in Colfax County.

Deposits of sand and gravel or of glacial till overlie the bedrock. The sand and gravel deposits are excellent sources of water for irrigation, industry, and domestic uses. The glacial till consists mostly of clay with scattered lenses of sand and pockets of gravelly sand. It generally yields only small amounts of water to wells. Till is present beneath most of the uplands, but is absent or very thin beneath the Platte River Valley. Areas where till crops out are indicated on the soil maps by Steinauer soils or by a till outcrop symbol.

Overlying the till is brown and light brown loess of the Loveland Formation. This loess crops out on upland slopes in many places, but the outcrop is seldom more than a narrow band on the slope. The soils of the Geary Variant formed in this loess. The outcrops of Loveland loess are indicated on the soil maps by a special symbol.

A thick layer of buff-colored loess mantles the Loveland loess and is at the surface on nearly all of the uplands and stream terraces. This loess is a slightly clay, calcareous silt, that is moderately permeable to air and water. It is the parent material of Belfore, Crofton, Fillmore, Moody, and Nora soils.

Areas of eolian sand occur in scattered areas on slopes adjacent to the major streams. There is an area of eolian and fluvial sand between Shell Creek and the Platte River. Thurman soils formed in eolian sand. Outcrops of sand are indicated on the soil maps by a special symbol.

Allluvium in the smaller valleys consists of silt and clay. The alluvium directly adjacent to the Platte River is sand and grades to silt and clay as the distance from the river increases. Major soils that developed in sand are Alda, Boel, Inavale, Ord, and Platte soils. Colo, Hobbs, Lawet, and Shell soils formed in silty alluvium. Luton soils formed in clay alluvium. Hall soils formed in silty loess underlain by coarse sand on the stream terrace that is at the north edge of the Platte Valley, extending from near Highway 15 north of Schuyler to the Platte County line north of Richland. Blendon soils formed in loamy alluvium on the terrace just north of the Platte River, the town of Schuyler is on this terrace.

The land surface in Colfax County was relatively stable before agricultural disturbance, there was little movement of surface materials by water and very little movement or shifting by wind. Cultivated crops have replaced the native grasses, and the soil surface is no longer well protected from erosion. The nearly level and gently sloping silty areas remain relatively stable. Areas with rolling and steep slopes have a great deal of movement of surface material and produce high amounts of sediment. In sandy areas, surface materials are now subject to considerable shifting by wind and to some movement by water, but very little material is moved out of the area.

The small valleys in the uplands have always received runoff water from the adjacent slopes. Some

of the surface material washed from the slopes is added to the valley alluvium. Under native prairie vegetation, the slight movement of surface materials resulted in dark colored alluvium being laid down in thin increments with minimal evidence of stratification. As cultivated crops replaced the native vegetation, the alluvium added by each overflow became thicker, lighter in color, and more definitely stratified. In most small valleys, two to five feet of alluvium overlies the dark colored pre-agricultural land surface. Flooding is occasional in most of these areas.

The broad valley of the Platte River receives slight additions of overflow material by runoff from adjacent uplands. Areas adjacent to river channels are frequently or occasionally flooded. Both scour and deposition occur during overflows. The scour is largely shifting of material rather than removal. Upland streams that cross the valley carry much sediment at flood stage and add clay fine and silty coarse material to overflowed areas.

Physiography, Relief and Drainage

(This information was taken from the Colfax County Soil Survey by the United States Department of Agriculture – Soil Conservation Service – January 1982)

Colfax County is in the Great Plains physiographic province. The strongest relief is in the breaks adjacent to the Shell Creek and Platte River Valleys. Relief between ridgetops and bottoms of the adjacent drainageways ranges to a maximum of about 100 feet.

About sixty percent of Colfax County is an upland landscape. This landscape consists of ridgetops, side slopes, and narrow valleys. The ridgetops are rounded and commonly are gently sloping. The side slopes range from gently sloping to steep.

The Platte River Valley is nearly level except for a few hummocky areas of sandy soils. Small drainageways transect the valley. A stream terrace borders the valley on the north side. This terrace is about 1 mile wide at the western end of the county, just north of Richland, and tapers to a point about two miles north of Schuyler. Stream terraces constitute about 5 percent of the county, and bottom lands about thirty-five percent of the county.

Colfax County is drained by the Platte River and its tributaries, by Shell Creek and Lost Creek, and by Maple Creek and Rawhide Creek, which are tributaries of the Elkhorn River. The Platte River flows to the east and northeast. Shell Creek and Lost Creek flow into the Platte River from the west and northwest. The Maple Creek system flows to the southeast, and Rawhide Creek flows to the east. The Platte River and its major tributaries flow continuously except during periods of extended drought.

The lowest elevation in the county located in the extreme southeastern part of the county at about 1,300 feet above sea level. The highest elevation, which is in the northwestern part of the county, is about 1,720 feet. Schuyler is at an elevation of about 1,350 feet.

Wildlife and Habitat

(This information was taken from the Colfax County Soil Survey by the United States Department of Agriculture – Soil Conservation Service – January 1982)

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing

plant cover, or by promoting the natural establishment of desirable plants.

Table 9 within the Colfax County Solis Survey rates soils based upon their potential to provide habitat. Soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of good indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of fair indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of poor indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of **very poor** indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of grain and seed crops are corn, wheat, oats, and grain sorghum.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, and slope. Soil temperature and soil moisture are also considerations. Examples of grasses and legumes are orchard grass, intermediate wheat grass, smooth brome, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flood hazard. Soil temperature and soil moisture are also considerations. Examples of wild herbaceous plants are big and little bluestem, goldenrod, wheatgrass, and side oats grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, the available water capacity, and wetness. Examples of these plants are oak, poplar, Washington hawthorn, dogwood, eastern cottonwood, and willow. Examples of fruit-producing shrubs that are suitable for planting on soils rated ***good*** are Peking cotoneaster, buck brush, aromatic sumac, and wild plum.

Coniferous plants furnish browse, seeds, and cones. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. An example of a native coniferous plant is eastern red cedar. Examples of coniferous plants that are commercially available and suited to soils in Colfax County are ponderosa, Scotch, and Austrian pine.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity,

salinity, and soil moisture. Examples of shrubs are plum, lilac, Peking cotoneaster, and aromatic sumac.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, prairie cord grass, rushes, sedges, and reed grass.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.
The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for open/and wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include bobwhite, quail, ring-necked pheasant, meadowlark, field sparrow, cottontail, skunk, and red fox.

Habitat for woodland wildlife consists of areas of deciduous plants or coniferous plants or both and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, cottontail, thrushes, woodpeckers, squirrels, red fox, skunk, raccoon, deer, coyote, and oppossum.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include white-tailed deer, badger, prairie grouse, and meadowlark. The kinds of wildlife and wildlife habitat on the twelve soil associations in Colfax County are discussed in the paragraphs that follow. The associations are described under the heading "General soil map units."

The Nora-Crofton-Moody association and the Moody-Alcester association have a landscape of undulating and rolling hills. The vegetation is primarily cultivated cropland. Scattered clumps of trees and shrubs are along roadsides, and herbaceous vegetation is in the narrow drainageways. These associations provide a good combination of food and cover for pheasant and bobwhite. Trees and shrubs around farmsteads provide protection for pheasant and quail as well as for cottontail, squirrels, and songbirds.

The Moody-Fillmore association, the Belfore association, and the Moody-Thurman association support habitat for open land wildlife such as pheasant and bobwhite, especially near wooded areas. In places shallow depressions provide habitat for shore birds and migrating waterfowl as well as for other related wildlife that use wetlands.

The Steinauer-Moody association is a narrow band of rolling to steep land that has short drainageways and dense stands of bur oak. This association is not a large one but is exceptional for wildlife habitat. Attracted to these wooded areas are such animals as white-tailed deer, squirrels, and songbirds and such predator species as fox, coyote, skunk, and raccoon.

The Blendon and Hall associations are used mainly by open land wildlife. The cover is mainly cultivated crops. Shelterbelts and windbreaks provide winter cover for pheasant and bobwhite, and the adjacent cropland provides food.

The Platte-Inavale association supports habitat for woodland and wetland wildlife. White-tailed deer, cottontail, tree squirrels, and songbirds abound in the wooded area along the Platte River. In the wetland areas adjacent to the river, muskrat, mink, shore birds, and waterfowl are common. The wildlife travel to the uplands for food and if pressured by hunters, return to the cover that is along the river.

The Lawet association is a poorly drained area. At certain times of the year, it provides habitat for wetland species such as waterfowl and shore birds. Cropland areas are usually planted to corn, and areas too wet to cultivate are in hayland or pasture. Small rodents provide food for hawks, owls, eagles, and other migrating predators as well as for the terrestrial predators such as fox and coyote.

In the Alda-Ord and the Zook-Shell-Hobbs associations excellent wildlife habitat is along the major drainageways of the bottom lands. Cover types in these associations include native range and pasture and cultivated cropland. Woody species, such as green ash, American plum, eastern red cedar, Russian-olive, common chokecherry, Russian mulberry, common hackberry, and Tatarian honeysuckle grow along the roadsides and in drainageways. The diversity of cover types provides habitat for a variety of wildlife species, such as fox, coyote, jack rabbit, white-tailed deer, squirrels, songbirds, hawks, owls, eagles, skunk, raccoon, and mink, along with muskrat and beaver. Ringnecked pheasant and bobwhite also nest in these areas. Mourning doves can be found throughout the county .

Wetlands

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods during the year, including during the growing season. Water saturation (hydrology) largely determines the soil development and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Two general categories of wetlands are recognized; coastal or tidal wetlands, and inland or non-tidal wetlands.

Inland wetlands found in Colfax County are most common on floodplains along rivers and streams (riparian wetlands), in isolated depressions surrounded by dry land (for example, playas, basins, and "potholes"), along the margins of lakes and ponds, and in other low-lying areas where the groundwater intercepts the soil surface or where precipitation sufficiently saturates the soil (vernal pools and bogs). Inland wetlands include marshes and wet meadows dominated by herbaceous plants, swamps dominated by shrubs, and wooded swamps dominated by trees.

Certain types of inland wetlands are common to particular regions of the country:

- wet meadows or wet prairies in the Midwest
- prairie potholes of Nebraska

Many of these wetlands are seasonal (dry one or more seasons every year). The quantity of water present and the timing of its presence in part determine the functions of a wetland and its role in the environment. Even wetlands that appear dry at times for significant parts of the year - such as vernal pools - often provide critical habitat for wildlife adapted to breeding exclusively in these areas.

The federal government protects wetlands through regulations (like Section 404 of the Clean Water Act), economic incentives and disincentives. For example, tax deductions for selling or donating wetlands to a qualified organization, and the "Swampbuster" provisions of the Food Security Act, cooperative programs, and acquisition (i.e. establishing national wildlife refuges). Beyond the federal level, a number of states have enacted laws to regulate activities in wetlands, and some counties and towns have adopted local wetlands protection ordinances or have changed the way

development is permitted. Few states, however, have laws specifically regulating activities in inland wetlands, although some states and local governments have non-regulatory programs that help protect wetlands.

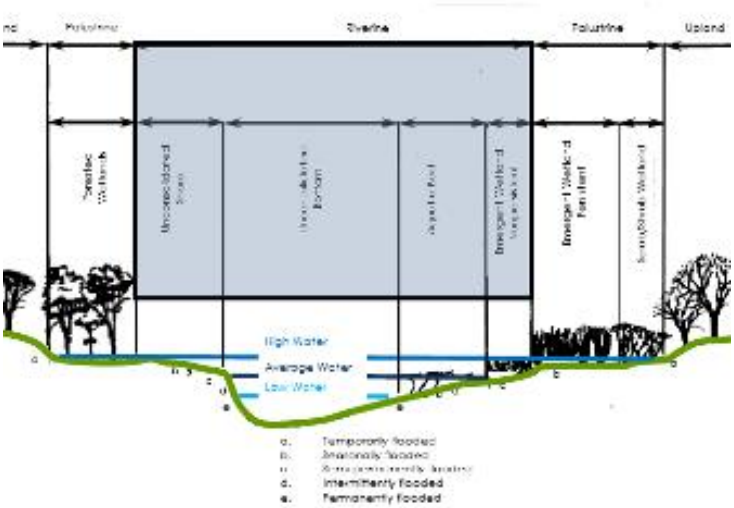
Partnerships to manage whole watersheds have developed among federal, state, tribal, and local governments, nonprofit organizations, and private landowners. The goal of these partnerships is to implement comprehensive, integrated watershed protection approaches. A watershed approach recognizes the inter-connection of water, land, and wetlands resources and results in more complete solutions that address more of the factors causing wetland degradation.

The government achieves the restoration of former or degraded wetlands under the Clean Water Act Section 404 program as well as through watershed protection initiatives. Together partners can share limited resources to find the best solutions to protect and restore America's natural resources. While regulation, economic incentives, and acquisition programs are important, they alone cannot protect the majority of our remaining wetlands. Education of the public and efforts in conjunction with states, local governments, and private citizens are helping to protect wetlands and to increase appreciation of the functions and values of wetlands. The rate of wetlands loss has been slowing, but we still have work to do, you can be a part. Approximately seventy-five percent of wetlands are privately owned, so individual landowners are critical in protecting these national treasures.

Wetlands play an important role in the ecology of Colfax County, and are home to many species of wildlife, many of which live only in wetland areas. Wetlands also provide an important service to nearby areas by holding and retaining floodwaters. These waters are then slowly released as surface water, or are used to re-charge groundwater supplies. Wetlands also help regulate stream flows during dry periods.

The U.S. Fish and Wildlife Service (FWS) produce information on the characteristics, extent, and status of the Nation's wetlands and deep-water habitats. This information has been compiled and organized into the National Wetlands Inventory (NWI).

FIGURE 7.1: RIVERINE WETLAND SYSTEM



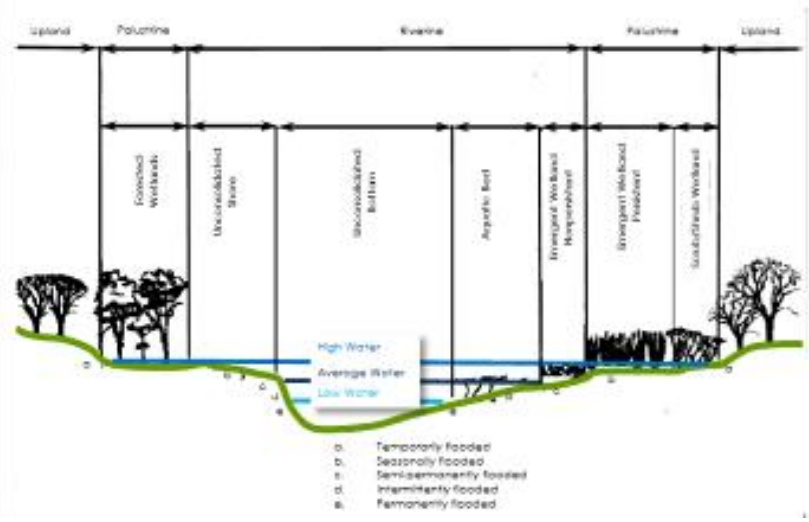
Wetlands are categorized in several classifications, each more detailed and specific than the previous. The NWI uses five systems; marine, estuarine, riverine, lacustrine, and palustrine. Within each system, there are subsystems, classes, subclasses, and dominance types to describe different wetland characteristics. The system classification refers to wetlands that share similar hydrologic, geomorphologic, chemical, or biological factors. The following are definitions and examples of three of the five systems used to describe wetlands. The Marine and Estuarine wetland systems are located

in and near the open ocean; therefore, they do not occur in Nebraska. Further information, through NWI, on specific classifications is available.

Colfax County experiences each of these wetland systems. They are found through out the entire county. The Figures 7.1, 7.2 and 7.3 depict common ways in which these three systems develop. These figures were produced by the United States Fish and Wildlife Service, and are taken from their 1979 publication entitled "Classification of Wetlands and Deepwater Habitats of the United States." These same Figures depict common examples of the riverine, lacustrine, and palustrine wetlands, respectively. Figure 7.5 shows the occurrence of wetlands in Colfax County.

Figure 7.1 shows the riverine system includes all wetlands that occur in channels, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean derived salts in excess of 0.5%. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. Therefore water is usually, but not always, flowing in the riverine system.
Springs discharging into a channel are also part of the riverine system. Uplands and palustrine wetlands may occur in the channel, but are not included in the riverine system. Palustrine Moss-Lichen Wetlands, Emergent Wetlands, Scrub-Shrub Wetlands, and Forested Wetlands may occur adjacent to the riverine system, often in a floodplain.

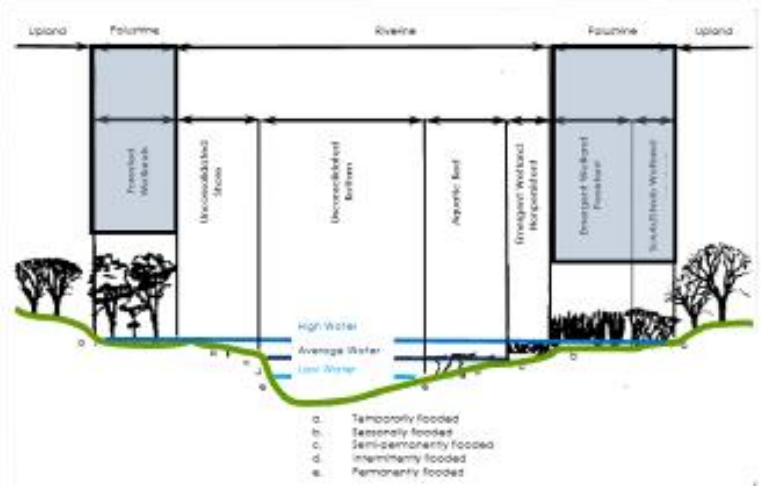
FIGURE 7.2: LACUSTRINE WETLAND SYSTEM



The Lacustrine System includes all wetlands with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent moss or lichens with greater than 30% area coverage; and (3) total area exceeds 20 acres. Similar wetland areas totaling less than 20 acres are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin exceeds 6.6 feet (2 meters) at low water.

The Lacustrine System includes permanently flooded lakes and reservoirs (e.g. Lake Superior), intermittent lakes (e.g. playa lakes), and tidal lakes with ocean-derived salinities below 0.5% (e.g. Grand lake, Louisiana). Typically, there are extensive areas of deep water and there is considerable wave action. Islands of Palustrine wetlands may lie within the boundaries of the Lacustrine System.

FIGURE 7.3: PALUSTRINE WETLAND SYSTEM



The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 20 acres; (2) lacking active wave-formed or bedrock shoreline features; (3) water depth in the deepest part of basin less than 6.6 feet (2 meters) at low water; and (4) salinity due to ocean-derived salts less than 0.5%.

The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent, or intermittent water bodies often called ponds. These wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers.

Playa Wetlands

There is one final wetland type found in Colfax County and it is the Playa wetlands. According to the Wetlands Guide published by the Nebraska Game and Parks Commission, Playa wetlands are wind-formed, nearly circular depressions located in semi-arid areas. They have a clay layer in the soil under the wetland that slows runoff water from seeping into the ground. This clay layer was formed by water movement over thousands of years. Most playas are not directly connected to groundwater. Playa wetlands are located throughout the northwest three-fourths of the state, except in the Sandhills. The major playa complexes in Nebraska include the Rainwater Basins, Central Table Playas, Southwest Playas, and the Todd Valley.

According to the same document, the Todd Valley is split in to two regions. The region south of the Platte River is located in an ancient valley of the Platte River (termed the Todd Valley) that runs northwest to southeast through part of Saunders County (Lueninghoener 1947). The valley has partially filled with sand deposits and fine, wind-blown loess soils after the river moved to its present location. The region north of the Platte River is located on an ancient floodplain terrace between the Platte River and Shell Creek and along Logan Creek. Todd Valley wetlands occupy small, clay-lined, closed depressions located in loess soils. They are mostly fresh-water, seasonally and temporarily-flooded wetlands that receive most of their water from runoff.

The Todd Valley is where Colfax County is located. The Todd Valley contains an estimated 2,662 acres of remaining Playa wetlands and these acres are considered to be endangered.

Figure 7.5: Wetlands Map

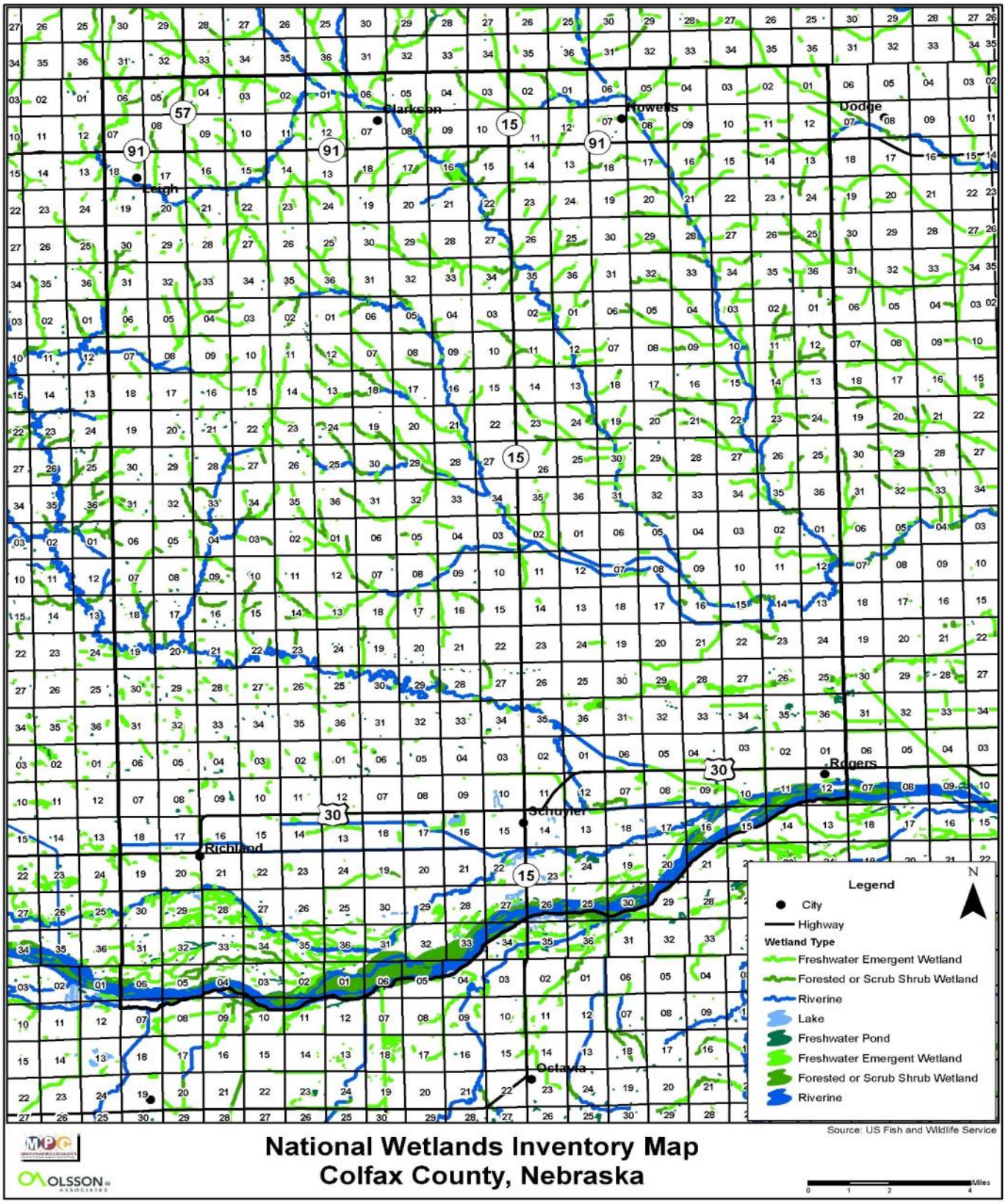
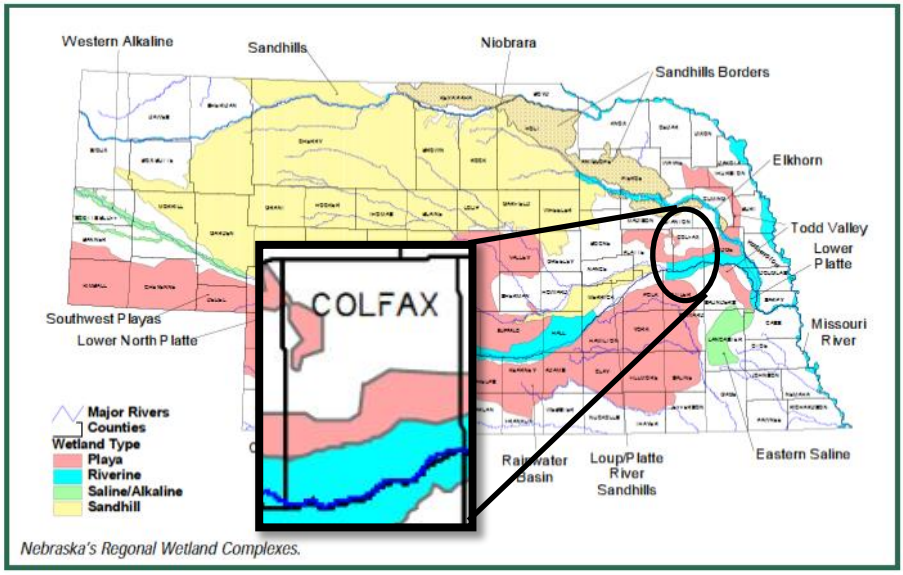


FIGURE 7.4: PLAYAWETLANDS



Source: Nebraska Game and Parks Commission

Soil Formation and Classification

(The following information has been inserted directly from the Colfax County Solis Survey dated January 1982)

The general soil map shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit, or soil association, on the general soil map is a unique natural landscape. Typically, an association consists of one or more major soils and some minor soils, and named for the major soils. The soils making up one association can occur in other associations but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified. Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one soil association differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Soil Associations

Silty soils on uplands and foot slopes

Two associations are in this group, the soils are gently sloping to steep, well drained, and somewhat excessively drained. Most of the acreage, except for small areas of introduced or native grasses near farmsteads and on steep slopes, is cultivated under dryland management. Some areas where high-yielding wells are available are irrigated mainly by a center-pivot system. Erosion by water is the main hazard. Maintaining a high level of fertility, controlling runoff, and conserving moisture for plants are the main concerns of management.

1. Nora-Crofton-Moody association

Deep, gently sloping to steep, well drained and somewhat excessively drained silty soils that formed in loess; on uplands.

This association is on dissected uplands that have a thick mantle of loess. The ridgetops are long,

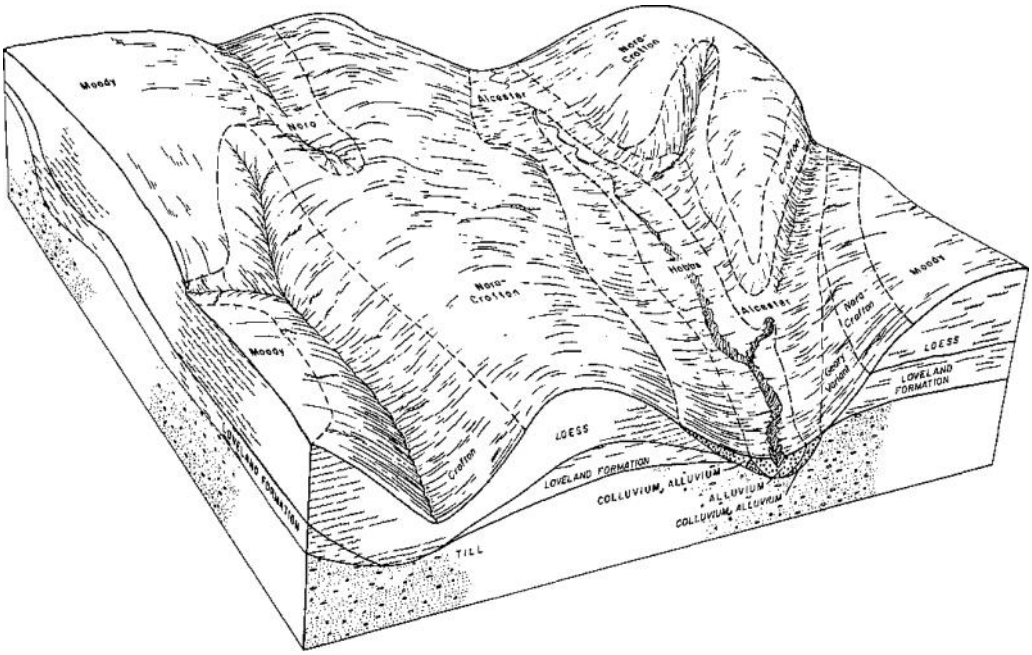
narrow, and gently sloping, the side slopes are strongly sloping and steep. This association is dissected by numerous narrow intermittent drainageways (Figure 7.6). Narrow foot slopes are at the base of many of the upland areas.

This association makes up about forty-six percent of the county. It is about thirty-two percent Nora soils, twenty-three percent Crofton soils, twenty-three percent Moody soils, and twenty-two percent soils of minor extent.

The Nora soils are gently sloping to moderately steep and occur on ridgetops and side slopes. They are deep, well drained soils. Typically, the surface layer is dark grayish brown, friable silty clay loam about nine inches thick. The subsoil is friable silty clay loam about eighteen inches thick. The upper part is brown, and the lower part is pale brown. The underlying material to a depth of sixty inches is very pale brown, mottled, calcareous silt loam.

The Crofton soils are deep, well drained and somewhat excessively drained, calcareous soils on ridgetops and side slopes. They are gently sloping to steep. Typically, the surface layer is brown, friable, calcareous silt loam about nine inches thick. The underlying material to a depth of sixty inches is calcareous silt loam. It is light gray in the upper part and light brownish gray in the lower part.

FIGURE 7.6: TYPICAL NORA-CROFTON-MOODY ASSOCIATION



The Moody soils are on ridgetops and side slopes, they are deep, well drained, and gently sloping or strongly sloping. Typically, the surface layer is dark grayish brown, friable silty clay loam about seven inches thick. The subsoil is friable silty clay loam about twenty-nine inches thick. The upper part is dark grayish brown and brown, and the lower part is yellowish brown. The underlying material to a depth of sixty inches is pale brown silty clay loam in the upper part and pale brown silt loam in the lower part.

Of minor extent in this association are Alcester, Hobbs, Kezan, and Geary Variant soils. The well drained Alcester soils are on foot slopes. The Geary Variant soils are on side slopes. The well drained, stratified Hobbs soils are in narrow upland drainageways that are occasionally flooded. The Kezan soils are poorly drained and in narrow upland drainageways.

The farms on this association are diversified, mainly a combination of cash grain and livestock enterprises. Corn, soybeans, oats, and alfalfa, which are grown under dryland farming, are the main crops. A few sprinkler irrigation systems are used where high-yielding wells are available. Introduced and

native grasses are grown near farmsteads and in small areas where slopes are steepest.

Soil erosion is the main hazard on this association. Maintaining soil fertility, controlling runoff, and conserving moisture are the main concerns of management. Wetness limits the use of some of the minor soils in drainageways for cultivated crops. Organic matter content needs to be improved in many areas.

The farms on this association average about 200 acres. Most cash crops and livestock are marketed locally. Some livestock are shipped to terminals outside the county.

2. Moody-Alcester association

Deep, gently sloping and strongly sloping, well drained silty soils that formed in loess and in a mixture of colluvium and alluvium; on uplands and foot slopes.

This association consists of broad, smooth areas of gently sloping and strongly sloping soils on loess uplands and the adjacent areas of gently sloping soils on foot slopes (Figure 7.7). There are many drainageways and only a few of the larger streams.

This association makes up about ten percent of the county. Moody soils make up about sixty-seven percent of this association and Alcester soils about 19 percent. Soils of minor extent make up the rest.

The Moody soils are gently sloping and strongly sloping and are in the broad, smooth areas of the uplands. They are deep, well drained soils. Typically, the surface layer is dark grayish brown, friable silty clay loam seven inches thick. The subsoil is friable silty clay loam about twenty-nine inches thick. The upper part is dark grayish brown and brown, and the lower part is yellowish brown. The underlying material to a depth of sixty inches is pale brown silty clay loam in the upper part and pale brown silt loam in the lower part.

The Alcester soils are deep, well drained, gently sloping soils on foot slopes. Typically, the surface layer is dark grayish brown, friable silt loam about 24 inches thick. The subsoil is friable silty clay loam about 12 inches thick. The upper part is grayish brown, and the lower part is brown. The underlying material to a depth of 60 inches is light yellowish brown silt loam.

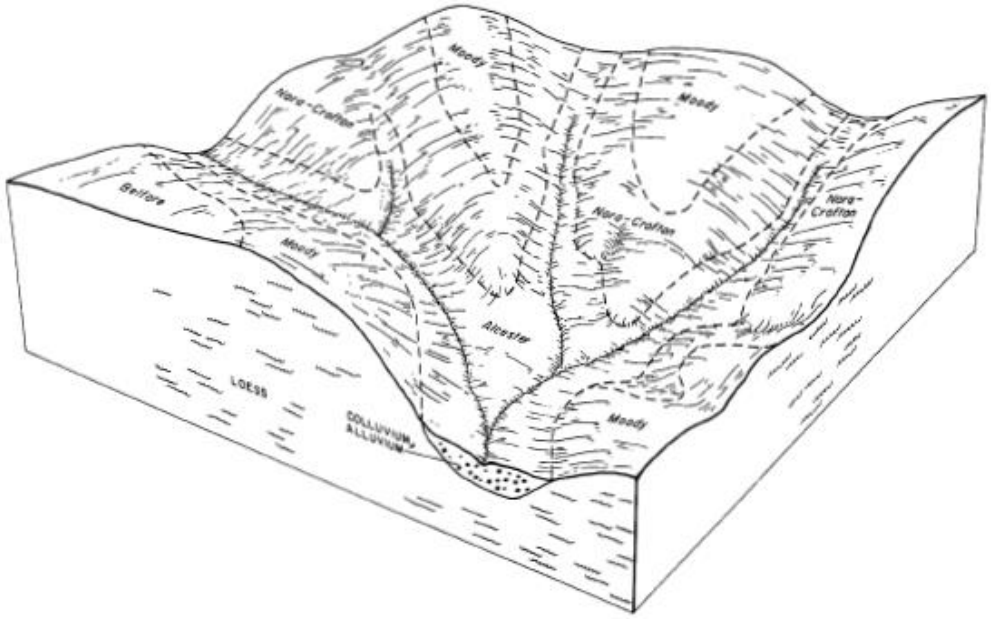
Of minor extent in this association are Nora, Crofton, and Belfore soils. The silty Nora and Crofton soils are on the steeper side slopes of uplands. Belfore soils are more clayey in the subsoil than the major soils and are on uplands.

The farms in this mapped area are diversified. They are primarily a combination of cash grain and livestock operations. Corn, soybeans, and alfalfa are the principal crops and are grown primarily under dryland farming, wheat, oats, with grain sorghum also grown. In a few of the less sloping areas the gravity method of irrigation is used, and in a few of the more sloping areas the center-pivot type of sprinkler system is used. The potential for irrigation is high where high-yielding, good quality wells can be drilled. There are a few small areas of pasture.

Soil erosion is the main hazard on these gently sloping and strongly sloping soils. Maintaining a high level of fertility and controlling runoff are the main concerns of management.

The farms on this association average about 320 acres, and most of the produce is marketed in the county. Some of the livestock—cattle and hogs—are shipped to terminal markets outside the county.

FIGURE 7.7: MOODY-ALCESTER ASSOCIATION



Silty soils on uplands and stream terraces and in upland depressions

Two associations are in this group, the soils are nearly level and gently sloping and are either well-drained or poorly drained. Most of the acreage is in dryland cultivated crops. Introduced or native grasses grow in a few depressions and in small areas of sandy soils. Part of the acreage is irrigated by sprinkler systems, with some of the nearly level areas are irrigated by gravity systems. Erosion by water on gently sloping and strongly sloping areas and ponding in the depressions are the main hazards. Conserving moisture for use by plants and maintaining fertility are the main concerns of management.

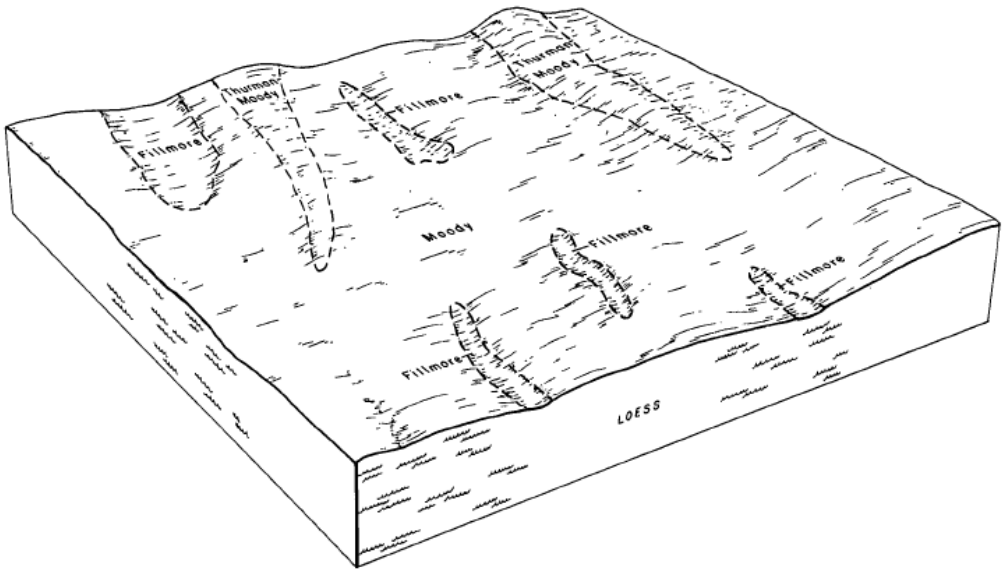
3. Moody-Fillmore association

Deep, nearly level and gently sloping, well-drained and poorly drained silty soils that formed in loess; on uplands and stream terraces and in up/down and depressions.

This association consists of areas of gently sloping soils on ridges and side slopes of the loess uplands (Figure 7.8), and on high stream terraces and interspersed areas of nearly level soils in depressions. The depressions are south of Shell Creek and north of the town of Richland. This association makes up about nine percent of the county. It is about sixty-six percent Moody soils, nine percent Fillmore soils, and twenty-five percent soils of minor extent.

The Moody soils are gently sloping and are on ridgetops and side slopes of the uplands, in places on the side slopes of depressions, and on high stream terraces, they are deep, well-drained soils. Typically, the surface layer is dark grayish brown, friable silty clay loam about seven inches thick. The subsoil is friable silty clay loam about twenty-nine inches thick. The upper part is dark grayish brown and brown, and the lower part is yellowish brown. The underlying material to a depth of sixty inches is pale brown silty clay loam in the upper part and pale brown silt loam in the lower part.

FIGURE 7.8: MOODY-FILLMORE ASSOCIATIONS



The Fillmore soils are nearly level and are in the depressions, they are deep, poorly drained soils. Typically, the surface layer is friable silt loam about eleven inches thick. The upper part is dark grayish brown, and the lower part is gray. The subsurface layer is a leached horizon of light gray silt loam about eight inches thick. The subsoil is dark gray silty clay about thirty-three inches thick. It is very firm in the upper part and firm in the lower part. The underlying material to a depth of sixty inches is grayish brown silty clay loam.

Of minor extent in this association are the nearly level Belfore soils on stream terraces, the gently sloping to strongly sloping Thurman soils on side slopes and a few ridgetops, and the gently sloping to strongly sloping Nora soils on side slopes and ridgetops.

The farms on this association consist of a combination of cash grain and livestock operations. Most of the acreage are cultivated crops farmed under dryland conditions. The principal crops are corn, soybeans, grain sorghum, and alfalfa. There are also a few acres of winter wheat and oats. A few sandy areas and wet depressions are in introduced grasses for pasture and in native grasses for range. Irrigation is also important. On most of the irrigated farmland the sprinkler method is used, whereas in some of the nearly level areas the gravity method is utilized. The potential for irrigation is high in this association.

The hazard of erosion by water on the gently and strongly sloping areas along with that of ponding in the depressions are the main hazards. Preventing runoff and maintaining fertility are the main concerns in management. Soil blowing and drought are hazards on the sandy soils of minor extent.

Soybeans and winter wheat are grown for cash, corn and sorghum are cut for silage. Some cattle are fattened in the feedlot and are marketed at a local packing plant. Other cattle and hogs are shipped to terminal markets in larger cities outside the County. A few cow-calf herds are kept, with most of the calves sold locally. Markets for most farm products are readily accessible.

4. Belfore association

Deep, nearly level, well drained silty soils that formed in loess; on uplands

This association consists mainly of nearly level soils on broad divides on the loess uplands. Some of the soils are in narrow swales and small, shallow depressions.

This association takes in some of the highest elevations in the county, and makes up about two percent of the County. It is about eighty percent Belfore soils and twenty percent soils of minor extent.

The Belfore soils are nearly level and on the broad divides. Typically, the surface layer is very dark grayish brown and dark gray, firm silty clay loam about sixteen inches thick. The subsoil is firm, silty clay loam about twenty-seven inches thick. It is brown in the upper part and pale brown in the lower part. The underlying material to a depth of sixty inches is very pale brown silty clay loam.

The soils of minor extent are the poorly drained Fillmore soils in upland depressions and the gently sloping Moody soils on narrow ridgetops and side slopes of the loess uplands.

Most of the acreage of this association is in dryland cultivated crops. The principal crops are corn, soybeans, alfalfa, and in small areas, oats, winter wheat, and grain sorghum. A few depressional areas are in introduced or native grasses, which are usually grazed by cattle. Irrigation is also important. Gravity and sprinkler systems are used. Corn, soybeans, and alfalfa are the principal irrigated crops. The potential for irrigation in this association is high.

Erosion on the gently sloping Moody soils and ponding in the depressional areas of Fillmore soils are the main hazards on this association. Maintaining fertility is the main concern of management. Drainage of the depressional areas is a concern of management, but suitable outlets are not common. In places, large pits are dug to hold the excess water.

The farms on this association average about 240 to 320 acres and are diversified. They consist mainly of a combination of cash grain and livestock operations. Soybeans and winter wheat are grown for cash. Much of the grain and hay is fed to cattle and hogs being fattened for market. Fattened cattle and hogs are commonly marketed locally through sale barns or direct to livestock buyers. A small percentage of the livestock is shipped to terminal markets in large cities outside the county. A few cow-calf herds and dairy herds are kept, and most calves *are* sold locally, while the milk produced is shipped by truck to areas outside the county. Markets for farm products are readily accessible.

Silty, loamy, and sandy soils on upland slopes adjacent to valleys

Two associations are in this group. The soils are gently sloping to steep and are well drained or somewhat excessively drained. A small part of the acreage is cultivated. The areas of steep soils and some of the areas of sandy soils are in introduced or native grasses that are either grazed or cut for hay. The sandy soils that are cultivated are generally irrigated by a sprinkler system. Water erosion on the steeper soils and water erosion and soil blowing on the sandy areas are the main hazards. Conserving moisture for use by plants and improving fertility are the main concerns of management.

5. Steinauer-Moody association

Deep, strongly sloping to steep, well drained loamy and silty soils that formed in glacial till and loess; on uplands

This association consists of strongly sloping and steep soils on uplands adjacent to the valleys of Shell Creek and Taylor Creek.

This association makes up about two percent of the county. It is about thirty-seven percent Steinauer soils, fifteen percent Moody soils, and forty-eight percent soils of minor extent.

The Steinauer soils are strongly sloping to steep and are on side slopes of uplands. They are deep and well drained and formed in glacial till, with stones commonly scattered on the surface. Typically, the surface layer is dark grayish brown, friable, calcareous clay loam about five inches thick. The underlying material to a depth of sixty inches is light gray and very pale brown, mottled, calcareous clay loam.

The strongly sloping Moody soils are on ridgetops and side slopes of the uplands. They are deep and well drained and formed in loess. Typically, the surface layer is dark grayish brown, friable silty clay loam about 7 inches thick. The subsoil is friable silty clay loam about 29 inches thick. The upper part is dark grayish brown and brown, and the lower part is yellowish brown. The underlying material to a depth of 60 inches is pale brown silty clay loam in the upper part, and pale brown silt loam in the lower part.

Of minor extent in this association are Geary Variant, Alcester, Crofton, and Nora soils. The light brown Geary Variant soils formed in Loveland loess and are on side slopes of uplands. The silty Alcester soils are on foot slopes. The calcareous Crofton soils are on side slopes of loess uplands. The silty Nora soils are on ridgetops and side slopes of loess uplands.

Farms on this association are diversified and consist mainly of a combination of cash grain and livestock operations. Some cow-calf herds are kept, and cattle and hogs are fattened on many farms. The areas of steep soils are mainly in native or introduced grasses that are either grazed or cut for hay. Some areas are in scattered trees, such as bur oak and other hardwoods. Dryland corn, sorghum, and oats are the principal crops. Generally, soils of this association are not irrigated.

Erosion by water is the main hazard on this association. Controlling runoff and improving the level of soil fertility are the main concerns of management.

The farms on this association average about 200 acres. The produce is marketed mainly within the county. Camp Luther provides outdoor recreation. The wooded acreage in this association provides excellent habitat for deer, quail, and other wildlife.

6. Moody-Thurman association

Deep, gently sloping to strongly sloping, well drained and somewhat excessively drained silty and sandy soils that formed in loess and eolian sands; on uplands

This association consists of soils on upland slopes bordering the Platte River Valley. The soils are gently sloping and strongly sloping and constitute side slopes and, in places, narrow ridgetops.

This association makes up about 1 percent of the county. It is about 37 percent Moody soils, 25 percent Thurman soils, and 38 percent soils of minor extent.

The Moody soils are deep and well drained and are on the side slopes and ridgetops. They are gently sloping and strongly sloping. The typical Moody soil in this association is not typical of the Moody soils in Colfax County. It has a surface layer of dark grayish brown, friable silty clay loam about 6 inches

thick. The subsoil is friable silty clay loam about 14 inches thick. The upper part is grayish brown, and the lower part is pale brown. The underlying material to a depth of 60 inches is pale silty clay loam in the upper part, light gray fine sandy loam in the middle part, and very pale brown fine sand in the lower part.

The Thurman soils are deep, somewhat excessively drained, and mainly on side slopes. They are below the Moody soils on the landscape and are gently sloping and strongly sloping. The typical Thurman soil has a surface layer of grayish brown, friable loamy fine sand about nine inches thick. Beneath this is a transitional layer of pale brown, loose loamy fine sand about six inches thick. The underlying material to a depth of sixty inches is very pale brown fine sand.

Of minor extent in this association are silty Alcester soils on foot slopes, Nora soils on the upper part of side slopes, and calcareous Crofton soils on the middle part of the side slopes.

The soils in this association are used as farmland. The farms are diversified and are mainly a combination of cash grain and livestock operations. The main crops are corn, alfalfa, and winter wheat. Some areas are in introduced or native grasses, with both dryland and irrigated crops grown. Irrigation is by the sprinkler method, while the potential for irrigation is high. Some feedlots for cattle and hogs are on this association.

Soil blowing and water erosion are the main hazards on this association. Conserving water and improving the level of fertility are the main concerns of management.

The farms average about 400 acres. Some areas of the Thurman soils in this association have been mined for sand for construction. Farm produce is marketed mainly within the county, but some livestock are shipped to terminal markets outside the county.

Loamy and silty soils on stream terraces

Two associations are in this group. The soils are nearly level and well drained. Nearly all of the acreage of this group is mainly irrigated farmland. Irrigation is mainly by the gravity system, but in some areas the sprinkler type system is used. Soil blowing is the main hazard, and many areas are droughty. Conserving moisture for use by plants and maintaining high soil fertility are the main concerns of management.

7. Blendon association

Deep, nearly level, well drained loamy soils that formed in alluvium; on stream terraces.

The soils in this association are on a stream terrace of the Platte River Valley. The terrace merges gradually with the adjacent bottom lands. The soils are nearly level (Figure 7.9).

This association makes up about three percent of the county. It is about 85 percent Blendon soils and fifteen percent soils of minor extent.

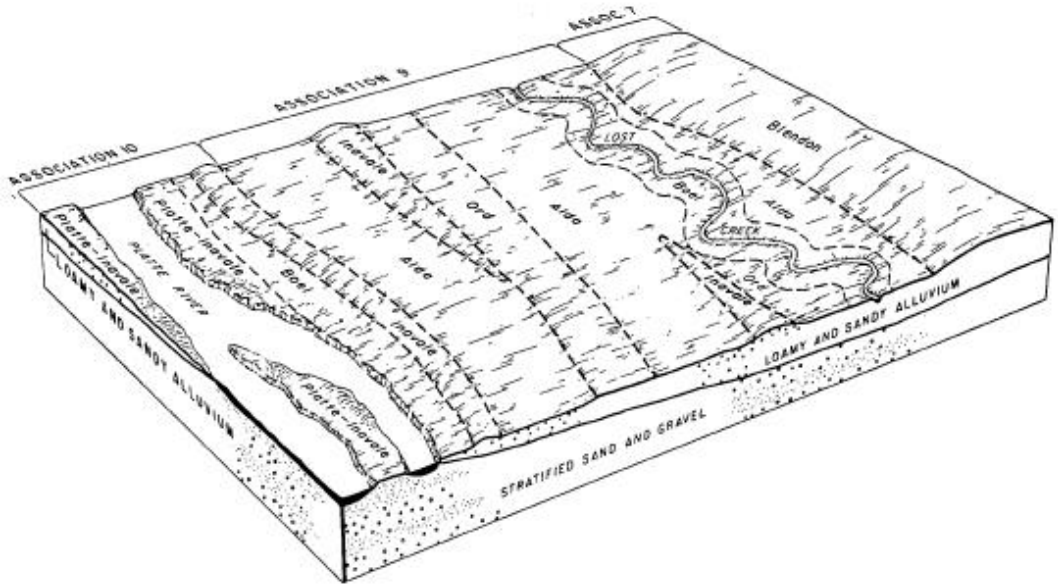
The Blendon soils are deep, well drained, and nearly level. Typically, the surface layer is dark grayish brown, friable fine sandy loam about eight inches thick. The subsoil is friable fine sandy loam about twenty-six inches thick. The upper part is dark grayish brown, and the lower part is brown. The underlying material to a depth of 60 inches is pale brown loamy sand in the upper part, light gray sand in the middle part, and light gray gravelly sand in the lower part.

Of minor extent in this association are Lawet, Shell, and Ord soils. The Lawet and Ord soils are at slightly lower elevations, and the Shell soils are at about the same elevation as the Blendon soils.

Most of the acreage of this association is in cultivated crops that are irrigated. The principal crops are corn and soybeans, while grain sorghum and alfalfa are grown in some places. Most areas are irrigated with well water. The potential for irrigation is medium in the areas that are not irrigated. Most of the more desirable areas are already irrigated.

Conserving water and maintaining good tilth and high fertility are the main concerns of management in this association. Drought is a hazard under dryland farming, while soil blowing is the main hazard. Maintaining a good cover of crop residue helps reduce soil blowing.

FIGURE 7.9: TYPICAL PATTERN OF SOILS IN THE BLENDON, ALDA-ORD, AND PLATTE-INVALE ASSOCIATIONS



The farms on this association average about 240 acres and are mainly cash grain operations. Most of the grain and hay produced on this association is utilized on the farm. Most livestock is marketed in Schuyler or Richland.

8. Hall association

Deep, nearly level, well drained silty soils that formed in loess, colluvium, and alluvium; on stream terraces

This association consists of nearly level soils on a stream terrace of the Platte River Valley.

This association makes up about one percent of the County. It is about seventy-nine percent Hall soils and twenty-one percent soils of minor extent.

These deep, well drained Hall soils are some of the most productive soils in the county. Typically, the surface soil is very dark grayish brown, friable silty clay loam sixteen inches thick. It is dark gray in the upper part and dark grayish brown in the lower part. The subsoil is friable silty clay loam about twenty-two inches thick. The upper part is dark grayish brown, the middle part is dark brown, and the lower part is brown. The underlying material to a depth of sixty inches is yellowish brown fine sandy loam and loamy sand.

Of minor extent in this association are the well drained Blendon soils on a terrace break to the bottom lands and the silty Alcester soils on adjacent foot slopes of the loess uplands.

The farms on this association are primarily cash crop operations, while few cattle and hogs are fattened on the farm. Most of the acreage is farmed and irrigated, Corn is the principal crop. Alfalfa is grown for

livestock feed, and some soybeans are raised as a cash crop. Most irrigation is by the gravity method, but there is also some sprinkler irrigation.

There are few hazards to crop production in this association. A few areas need leveling for better surface drainage. Soil blowing is a problem on the soils of minor extent. Conserving water and maintaining the high level of fertility are the main concerns of management.

The farms average about 400 acres. Markets for farm produce are available within the county or at nearby terminals in Omaha and Sioux City.

Loamy and sandy soils on bottom lands

Two associations are in this group. The soils are nearly level to strongly sloping and are somewhat poorly drained and somewhat excessively drained. Most of the acreage of this group is in introduced or native grasses, which are grazed or mowed for hay or are maintained for recreation use. A small amount of acres cultivated, and most are irrigated. Irrigation is mainly by the center-pivot system. The main limitations are wetness caused by the high water table in spring and droughtiness after the water table recedes late in summer, while flooding is the main hazard. Maintaining the grasses in good condition and improving the fertility of the cultivated soils are important concerns of management.

9. Aida-Ord association

Nearly level, somewhat poorly drained loamy soils that are moderately deep and deep to mixed sand and gravel; formed in alluvium on bottom lands

This association consists of nearly level soils on bottom lands of the Platte River Valley. In some of the lower lying areas are narrow, shallow channels of streams that flow only after heavy rains.

This association makes up about six percent of the county. It is about twenty-eight percent Alda soils, twenty-eight percent Ord soils, and forty-four percent soils of minor extent.

The Alda soils are moderately deep to mixed sand and gravel, nearly level, and somewhat poorly drained. They are slightly lower on the landscape than Ord soils. Typically, the surface layer is dark gray, very friable, calcareous loam about ten inches thick. The underlying material to a depth of sixty inches is very pale brown, stratified sandy loam in the upper part, fine sand in the middle part, and coarse sand in the lower part. The lower part has yellow mottles.

The nearly level Ord soils are on the higher parts of the landscape. They are deep and somewhat poorly drained. Typically, the surface layer is very friable fine sandy loam about sixteen inches thick. It is dark gray in the upper part and stratified gray and light gray in the lower part. The upper part and stratified gray and light gray in the lower part. The underlying material to a depth of sixty inches is light brownish gray, mottled, calcareous fine sandy loam in the upper part and light gray, mottled fine sand in the lower part.

Of minor extent in this association are the sandy Inavale soils at the highest elevations. Platte soils, which are shallow to mixed sand and gravel, are at the lowest elevations. The well-drained Eudora soils are higher on the landscape than the major soils.

Most of the acreage of this association is in native grasses, some acreage is cultivated. The grass is cut for hay or is used for grazing. Most of the cattle are in small cow-calf herds, and/or cattle are fattened in feedlots. Corn and alfalfa, the principal crops, are grown under both dryland and irrigation management.

Sprinkling is the principal method of irrigation. Wetness caused by the water table is the main limitation if the soils are cultivated. Maintaining the fertility of the soil and controlling the occasional

flooding are problems on cultivated land.

Proper grazing use and timely haying are the major management concerns on the rangeland. The farms are about 400 acres on the average. The sand and gravel beneath this association are good materials for construction, while there are only a few roads on this association.

10. Platte-Inavale association

Nearly level to strongly sloping, somewhat poorly drained and somewhat excessively drained loamy and sandy soils that are shallow and deep to mixed sand and gravel; formed in alluvium on bottom lands

This association is on bottom lands of the Platte River Valley. The soils are nearly level to strongly sloping and are generally in long and narrow areas. Some areas are islands within the braided channels of the river. Most of this association has a seasonal high water table that ranges in depth from one to three feet.

This association makes up about one percent of the county. It is about forty-seven percent Platte soils, thirty-one percent Inavale soils, and twenty-two percent soils of minor extent.

The Platte soils are nearly level and are on the lower parts of the landscape. They are somewhat poorly drained and shallow to mixed sand and gravel. Typically, the Platte soils have a surface layer of very friable, light brownish gray loam about eleven inches thick. The underlying material to a depth of sixty inches consists of stratified light gray and light brownish gray, mottled fine sandy loam in the upper six inches and of light gray coarse sand with eight percent gravel in the lower part.

The Inavale soils are nearly level to strongly sloping and on the higher parts of the landscape. They are deep and well drained. Typically, the surface layer is dark grayish brown, loose loamy fine sand about seven inches thick. A transition layer of light brownish gray, loose loamy fine sand about eight inches thick is beneath the surface layer. The underlying material to a depth of sixty inches is light gray fine sand.

Of minor extent in this association are the Alda soils, which are moderately deep to mixed sand and gravel and are slightly higher on the landscape than the Platte soils but lower than Inavale soils. The deep Boel and Ord soils are between Platte and Inavale soils also.

Areas of this association are used mainly for grazing, which are also used as habitat for wildlife as well as recreational hunting.

Mixed woodland and in a few small areas, native grasses, dominate the vegetation. Eastern cottonwood and eastern red cedar are the dominant trees. Shrubs in the understory include wild rose, currant, dogwood, snowberry, sumac, and buck brush.

Frequent flooding is the main hazard, and wetness caused by the seasonal high water table is the main limitation. Improving the vegetation for use by livestock and wildlife is the main concern of management.

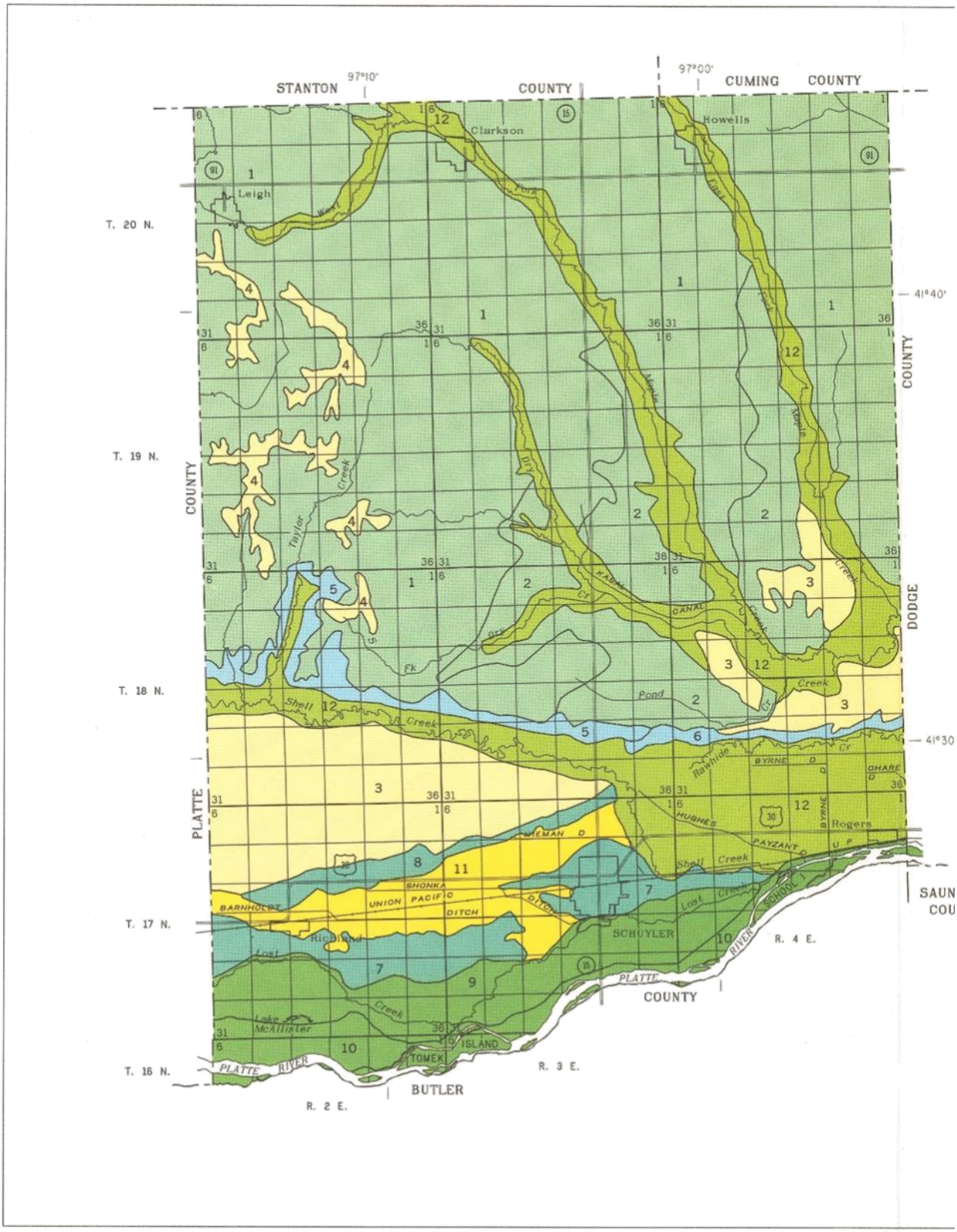
Permanent dwellings are not common, but cabins for recreation uses are common. There are few roads on the association.

Silty, highly calcareous soils on bottom lands

The soils in this group are nearly level and poorly drained. Most of the acreage of this group is cultivated, and a large part of this cultivated acreage is irrigated. Both sprinkler and gravity systems are used. Some areas are in native grasses, which are cut for hay. Poor soil drainage is the main limitation. Providing proper drainage and dealing with the excessive amount of carbonates in the soil are the main concerns of management.

FIGURE 7.10: GENERAL SOILS MAP

FIGURE 7.10: GENERAL SOILS MAP CONTINUED



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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
UNIVERSITY OF NEBRASKA CONSERVATION AND SURVEY DIVISION

GENERAL SOIL MAP

COLFAX COUNTY, NEBRASKA

Scale 1:190,080

1 0 1 2 3 4 Miles

1 0 1 2 3 4 5 6 Kilometers

SOIL LEGEND*

SILTY SOILS ON UPLANDS AND FOOT SLOPES

1 — Nora-Crofton-Moody association: Deep, gently sloping to steep, well drained and somewhat excessively drained silty soils that formed in loess; on uplands

2 — Moody-Alcester association: Deep, gently sloping and strongly sloping, well drained silty soils that formed in loess and in a mixture of colluvium and alluvium; on uplands and foot slopes

SILTY SOILS ON UPLANDS AND STREAM TERRACES AND IN UPLAND DEPRESSIONS

3 — Moody-Fillmore association: Deep, nearly level and gently sloping, well drained and poorly drained silty soils that formed in loess; on uplands and stream terraces and in upland depressions

4 — Belfore association: Deep, nearly level, well drained silty soils that formed in loess; on uplands

SILTY, LOAMY, AND SANDY SOILS ON UPLAND SLOPES ADJACENT TO VALLEYS

5 — Steinauer-Moody association: Deep, strongly sloping to steep, well drained loamy and silty soils that formed in glacial till and loess; on uplands

6 — Moody-Thurman association: Deep, gently sloping to strongly sloping, well drained and somewhat excessively drained silty and sandy soils that formed in loess and eolian sands; on uplands

LOAMY AND SILTY SOILS ON STREAM TERRACES

7 — Blendon association: Deep, nearly level, well drained loamy soils that formed in alluvium; on stream terraces

8 — Hall association: Deep, nearly level, well drained silty soils that formed in loess, colluvium, and alluvium; on stream terraces

LOAMY AND SANDY SOILS ON BOTTOM LANDS

9 — Alda-Ord association: Nearly level, somewhat poorly drained loamy soils that are moderately deep and deep to mixed sand and gravel; formed in alluvium on bottom lands

10 — Platte-Inavale association: Nearly level to strongly sloping, somewhat poorly drained and somewhat excessively drained loamy and sandy soils that are shallow and deep to mixed sand and gravel; formed in alluvium on bottom lands

SILTY, HIGHLY CALCAREOUS SOILS ON BOTTOM LANDS

11 — Lawet association: Deep, nearly level, poorly drained silty soils that formed in alluvium; on bottom lands

SILTY SOILS ON BOTTOM LANDS

12 — Zook-Shell-Hobbs association: Deep, nearly level, poorly drained and well drained silty soils that formed in alluvium; on bottom lands

*Texture terms refer to the surface layer of the major soils.

Compiled 1980

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

DERS
NTY

11. Lawet association

Deep, nearly level, poorly drained silty soils that formed in alluvium; on bottom lands.

This association is on bottom lands of the Platte River Valley. The soils are nearly level. The seasonal high water table is between depths of one and two feet. The water table recedes to a depth of three or four feet in summer.

This association makes up about four percent of the county. It is about ninety-five percent Lawet soils and five percent soils of minor extent.

The Lawet soils are deep, poorly drained, and highly calcareous. Typically, the surface layer is dark gray and gray friable silty clay loam twenty-four inches thick. The subsoil is gray, friable clay loam about eight inches thick. The underlying material to a depth of sixty inches is light gray silty clay loam in the upper part, light brownish gray sandy clay loam in the middle part, and light gray sand in the lower part.

Of minor extent in this association are the well-drained Shell soils in the higher lying areas and the poorly drained Zook soils in the lower lying areas.

The farms on this association are diversified, combining mainly cash crop and livestock operations. Much of the acreage of this association is cultivated, but a fairly large acreage is still in native grasses. Corn is the principal crop, while grain sorghum and small grain are also grown. The carbonate content of Lawet soils is too high for good production of soybeans. Alfalfa may die if the soil is not drained. Some areas are tile drained, and sprinkler and gravity methods are used to irrigate a large part of the association. Areas in native grass are used primarily as hayland. A few farms have small cow-calf herds, and some cattle are fattened in the feedlot.

Wetness caused by the high water table is the main limitation in this association. The carbonates in the soil limit the choice of crops and are therefore a concern of management.

The farms on this association average about 360 acres. Most of the produce is marketed in Schuyler or Richland. Some livestock is shipped to terminal markets outside the county.

Silty soils on bottom lands

The soils in this group are nearly level and are poorly drained and well drained. Nearly all of the acreage of this group is farmed, and most of the farmland is irrigated. Irrigation is by either the gravity or sprinkler method. Wetness of the poorly drained soils is the main limitation. Maintaining high fertility, providing good water management, and improving tilth are the main concerns of management.

12. Zook-Shell-Hobbs association

Deep, nearly level, poorly drained and well drained silty soils that formed in alluvium; on bottom lands.

This association is on bottom lands of the Platte River Valley and in the narrower valleys, primarily of Maple Creek, Shell Creek, Rawhide Creek, Taylor Creek, and Dry Creek. The soils are nearly level (Figure 7.11).

This association makes up about fifteen percent of the county. It is thirty-two percent Zook soils, thirty-two percent Shell soils, twenty percent Hobbs soils, and sixteen percent soils of minor extent.

The nearly level Zook soils are on lowest parts of the landscape, which are deep, poorly drained soils. Typically, the surface soil is about twenty-seven inches thick. The upper part is dark gray, firm silty clay loam; the middle part is very dark gray, firm silty clay loam; and the lower part is very dark gray, very firm silty clay. The subsoil is very dark gray, very firm silty clay about nine inches thick. The underlying material to a depth of sixty inches is silty clay. The upper part is dark gray, and the lower part is gray and mottled.

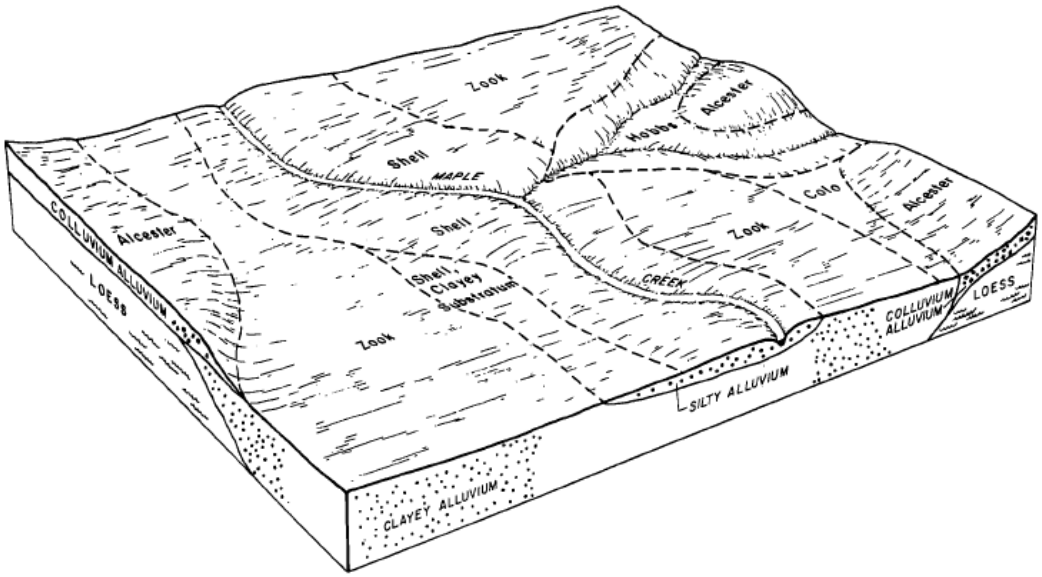
The Shell soils in this association are nearly level and are on the highest parts of the landscape, they are deep and well drained. Typically, the surface layer is grayish brown, very friable silt loam about twenty-four inches thick. The underlying material to a depth of sixty inches is silt loam that is stratified grayish brown and light brownish gray silt loam in the upper part. It is dark grayish brown and light brownish gray in the lower part. In some areas, silty clay is below a depth of forty inches.

The Hobbs soils are nearly level and are between the Zook and Alcester soils on the landscape, they are deep, well-drained soils. Typically, the surface layer is grayish brown, very friable silt loam about seven inches thick. The underlying material to a depth of sixty inches is thinly stratified silt loam. It is grayish brown in the upper part and dark gray in the lower part.

Of minor extent in this association are the poorly drained Luton and Napa soils, which are at slightly lower elevations than Zook soils. The somewhat poorly drained Colo soils are slightly higher on the landscape than Zook soils, but lower than the Shell or Hobbs soils. Alcester soils are on adjacent foot slopes.

Most of the acreage of this association is farmed. The principal crops are corn, soybeans, grain sorghum, and winter wheat. Most of the acreage is irrigated, with gravity or sprinkler systems used, and the water is pumped from wells.

FIGURE 7.11: TYPICAL ZOOK-SHELL-HOBBS ASSOCIATION



Wetness is the main limitation, and occasional flooding is the main hazard on this association. Surface drainage is needed in areas of the Zook and Colo soils. Maintaining high fertility, improving tilth of the fine textured soils, and providing good water management are the main management concerns.

Farms on this association average about 400 acres.

The farmsteads are mainly in the well drained areas. The farms are diversified and mainly consist of a combination cash grain and livestock operation, while soybeans are grown for cash. Much of the grain and hay is fed to cattle and hogs that are being fattened for market. Most cash crops and livestock are marketed locally. Some livestock are shipped to terminal markets outside the county.

Soil Suitability

The characteristics of soils play a major role in determining the potential compatibility of certain uses on the land. The ability to absorb certain liquids such as water and wastewater are different for certain types. In addition, as noted in the capabilities section, how sensitive an area is to erosion or how shallow the soils are in an area can have a major impact on the ability to develop a specific area of Colfax County. These conditions and how they factor into a soils ability to support certain types of uses is referred to limitations.

Finally, if a soil has some level of limitation, it does not mean that different uses cannot be constructed in those soils. However, the key to this is focused on the fact that special engineering solutions may need to be implemented in order to overcome these specific soil limitations.

Soil Limitations

The interpretations are based on the engineering properties of soils, on test data for soils in the survey area and others nearby or adjoining, and on the experience of engineers and soil scientists with the soils of Colfax County. Ratings are used to summarize limitation or suitability of the soils for all listed purposes other than for drainage of cropland and pasture, irrigation, pond reservoir areas, embankments, dikes, and levees, and terraces and diversions.

Soil limitations are indicated by the ratings Not Limited, Somewhat Limited, and Very Limited.

- **Not Limited** means that soil properties are generally favorable for the rated use, or in other words, that limitations are minor and easily overcome.

- **Somewhat Limited** means some soil properties are unfavorable but can be overcome or modified by special planning and design.

- **Very Limited** means soil properties are so unfavorable and so difficult to correct or overcome as to require major soil reclamation, special designs, or intensive maintenance.

Conventionally, the septic tank-absorption field system has proven satisfactory for many areas when properly designed, installed, and maintained. However, conditions do exist where this system is not suitable. Areas of seasonal high groundwater tables, bedrock in close proximity to the soil surface, or soils having very fast or very slow percolation rates are not suited for the septic tank-absorption field system. Other limitations for this system include topography, small lot size and proximity to water supplies used for drinking or recreation.

TABLE 7.1: SOIL PROPERTIES BY TYPE AND USE

Soil Symbol/Soil Name	Dwellings without Basements		Dwellings with Basements		Commercial Uses		Septic tank and absorption fields		Area Sanitary Landfills	
	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions
AcC Alcester	0	-	1	8	1	5,8	0	-	0	-
Af, Ag Alda	2	1	2	1,2	2	1	2	1,2,3	2	1,2,7
Be Belfore	2	8	2	8	2	8	2	4	0	-
Bf Belfore	2	8	2	8	2	8	2	4	0	-
Bh, BnC Blendon	0	-	0	-	0	-	2	3	2	7
Bo Boel	2	1	2	1,2	2	1	2	1,2,3	2	1,2,7
Cg Colo	2	1,8,2	2	1,2,8	2	1,2,8	2	1,2	2	1,2
CrC2 Crofton	0	-	0	-	1	5	0	-	0	-
CrD2, CrE2 Crofton	1	5	1	5	2	5	1	5	1	5
CrF2 Crofton	2	5	2	5	2	5	2	5	2	5
Ed Eudora	2	1	2	1	2	1	2	3	1	1
Fm Fillmore	2	6,8	2	6,8	2	6,8	2	4,6	2	6
Fp Fillmore	2	6,8	2	6,8	2	6,8	2	4,6	2	6
Gc Gayville V	2	1,8	2	1,8	2	1,8	2	4	1	1
GvD2 Geary V	1	5,8	1	5,8	2	5	2	4	1	5
GvF2 Geary V	2	5	2	5	2	5	2	4,5	2	5
Ha Hall	1	8	1	8	1	8	1	3,4	0	-
Hb, Hf Hobbs	2	1	2	1	2	1	2	1	2	1
InB Inavale	2	1	2	1	2	1	2	1,3	2	1,7
InD Inavale	2	1	2	1	2	1	2	3	2	7
Kz Kezan	2	1,2	2	1,2	2	1,2	2	1,2	2	1,2
Lc, Ld Lawet	2	1,2	2	1,2	2	1,2	2	2,4	2	2
Lu Luton	2	1,2,8	2	1,2,8	2	1,2,8	2	1,2,4	2	1,2
Mo Moody	1	8	1	8	1	8	1	4	0	-
MoC, MoC2 Moody	1	8	1	8	1	5,8	1	4	0	-
MoD, MoD2 Moody	1	5,8	1	5,8	2	5	1	4,5	1	5
Na Napa	2	1,2,8	2	1,2,8	2	1,2,8	2	1,2,4	2	1,2
NoC, NoC2 Nora	1	8	1	8	1	5,8	1	4	0	-
NoD, NoE Nora	1	5,8	1	5,8	2	5	1	4,5	1	5
NpD2, NpE2 Nora	1	5,8	1	5,8	2	5	1	4,5	1	5
Of Ord	2	1	2	1,2	2	1	2	1,2,3	2	1,2,7
Pc Platte	2	1,2	2	1,2	2	1,2	2	1,2,3	2	1,2,7
Px Platte	2	1,2	2	1,2	2	1,2	2	1,2,3	2	1,2,7
So Shell	2	1	2	1	2	1	2	1	2	1
Sp Shell	2	1	2	1	2	1	2	1,2,4	2	1
StD2 Steinaur	1	5,8	1	5,8	2	5	2	4	1	5
StF2 Steinaur	2	5	2	5	2	5	2	4,5	2	5
TmC2 Thurman	0	-	0	-	1	5	2	3	2	7
TmD2 Thurman	1	5	1	5	2	5	2	3	2	7
Zo Zook	2	1,2,8	2	1,2,8	2	1,2,8	2	1,2,4	2	1,2

Source: United States Department of Agriculture - Natural Resources Conservation Service

TABLE 7.1 CONTINUED—LEGEND

Legend for Table 7.1

Suitability	Conditions
0 = Not Limited	1= Flooding
1 = Somewhat Limited	2 = Wetness
2 = Very Limited	3 = Poor filter
	4 = percs slowly
	5 = Slope
	6 = Ponding
	7 = Seepage
	8 = Shrink-swell

Flooding is defined as soils located in areas which are prone to flooding.

Wetness refers to soils which do not drain well or have a low permeability. This conditions creates an above average existence of wet soils.

Poor Filter means soils with rapid permeability or an impermeable layer near the surface, the soil may not adequately filter effluent from a waste disposal system.

Percs Slowly means soils that do not allow reasonable downward movement of water.

Slope means the inclination of the land surface from the horizontal. Within Colfax County the class of slopes are:

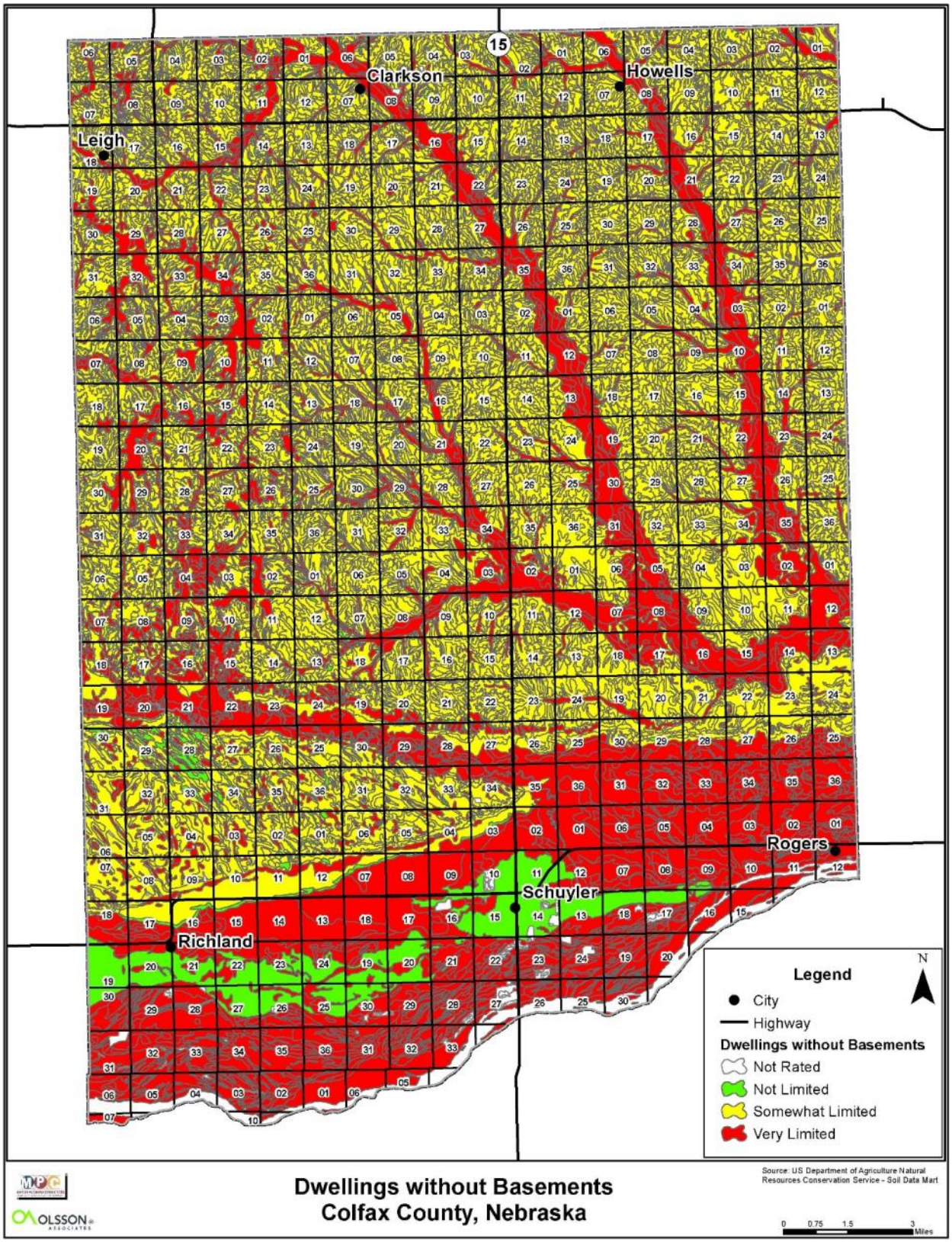
Nearly level	0 to 2 percent
Gently sloping	2 to 6 percent
Strongly sloping	6 to 11 percent
Moderately sloping	11 to 15 percent
Steep	15 to 30 percent

Ponding means standing water on soils in closed depressions. The water can be removed only by percolation or evapotranspiration.

Seepage means the movement of water through the soil. Seepage adversely affects the specified use.

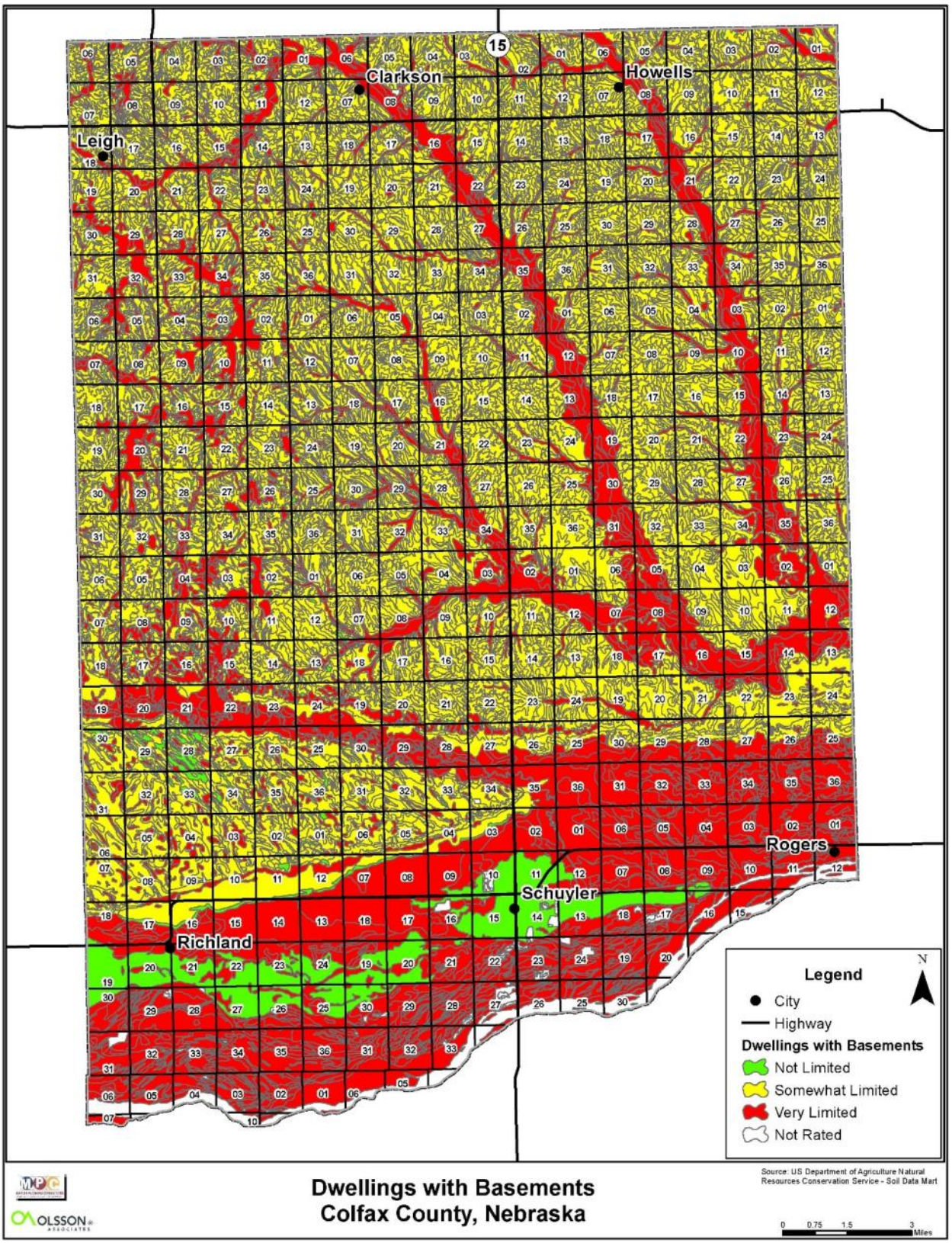
Shrink-swell means the shrinking of soil when dry and swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures, as well as damage plant roots.

FIGURE 7.11: SOIL SUITABILITY MAP - DWELLINGS WITHOUT BASEMENT



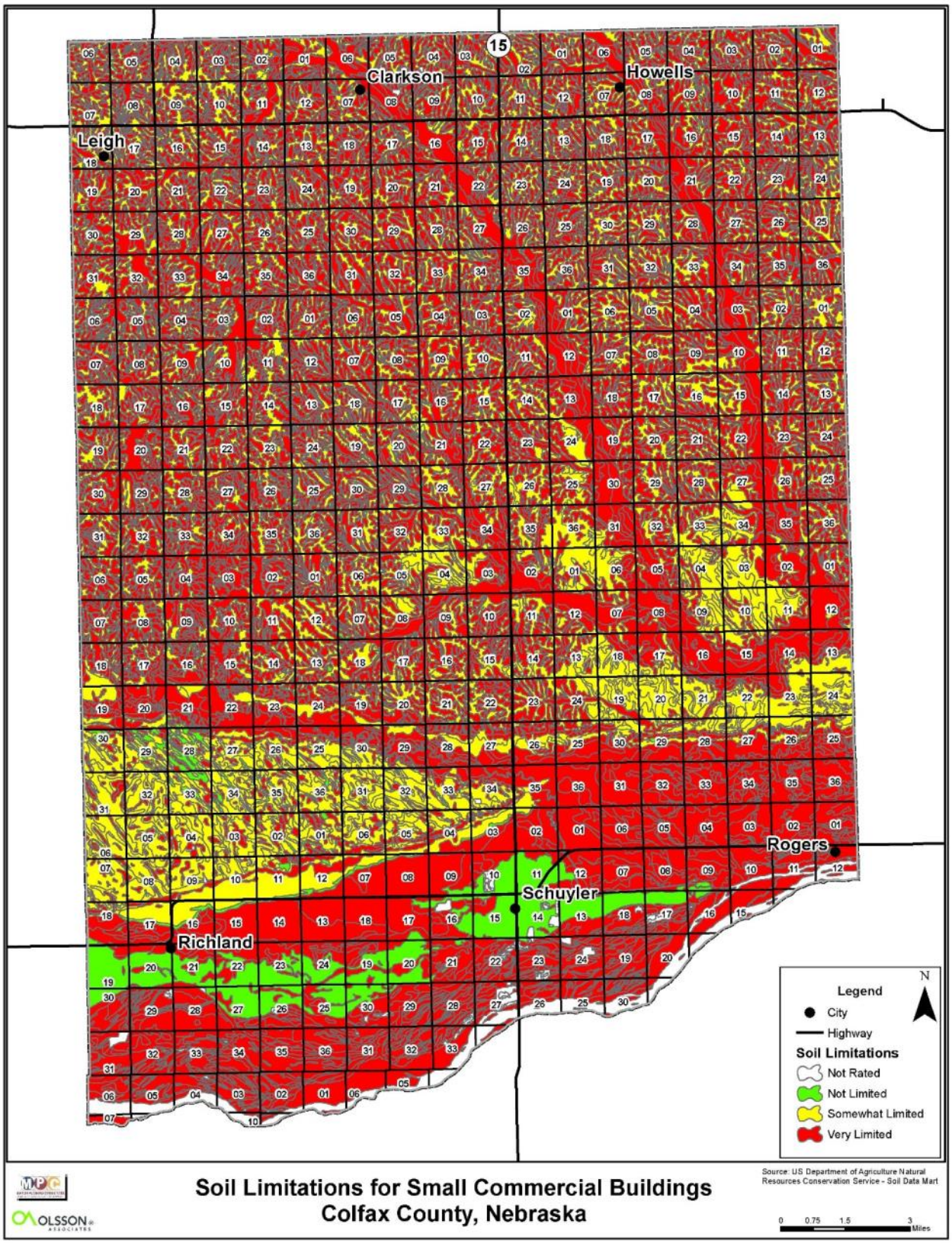
Source: United States Department of Agriculture - Natural Resources Conservation Service

FIGURE 7.12: SOIL SUITABILITY MAP - DWELLINGS WITH BASEMENT



Source: United States Department of Agriculture - Natural Resources Conservation Service

FIGURE 7.13: SOIL SUITABILITY MAP - SMALL COMMERCIAL USES



Source: United States Department of Agriculture - Natural Resources Conservation Service

Dwellings without Basements

Figure 7.11 shows the soil suitability conditions for constructing dwelling without a basement (slab on-grade construction). In addition Table 7. 1 provides the suitability by soil types and the specific conditions impacting the soil.

Based upon the Table 7.1, there are only four soils that have no limitations on the soils. These soils are located predominately around the city of Schuyler and south of Richland, with a small cluster of these soils north of Richland as well.

Eleven different soils are found in the soils with some limitations. These soils are spread throughout the county and are typically located on the upward slopes of the rolling hills in the county. The most common limitations needing to be overcome are slopes and shrink-swell conditions of the soils.

The soils that are very limited make up the remaining soils and areas of Colfax County. These areas are typically in the valleys of the rolling hills and in the flat land along the Platte River Valley. The most predominant limitations for dwellings without basements are flooding, wetness, slope, ponding, and shrink-swell.

Dwellings with Basements

Figure 7.12 examines the suitability conditions for constructing dwelling with basements. Again Table 7. 1 provides the suitability by soil types and the specific conditions impacting the soil.

Based upon the Table 7.1, there are only three soils that have no limitations on the soils. These soils are located predominately in the same portions of Colfax County as were those without basement.

The soils with some limitations are found in twelve different soils, and spread throughout the County located on the upward slopes of the rolling hills. As with the dwellings without basements most common limitations were slopes and shrink-swell conditions of the soils.

The soils that are very limited are identical to those dwellings with basements. However, in some cases the soils type includes wetness as an additional limitation.

Small Commercial Uses

Figure 7.13 shows the soil suitability conditions for constructing small commercial uses in Colfax County. Table 7. 1 provides the suitability by soil types and the specific conditions impacting the soil.

Based upon the Table 7.1, there is one soil with no limitations. This soil is located predominately around the city of Schuyler and south of Richland. There is a small cluster of these soils north of Richland as well.

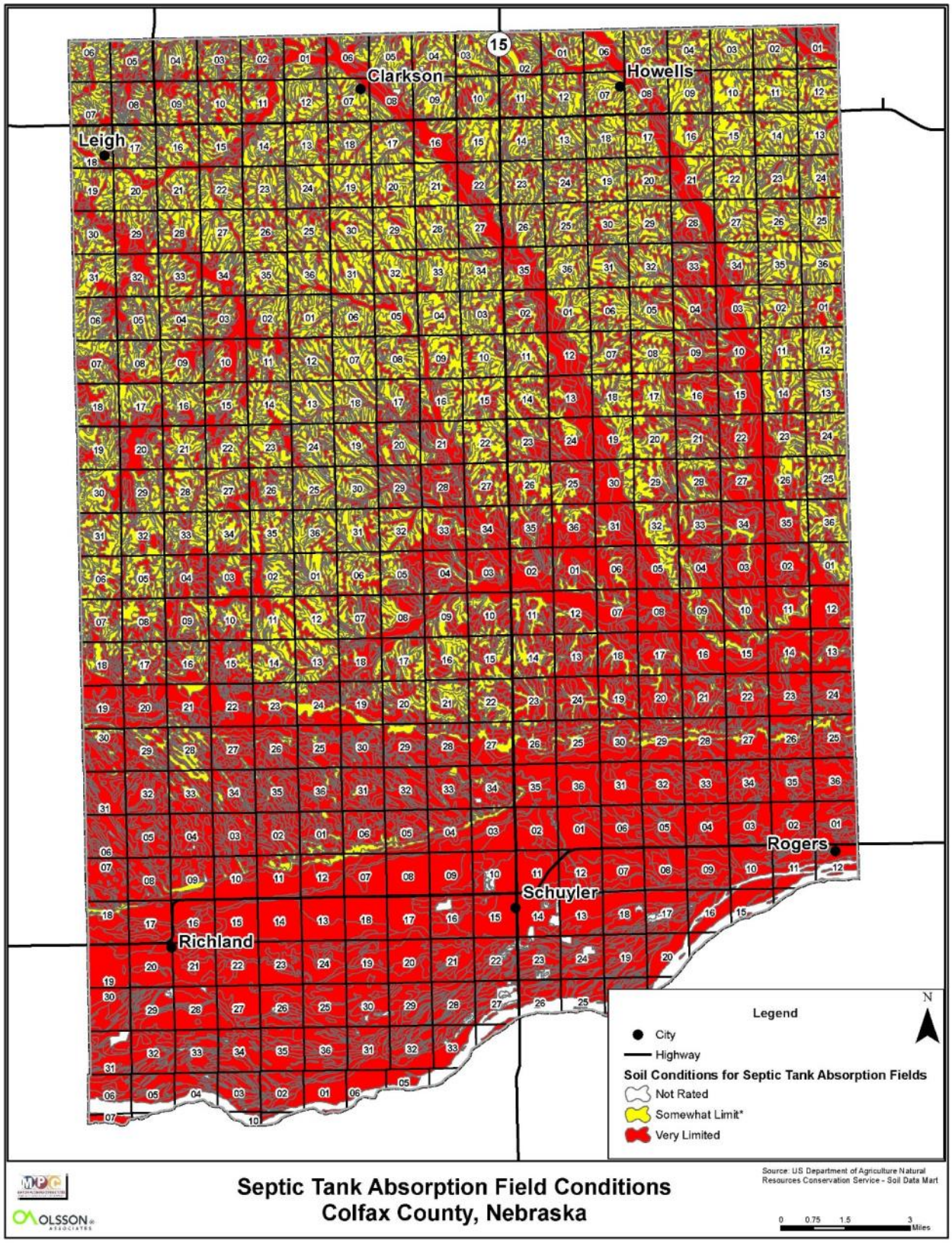
The soils with some limitations are found in seven different soils. These soils are far more dispersed and not nearly as clustered as with dwelling units. A lot of the difference between dwelling units and commercial uses is the size of the structure, the weight of commercial structures versus soil bearing capacity, and the other associated uses and equipment. The most common limitations needing to be overcome are slopes and shrink-swell conditions of the soils.

The soils that are very limited make up the remaining soils and areas of Colfax County. These areas cover more of the upslope of the rolling hills than did the dwelling units. Other locations for these soils are in the flat land along the Platte River Valley. The most predominant limitations again are flooding, wetness, slope, ponding, and shrink-swell.

Septic Tank and Absorption Fields

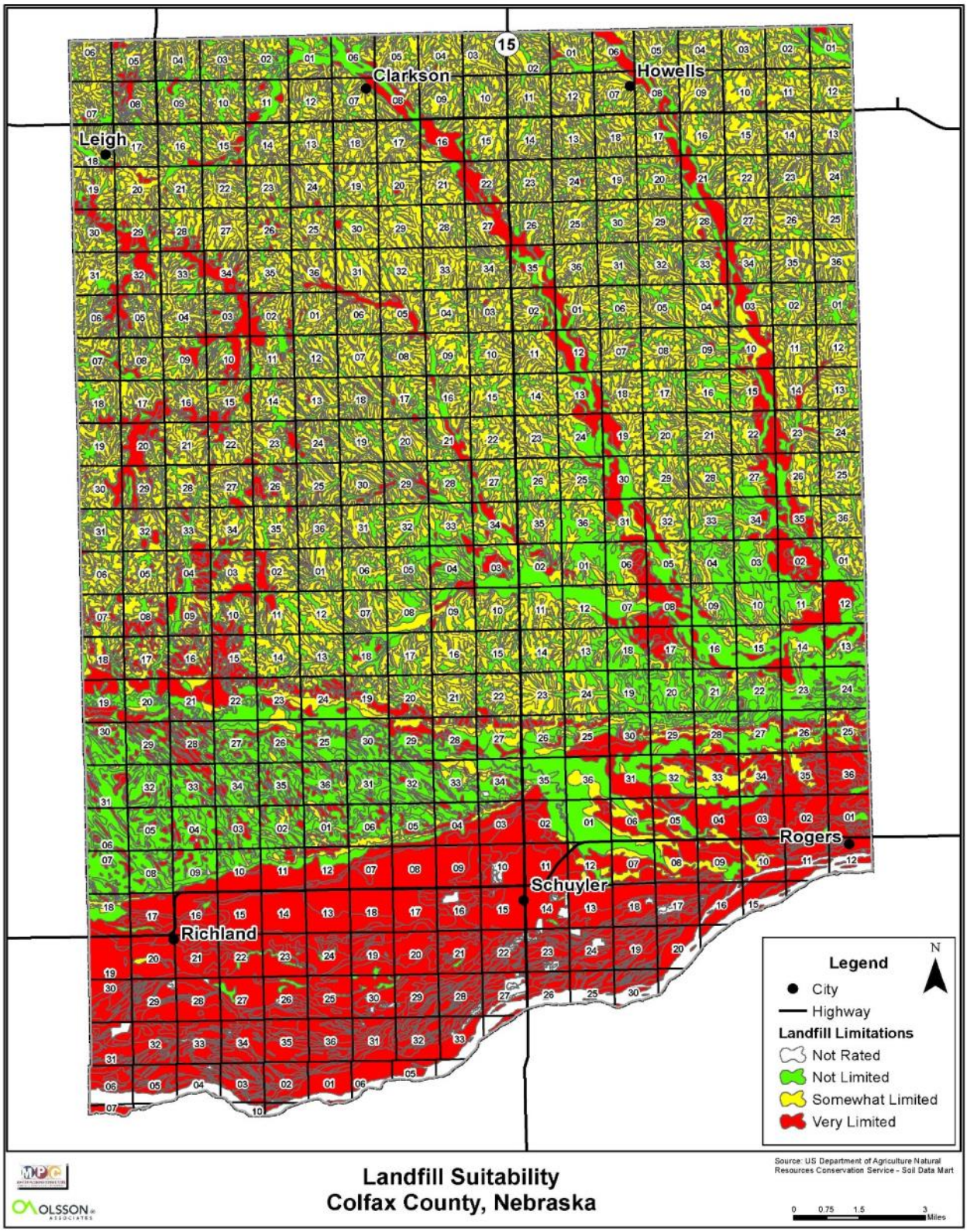
Figure 7.14 shows the soil suitability conditions for placement of a septic tank and absorption field in Colfax County. Table 7. 1 provides the suitability by soil types and the specific conditions impacting the soil.

Figure 7.14: Soil Suitability Map - Septic Tank and Absorption Fields



Source: United States Department of Agriculture - Natural Resources Conservation Service

FIGURE 7.15: SOIL SUITABILITY MAP - SANITARY LANDFILLS



Source: United States Department of Agriculture - Natural Resources Conservation Service

Based upon the Table 7.1, there are only two soils that have no limitations. This soils are mixed in throughout the county and make up a very small percentage of the total soils.

The soils with some limitations are found in eight different soils. These soils are found in a similar location as the dwelling units. The most common limitations to be overcome are the soils are a poor filter, they have slow percolation rates and slopes.

The soils that are very limited make up the remaining soils and areas of Colfax County. The most predominant limitations are flooding, wetness, soils making a poor filter, slow percolation rates, slopes, and ponding.

Sanitary Landfills

Figure 7.15 shows the soil suitability conditions for placement of a sanitary, landfill in Colfax County. Again, Table 7. 1 provides the suitability by soil types and the specific conditions impacting the soil.

Based upon the Table 7.1, there are six soils that have no limitations. These soils are mixed in throughout the county outside of the Platte River valley.

The soils with some limitations are found in eight different soils. These soils are found throughout the county outside of the Platte River valley. The most common limitations to be overcome are the soils are flooding and slope.

The soils with the most limitations make up the remaining soils and areas of Colfax County. The most predominant limitations are flooding, wetness, slopes, ponding, and seepage.

Other Factors Impacting Land Uses

The previously discussed uses are typical to counties similar to Colfax County. Earlier in this Chapter, the issue of wetlands was covered in some detail and is very closely associated with surface and groundwater. The following topics are greatly influenced by the type of soil and its location in an area. The following paragraphs will focus on Prime Farmland and Percent of Slope.

Prime Farmland

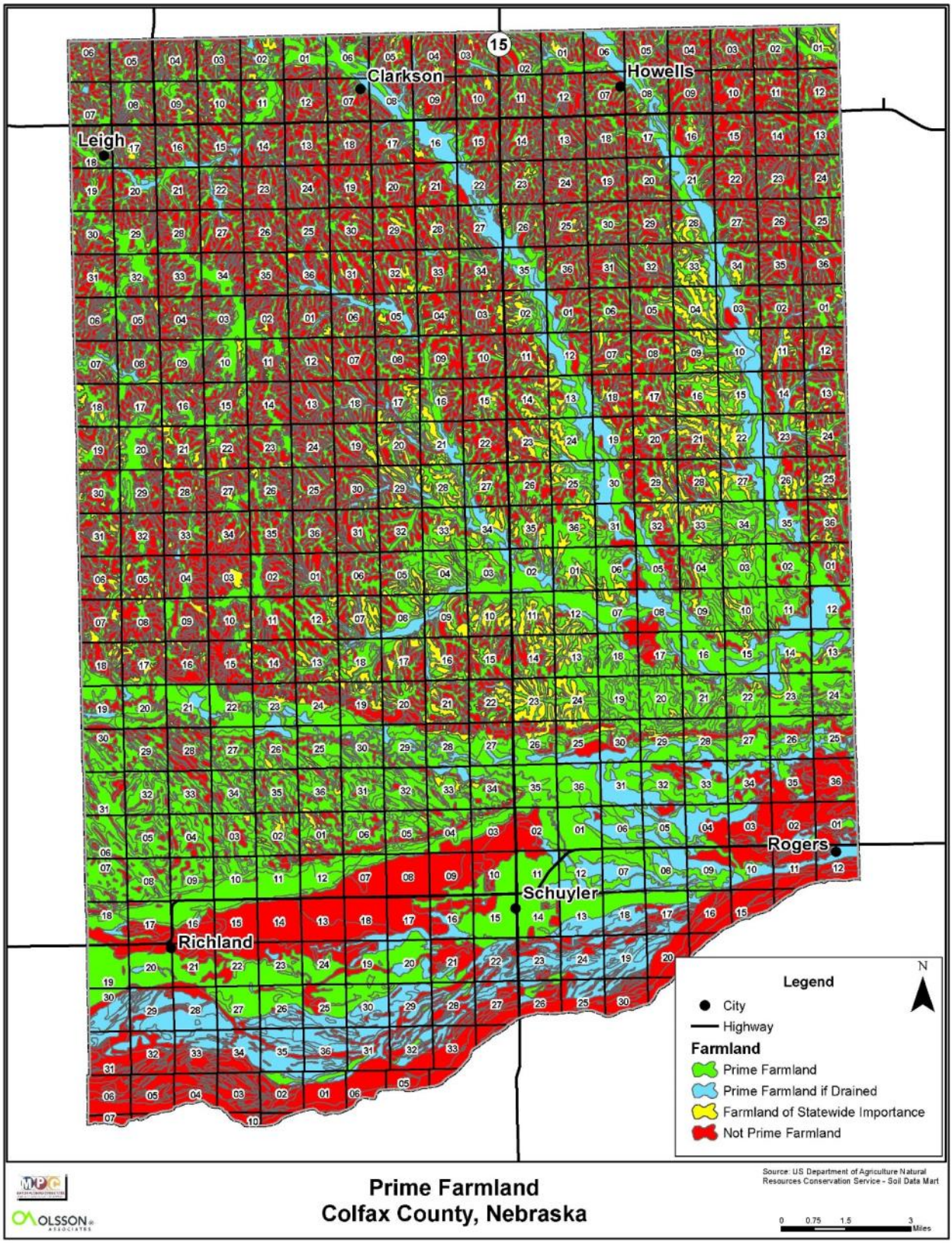
Prime farmland is directly tied to the specific soils and their composition. The map in Figure 7.16 identifies Prime Farmland, Prime Farmland if Drained, Farmland of Statewide Importance, and Not Prime Farmland.

According to the USDA, Prime farmland

> "...is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. It must also be available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding."

Soils determined to be prime farmland need to be protected throughout the rural areas of Nebraska. These soils are typically the best crop producing lands.

FIGURE 7.16: PRIME FARMLAND



Source: United States Department of Agriculture - Natural Resources Conservation Service

Percent of Slope

The slope of an area is critical to the ability of the area to be used for agricultural purposes to constructing homes and septic systems. Typically the steeper the slope the more difficult these issues become. However, lands with little to no slope can also create problems regarding the inability of water to drain away from a site.

TABLE 7.3: DEFINTION OF SOIL SLOPES

Classes Simple Slopes	Complex Slopes	Slope Gradient Limits	
		Lower Percent	Upper Percent
Nearly level	**Nearly level**	0	3
Gently sloping	**Undulating**	1	8
Strongly sloping	**Rolling**	4	16
Moderately	**Hilly**	10	30
Steep	**Steep**	20	60
Very steep	**Very steep**	>45	

Source: http://soils.usda.gov/technical/manual/contents/chapter3.html

Figure 7.17 shows the percent slope for Colfax County. Based upon the map, there are not any areas within the county considered to be steep or very steep. The greatest steepness falls in a range from seventeen to thirty percent.

Based upon Table 7.1 slope is factor in a few soils/locations in the county. In a number of situations, any soil conditions based upon slope could likely be engineered to become more compatible. However, it is important to involve an engineer, geologist, or soil scientist in the issue in order to make the correct modifications.

Permeability

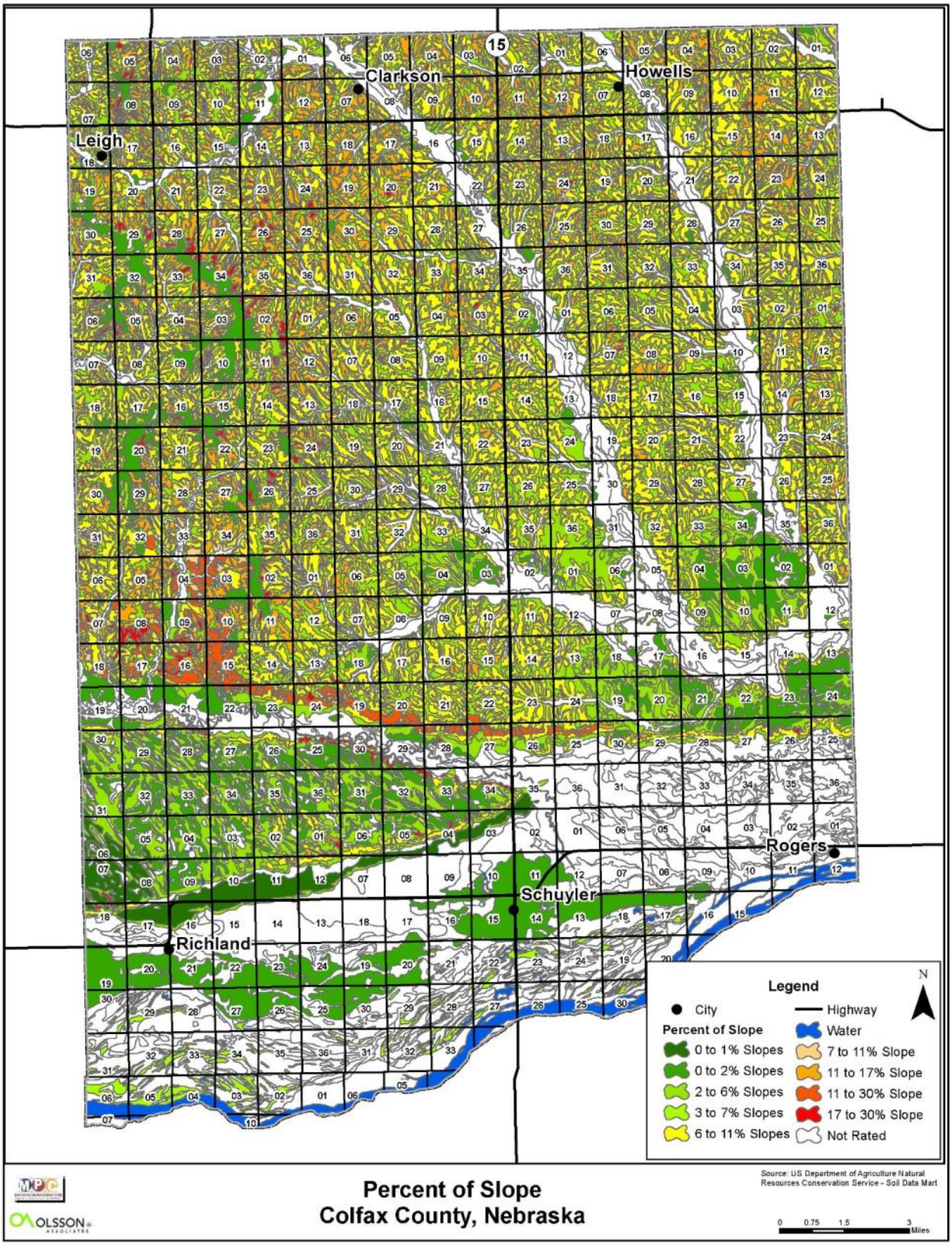
Permeability is defined in the Colfax County Soil Survey as..."The quality of the soil that enables water to move downward through the profile. Permeability is measured as the number of inches per hour that water moves downward through saturated soils." Permeability is rated as:

Very slow	less than 0.06 inches
Slow	0.06 to 0.20 inches
Moderately slow	0.2 to 0.6 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Table 7.2 indicates the various permeability rates for each soil and at what depth the rating was taken. The Table indicates those considered to moderately rapid or higher in red. There are a number of soils in Colfax County that can see a permeability of twenty inches per hour or more, most of these are located along the Platte River valley.

There are a number of specific uses that are not compatible for soils rated as Moderately rapid or higher. Soils rated at these levels will move contaminated materials much faster through the profile and into the regional water tables and aquifers. These uses will typically include anything dealing with animal or human sanitary waste systems.

FIGURE 7.17: PERCENT OF SLOPE



Source: United States Department of Agriculture - Natural Resources Conservation Service

TABLE 7.2: PERMEABILITY AND SHRINK-SWELL BY SOIL TYPE

Soil Symbol/ Soil Name	Depth (inches)	Permeability (in/hr.)	Shrink-swell potential
AcC Alcester	0-24 24-60	0.6-2.0 0.6-2.0	Moderate Moderate
Af, Alda	0-10 10-20 20-60	0.6-2.0 0.6-2.0 > 20	Low Low Low
Ag, Alda	0-10 10-24 24-60	0.6-2.0 2.0-6.0 > 20	Low Low Low
Be Belfore	0-16 16-36 36-60	0.2-0.6 0.2-0.6 0.2-0.6	High High High
Bf Belfore	0-14 14-32 32-60	0.2-0.6 0.2-0.6 0.2-0.6	High High High
Bh Blendon	0-8 8-34 34-60	2.0-6.0 0.6-6.0 2.0-20	Low Low Low
BnC Blendon	0-15 15-25 25-60	0.6-2.0 0.6-6.0 2.0-20	Low Low Low
Bo Boel	0-10 10-60	0.6-2.0 6.0-20	Low Low
Cg Colo	0-24 24-37 37-60	0.6-2.0 0.2-0.6 0.2-0.6	High High High
CrC2, CrD2, CrE2, CrF2 Crofton	0-5 5-60	0.6-2.0 0.6-2.0	Low Low
Ed Eudora	0-16 16-53 53-60	0.6-2.0 0.6-2.0 6.0-20	Low Low Low
Fm Fillmore	0-19 19-32 32-45 45-60	0.6-2.0 < 0.06 0.2-0.6 0.06-2.0	Moderate High High Moderate
Fp Fillmore	0-18 18-60	0.6-2.0 < 0.6	Low High
Gc Gayville Variant	0-8 8-30 30-60	0.2-0.6 < 0.06 0.2-0.6	High High High
GvD2 Geary Variant	0-6 6-39 39-60	0.2-0.6 0.2-0.6 0.2-0.6	Moderate Moderate Moderate
GvF2 Geary Variant	0-6 6-32 32-60	0.2-0.6 0.2-0.6 0.2-0.6	Moderate Moderate Moderate
Ha Hall	0-7 7-38 38-60	0.2-0.6 0.2-0.6 6.0-20	Moderate Moderate Low
Hb Hobbs	0-7 7-60	0.6-2.0 0.6-2.0	Low Low
Hf Hobbs	0-8 8-60	0.6-2.0 0.6-2.0	Low Low
InB, InD Inavale	0-7 7-16 15-60	6.0-20 6.0-20 6.0-20	Low Low Low
Kz Kezan	0-10 10-60	0.6-2.0 0.6-2.0	Low Low
Lc Lawet	0-24 24-38 38-60	0.6-2.0 0.2-2.0 2.0-20	Low Moderate Low
Ld Lawet	0-24 24-55 55-60	0.2-2.0 0.2-2.0 2.0-20	Moderate Moderate Low
Lu Luton	0-15 15-34 34-60	0.6-2.0 < 0.06 <0.06	High High High
Mo, MoC, MoC2, MoD, MoD2 Moody	0-7 7-36 36-60	0.2-2.0 0.2-2.0 0.6-2.0	Moderate Moderate Moderate
Na Napa	0-1 1-36 36-60	0.6-2.0 < 0.06 <0.06	Low High High
NoC, NoC2, NoD, NoE Nora	0-9 9-27 27-60	0.6-2.0 0.6-2.0 0.6-2.0	Moderate Moderate Moderate
NpD2, NpE2 Nora	0-6 6-22 22-60	0.6-2.0 0.6-2.0 0.6-2.0	Moderate Moderate Moderate
Of Ord	0-16 16-31 31-60	0.6-6.0 2.0-6.0 2.0-20	Low Low Low
Pc Platte	0-11 11-60	0.6-2.0 > 20	Low Low
Px Platte	0-11 11-17 17-60	0.6-2.0 2.0-6.0 > 20	Low Low Low
So Shell	0-24 24-33 33-60	0.6-2.0 0.6-2.0 0.6-2.0	Low Low Low
Sp Shell	0-17 17-41 41-60	0.6-2.0 0.6-2.0 0.06-0.2	Low Low High
StD2, StF2 Steinaur	0-4 4-14- 14-60	0.2-0.6 0.2-0.6 0.2-0.6	Moderate Moderate Moderate
TmC2 Thurman	0-15 15-60	6.0-20 6.0-20	Low Low
TmD2 Thurman	0-25 25-60	6.0-20 6.0-20	Low Low
Zo Zook	0-21 21-60	0.2-0.6 0.06-0.2	High High

Permeability, as with other soil factors, can be overcome with the proper engineering and construction techniques. Caution is a must when dealing with these conditions since the potential for contaminating an aquifer that feeds an entire area with water is a risk.

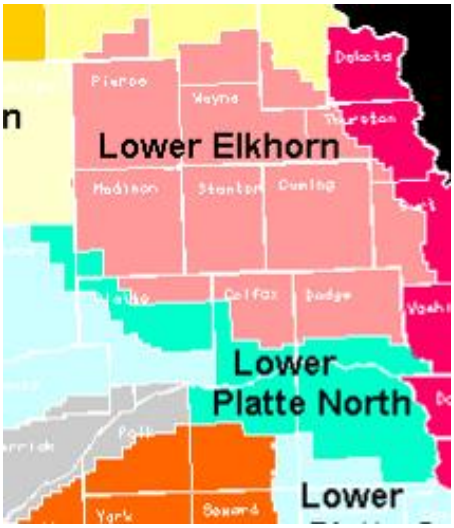
Water and the Impact on Colfax County

Water, along with the soil conditions discussed in this section are the two most restricting environmental conditions faced by Colfax County. Damaging either one of these two elements will impact the residents of the county for years to come. As with the soil descriptions and conditions, it is important to discuss the water factors impacting Colfax County during the present and coming planning period. Water in this section will apply to two topics, surface water and ground water.

Surface water applies to any water that runs across a surface and eventually runs into a minor drainage area, eventually ending up in a major waterway such as the Platte River. However, a certain portion of surface water can and is absorbed by the soil in order to support plant life including corn, soybeans, and grass lawns.

Colfax County lies in two distinct watersheds, these are defined and drainage areas controlled by the respective Natural Resource District. The two districts covering Colfax County are the Lower Platte North Natural Resource District and the Lower Elkhorn. The Lower Platte North is based in Wahoo, Nebraska, while the Lower Elkhorn is in Norfolk, Nebraska.

FIGURE 7.18: WATERSHEDS AND THE NATURAL RESOURCE DISTRICTS



Source: www.lancaster.unl.edu

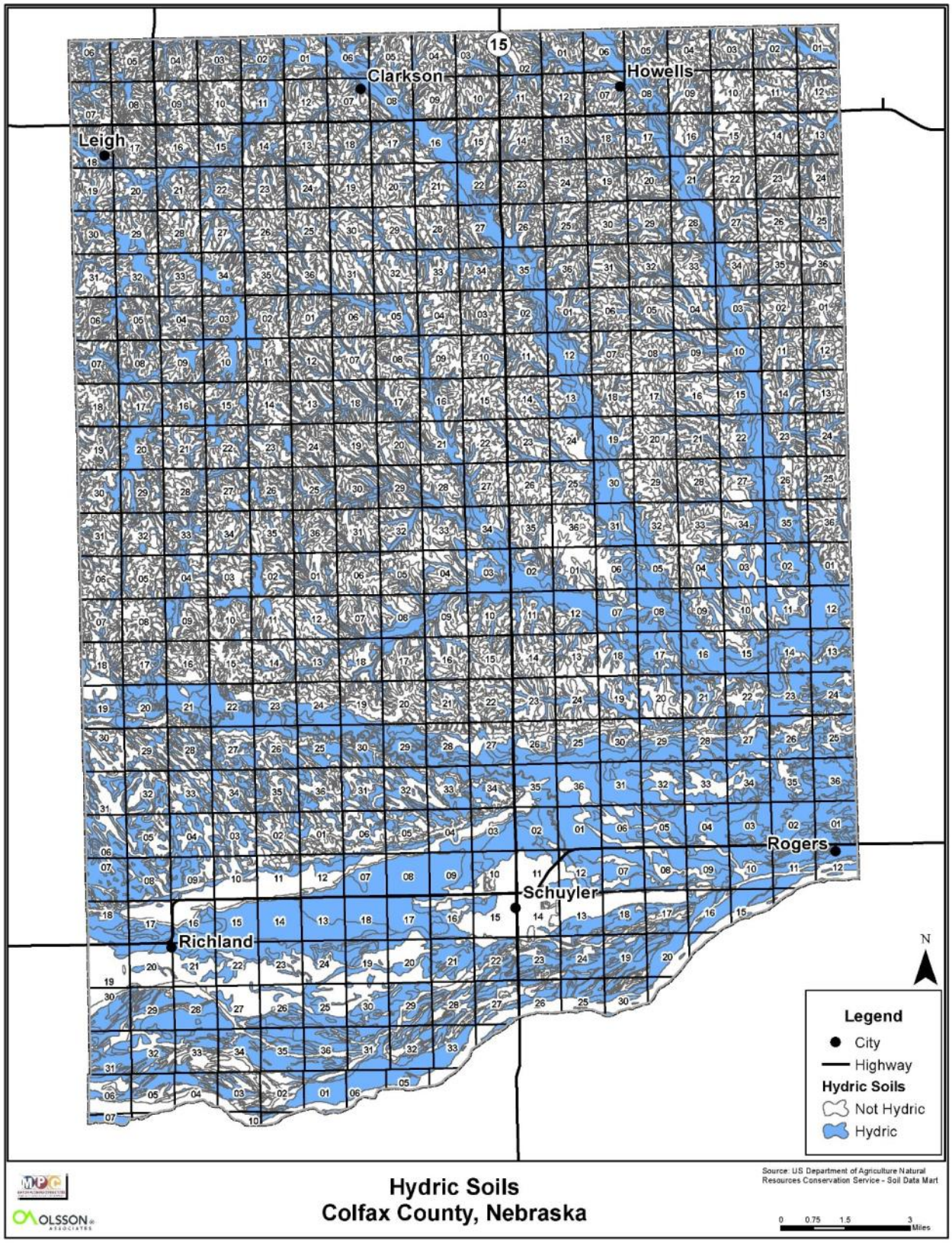
Hydric Soils

Hydric soils are formed under conditions of saturation, flooding, or ponding. The process has to occur long enough during the growing season to develop anaerobic conditions in the upper part. Hydric soils along with hydrophytic vegetation and wetland hydrology are used to define wetlands. (USDA/NRCS, Fall 1996)

Figure 7.19 indicates where the hydric soils are located in Colfax County. The soils are classified as the following:

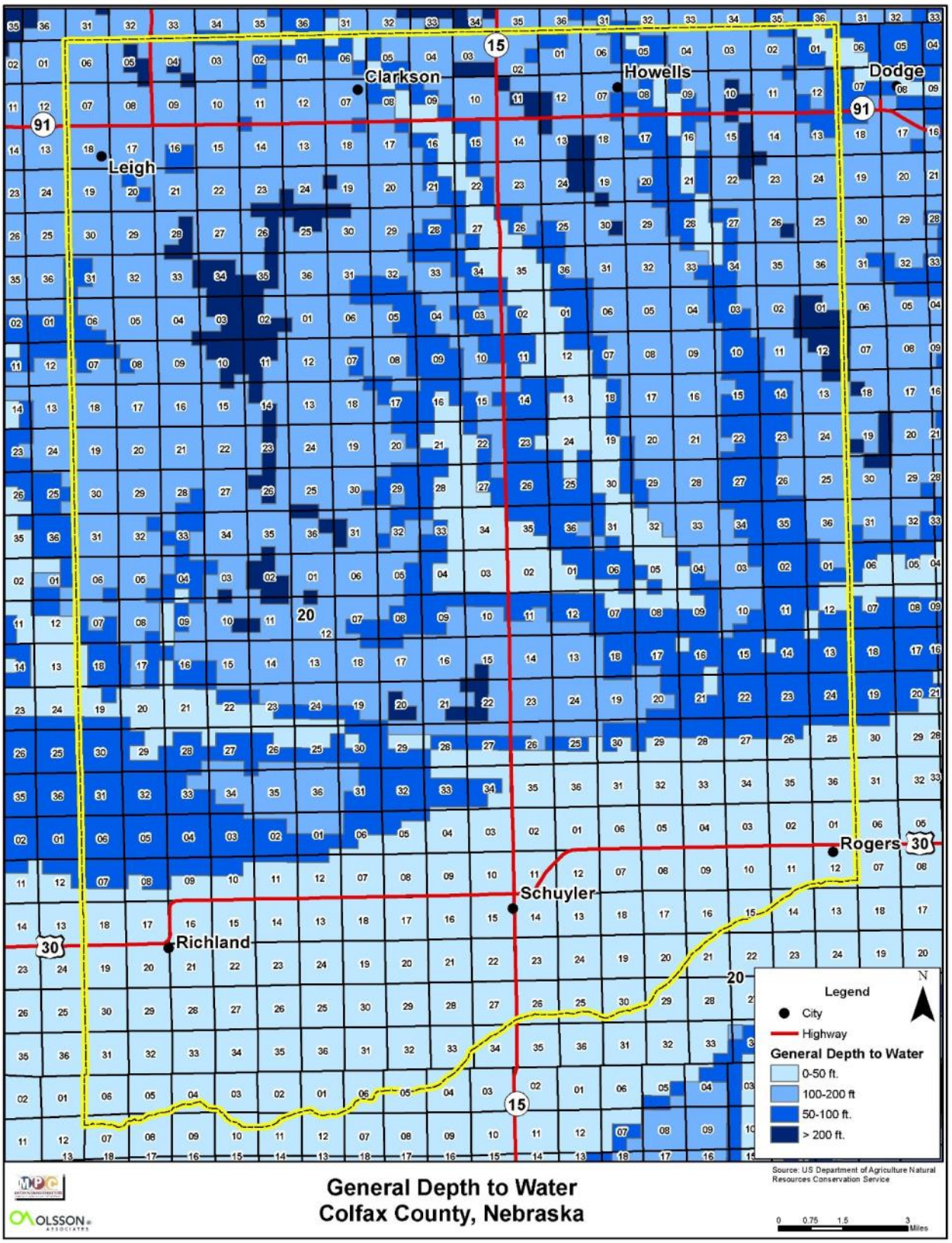
- All Hydric,
- Not Hydric

FIGURE 7.19: HYDRIC SOILS



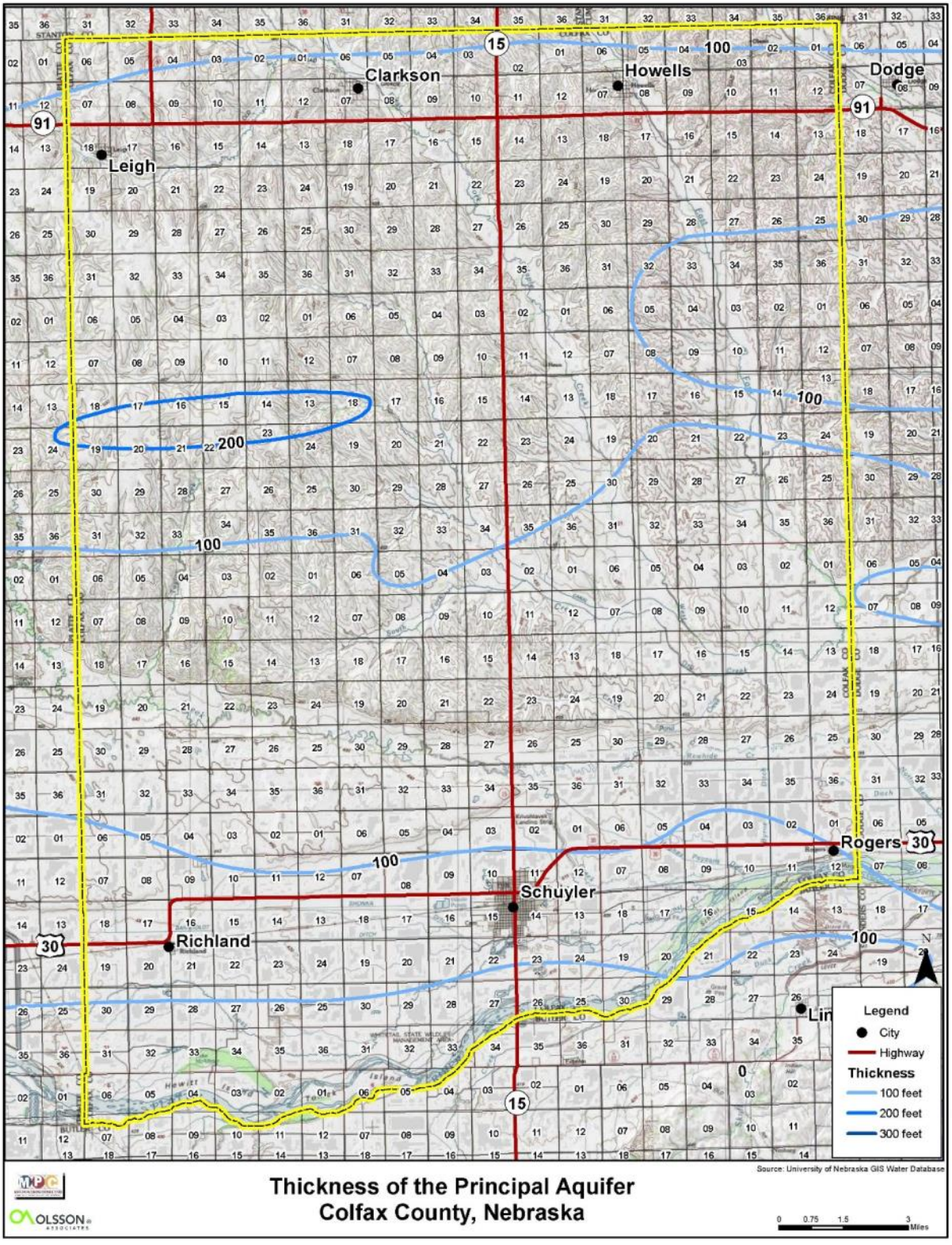
Source: United States Department of Agriculture - Natural Resources Conservation Service

FIGURE 7.20: DEPTH TO WATER



Source: http://snr.unl.edu/data/geographygis/NebrGISwater.asp

FIGURE 7.21: THICKNESS OF THE PRINCIPAL AQUIFER



Source: http://snr.unl.edu/data/geographygis/NebrGISwater.asp

The majority of the soils in Colfax County are considered Not Hydric. The largest area of Hydric soils are located along the Platte River corridor and along the major drainageways and streams in the county.

Groundwater/Water Table Elevations

Groundwater refers to water found beneath the surface and includes smaller pockets of water as well as aquifers. This water source is where the residents of Colfax County both city and rural, get their potable water for everyday living as well as the irrigation water for crops. The ability to find water meeting these specific needs is critical to the placement of certain uses. These specific needs include water quantity, water quality, and water pressure.

Depth to Water

Figure 7.20 indicates the approximate water table/aquifer elevations. The water table elevation, in Colfax County, varies from 0 feet below grade to over 200 feet below grade. As expected, the shallowest areas in Colfax County occur along the Platte River Valley. A large portion of Colfax County has a depth of 50 to 100 feet.

Thickness of Principal Aquifer

Figure 7.21 indicates the thickness of the water table/aquifer. The thickness ranges from 100 feet in depth to 200 feet in depth depending upon which part of the county ones resides. The deepest portion of the aquifer can be found in the northwest Colfax County.

Use of Groundwater

Groundwater use in Colfax County is in three forms; domestic and livestock supply, public water supplies, and irrigation. Each use is important to the overall viability of Colfax County.

Domestic and Livestock supplies

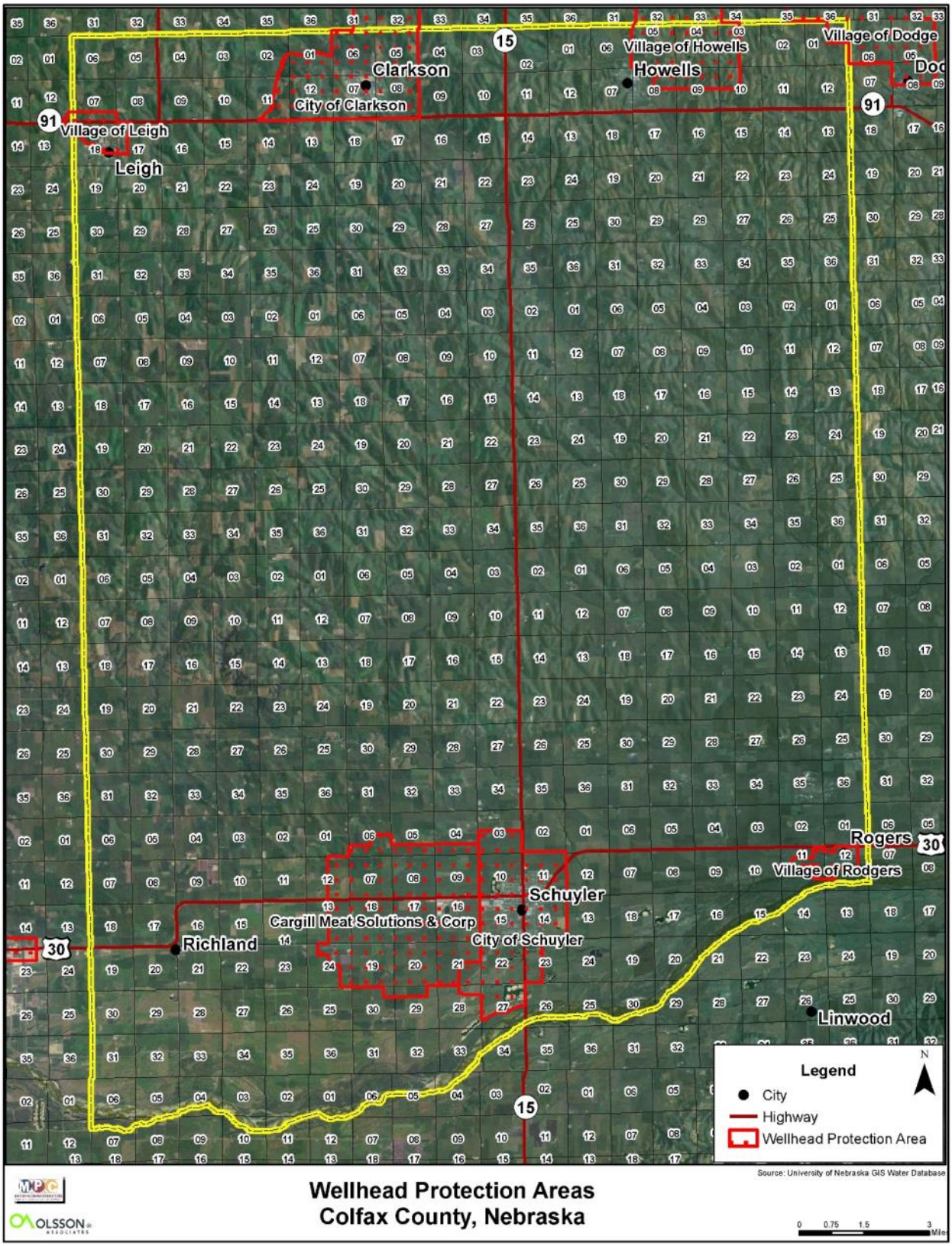
Typically domestic and most livestock water supplies are obtained through the use of small diameter wells. Most of these wells are drilled only a few feet below the top of the water table, are low production wells, and equipped with electric powered jet or submersible pumps. The water yield of this type of well is usually no more than five gallons of water per minute.

Public water supplies

The public water supply is one of the most critical uses of groundwater resources. These supplies are used by the municipalities supplying water to its residents. In Colfax County, all of the incorporated communities have a publicly owned water supply system.

The State of Nebraska places a great deal of value on these systems across the state. The value is so high that a Wellhead Protection Program is available to municipalities through Nebraska Department of Environmental Quality. This program allows the municipalities, after a series of prescribed steps are completed, to designate special areas around their wells and well fields in order to protect the quality and quantity of the water within the underlying aquifers. Development of a community wellhead protection plan can help communities receive financial assistance to protect and secure the source of drinking water for the community.

FIGURE 7.22: WELLHEAD PROTECTION AREAS



Source: Nebraska Department of Environmental Quality

Wellhead Protection

A Wellhead Protection Area is an delineated area indicating where a water source is located, as well as the area of travel for a specific well or well field. A wellhead protection area is important from the aspect that correctly implemented, the area will aid in protecting the water supply of a domestic well providing potable water to a community.

In Nebraska, the goal of the Nebraska Department of Environmental Quality's Wellhead Protection Program "...is to protect the land and groundwater surrounding public drinking water supply wells from Contamination". Within the NDEQ's program there are five steps to developing a wellhead protection area, which are:

1. Delineation
2. Contamination Source Inventory
3. Contaminant Source Management
4. Emergency, Contingency, and Long-term Planning
5. Public Education

The mapping process includes the use of computer modeling and other data. From this the NDEQ can generate a map indicating the wellhead Protection Area. However, delineating an area is not sufficient for protecting the groundwater around a public supply well, the governmental entity must adopt an ordinance in order to enforce the area and the regulations used to protect this water supply. Another way to officially regulate a wellhead protection area is for the community to create an interlocal agreement with the County to regulate these areas as part of the county comprehensive plan and zoning regulations.

Figure 7.22 shows the documented wellhead protection areas impacting Colfax County. These are only the mapped areas, it is not clear if these communities have actually adopted the proper ordinances to fully protect the water supply.

Irrigation

Irrigation wells in Colfax County has been a long standing practice. This process has become increasingly important to the production of crops within Colfax County and Nebraska. The water demand for irrigation varies greatly from year to year and is dependent upon the amount of natural precipitation received in the area.

The use of irrigation is critical during the growing and finishing periods of the crop lifecycle. The demand for irrigation can have major impacts on the draw down of the aquifer and the aquifers ability to recharge itself in an appropriate time period.

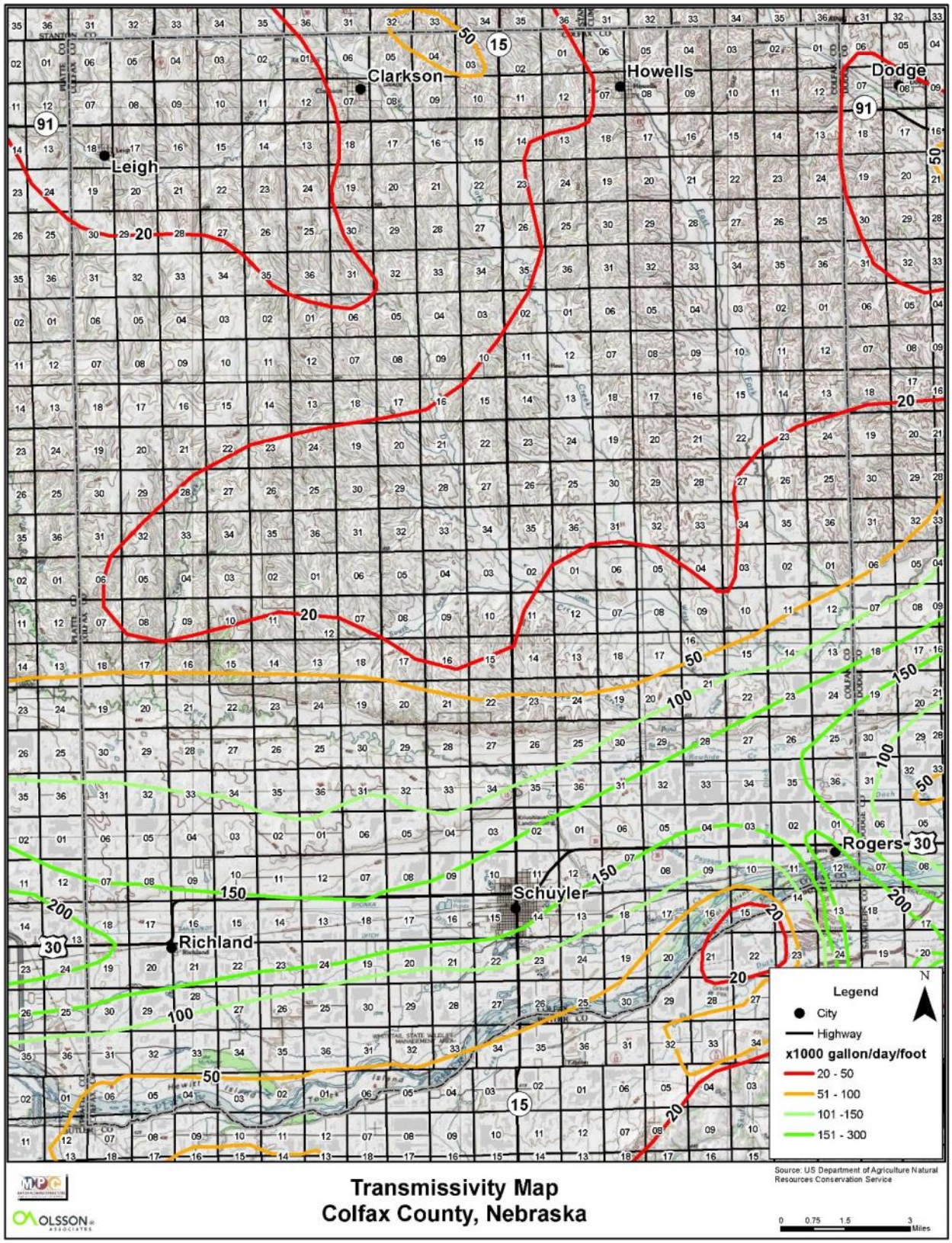
Irrigation in Colfax County does have some limitations based upon the topography/percentage slope of agricultural grounds. However, if an area can be irrigated in a cost-effective manner then it has a high probability of occurring.

Transmissivity

Transmissivity is the term used to describe the ability of water to move below groundwater through the different soils. The data are described in terms of "1000 gallons/day/foot". The higher the numbers the more water that is transmitted through the soils. Therefore, if an area indicates a Transmissivity of 50 to 100, it means there is between 50,000 to 100,000 gallons/day/foot being transmitted through these soils.

Figure 7.23 indicates the generalized Transmissivity of Colfax County. Within the county the best area for the transmission of water is the Platte River corridor. The farther north in the County, the lower the transmissivity. The highest levels occur in a strip running generally east and west from Richland to Schuyler to Rogers.

FIGURE 7.23: TRANSMISSIVITY

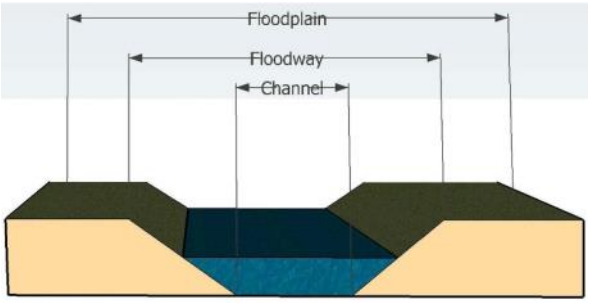


Source: United States Department of Agriculture - Natural Resources Conservation Service

Transmissivity is a critical component to determining the wellhead protection areas. Since the rate of flow below the surface is critical to identifying how much time is required for water to travel from one spot to the wellhead.

Floodways and Floodplains

Flooding is the temporary covering of the soil surface by flowing water from any source, such as streams and rivers overflowing their banks, runoff from adjacent or surrounding slopes, or a combination of different sources. During a flooding event there are a number of components that make up the flooded area. These areas include:



Floodway which is the channel of a watercourse and those portions of the adjoining floodplains which are required to carry and discharge the 100-year flood with no significant increase in the base flood elevation.

Floodplain which is the low land near a watercourse which has been or may be covered by water from flood of 100-year frequency, as established by engineering practices of the U.S. Army Corps of Engineers. It shall also mean that a flood of this magnitude may have a 1 percent chance of occurring in any given year.

Floodway Fringe which is that portion of a floodplain that is inundated by floodwaters but is not within a defined floodway. Floodway fringes serve as temporary storage for floodwaters.

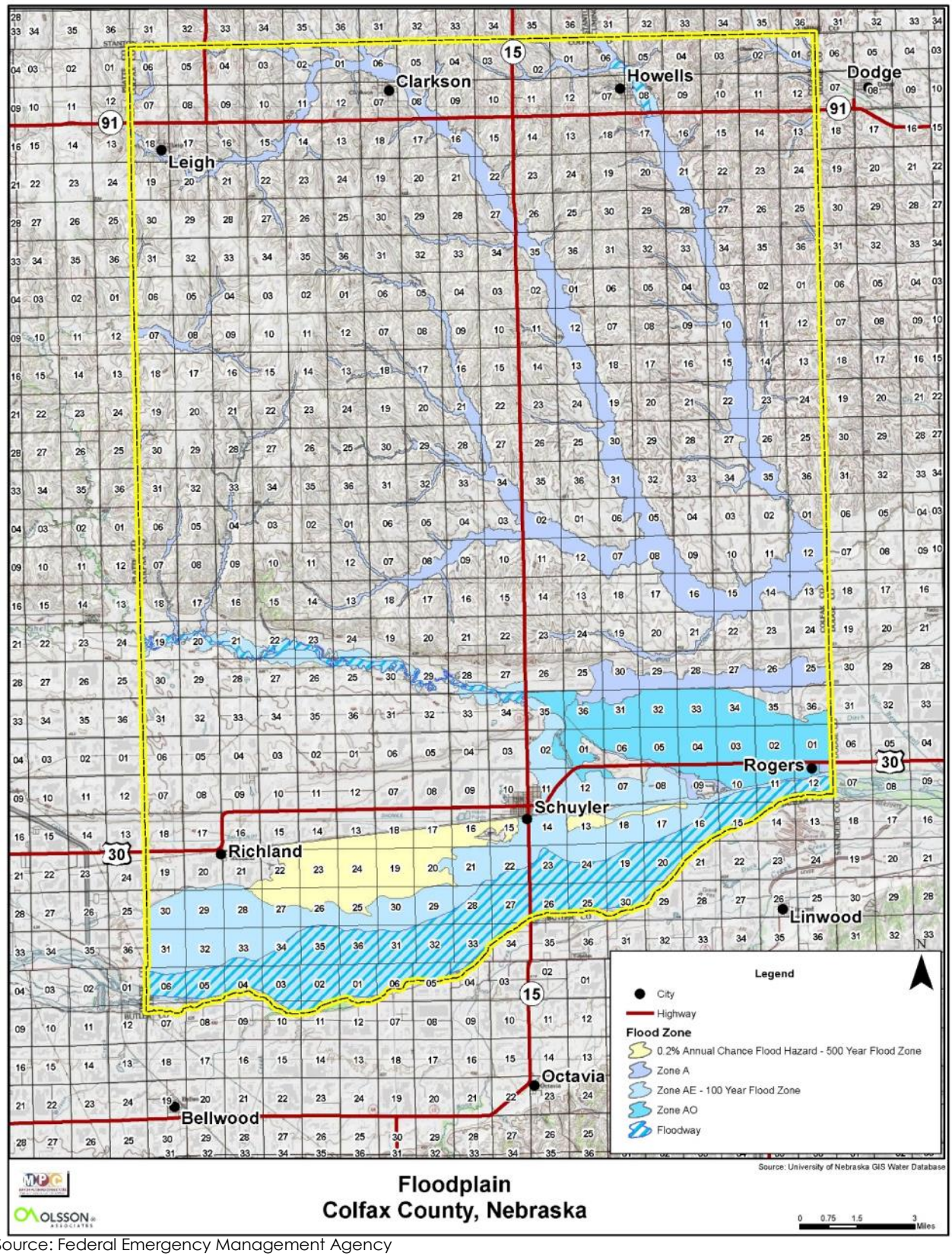
The floodplain also includes the floodway and the flood fringe, which are areas covered by the flood, but which do not experience a strong current.

A home north of Quincy, Illinois within the 100 year floodplain - river is between 1 and 2-miles away

Same home during the 2008 Mississippi River floods

The floodplain area of greatest significance in terms of state and federal regulation is the 100 year floodplain. This area is defined by the ground elevation in relation to the water elevation experienced during a 100 year flood event. The 100 year floodplain is calculated to be the elevation level of flood water expected to be equaled or exceeded every 100 years on average. In other and more accurate words, the 100 year flood is a 1% flood, meaning it defines a flood that has a 1% chance of being equaled or exceeded in any single year.

FIGURE 7.24: FLOODPLAIN AND FLOODWAY MAP



Source: Federal Emergency Management Agency

Preserving the floodplain and floodway are critical to limiting the level of property damage that can occur as well as the level of damage to life of the occupants of the area. Land when not flooded seems to be harmless, but it is those rare times that threaten life and property that need to be controlled.

In recent years there have been numerous flooding occurrences in Nebraska and the Midwest. These events have included the Platte River, the Missouri River, and the Mississippi River, as well as their tributaries. Each of these events have caused significant damage to life and property. In order to protect an individuals property there are specific rules and guidelines that need to be followed. On some occasions these guidelines work and others they may not; most guidelines are developed for 100 year flooding events. The times that the guidelines do not work are typically referred to a 500 year event for lack of a better term. However, in some cases, due to mother nature and increases in development runoff, the area needed to handle the floodway and floodplain (100 year event) have increased due to the amount and speed that the water is reaching the streams and rivers.

Additionally, in 2011, the state of Nebraska and Iowa saw similar destruction when the Missouri River flooded. That flooding destroyed large sections of Interstates 680 and twenty-nine in Iowa, which were laying flat on the ground. In themed 2000's, Cedar Rapids. Iowa saw numerous structures swept off their foundations and sent downstream creating huge losses and large amounts of recovery dollars to be spent.

Natural Resources/Environment Goals and Policies

Soils

Soil Goal 1

Colfax County needs to protect specific soils regarding the suitability of certain uses.

Soil Policies and Strategies

Soil-1.1 The County should require individuals and businesses wishing to build in areas with moderate and severe limitations to provide an engineering statement signed by a licensed engineer stating the issues have been considered in the design of the project.

Soil-1.2 The County should require the use of the Planned Unit Development technique for larger developments in highly sensitive areas.

Soil-1.3 Discourage conversion of designated prime agricultural land and soils to non-agricultural uses by targeting less productive agricultural soils (crops) for urban or non-farm uses.

Water (surface water and groundwater)

Water Goal 1

Protect both the surface water and groundwater that runs through and is under the county.

Water Policies and Strategies

W-1.1 Encourage the preservation of environmentally sensitive areas such as wetlands, wooded areas, waterways (streams, ponds, lakes, rivers, etc.).

W-1.2 Protect all water supplies and aquifers from development activities that may affect the quality of water; development must demonstrate a positive or, at least, a neutral impact on groundwater.

W-1.3 Continue participation in the FEMA National Flood Insurance Program to prevent flood-caused loss of life and property.

W-1.4 Colfax County should discourage land use development within the floodplains of the county.

W-1.5 Colfax County should support soil and water conservation efforts to aid in erosion, sediment, and run-off control.

W-1.6 Colfax County should coordinate with and support city, regional, state and federal water-quality plans and programs so that high water quality will be achieved in the cities and villages of the County.

W-1.7 Colfax County should require the protection of riparian vegetation from damage that may result from

development.

W-1.8 Water erosion control structures, including riprap and fill, should be reviewed by the appropriate authorities to insure they are necessary and are designed to minimize adverse impacts on water currents, erosion, and accretion patterns.

W-1.9 Colfax County should consider the following in any public or private land use determination subject to county review:

1) the impact of filling or drainage of swamps or marshes;
2) the damming of rivers and streams;
3) the location and construction of highways and utility transmission lines; and
4) Any other land development activities which significantly interfere with the vegetation or soil cover or drainage patterns in critical habitat areas.

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8

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 non-renewable energy sources has increased significantly over the past 100 years. In addition, some of these energy sources are not friendly to our environment, especially the ozone layer.

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
- Agricultural equipment
- 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 this increased concern for the environment came a better 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 Colfax 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 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 comprehensive plans addressing the entire issue of energy conservation and/or 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 present day generations to live without jeopardizing the ability of future generations to sustain life as we know it today.

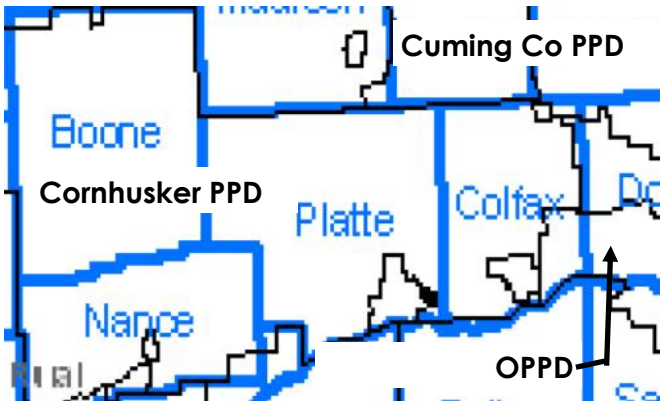
The generations living in today's world need to begin switching to cleaner and more renewable resources. By doing so it will aid future generations with their quality of life. The more renewable energy sources become the norm for our generation, the more likely these sources will be second nature and common place in the future.

Americans have grown to rely more heavily on electricity. However, state and federal policies have been increasingly more insistent on curbing this increasing reliance on electricity; especially, those sources produced by non-renewable fossil fuels such as oil and coal. Federal policy has set a goal for 20% of all electricity, by 2020, in the United States be from renewable sources such as solar and wind. People question what a smaller county like Colfax County can do to make for a better environment. There are a number of activities that can be undertaken and pursued to make an impact in this small part of Nebraska. The following information will perform at a minimum the requirements of LB 997 but they will also examine strategies that counties like Colfax County can undertake to make a contribution to the overall solution.

Energy Infrastructure

Electrical Power

Electrical power is supplied by three entities in Colfax County. These entities include: Cornhusker Public Power District, Cuming County Public Power District and Omaha Public Power District. Two of these districts are wholesale customers of Nebraska Public Power District headquartered in Columbus, Nebraska. While OPPD is a generator, wholesaler and retailer of electricity.



Cornhusker Public Power District is headquartered in Columbus and serves 2,250 square miles. The utility has over 9,000 customers.

Cuming County Public Power District is located in West Point and has nearly 4,000 meters on their system. The district serves only a small corner of Colfax County near Howells.

Omaha Public Power District is headquartered in Omaha. The district covers a large portion of Eastern Nebraska including Omaha, Douglas County, and Sarpy County. OPPD is both a generator with several coal fired generation plants in Nebraska, a currently idle nuclear plant in Fort Calhoun and they are vested in wind power in a couple of farms in Nebraska.

Electrical Distribution

The overall distribution system is in good condition. The distribution system not only supplies power throughout Colfax County but is the foundation for power that is transmitted to other customers adjacent to the county.

Natural Gas Service

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

Energy Use by Sector

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

Residential Uses

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

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

Commercial Uses

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

is electricity produced from both fossil fuels and renewable resources.

The use of natural gas, oil, propane, and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on the type of commercial use and the construction of the building(s) involved. Again, similar to residential uses, commercial uses located within the more urban parts of Colfax 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

Colfax County's industrial uses will be very similar to those discussed within the commercial section. However, 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.

Short-term and Long-term Strategies

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

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

Residential Strategies

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. These strategies range from simple (less costly) to complex (costly). Unfortunately, not all of the solutions will have an immediate return on investment. As individual property owners, residents will need to find strategies that will fit into their ability to pay for savings at the present time.

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

- Converting all incandescent light bulbs to Compact Florescent Lights.
- Installing additional insulation in the attic.
- Converting standard thermostats to digital/programmable thermostats.
- Changing out older less efficient air conditioners and furnaces/boilers to newer high-efficiency units
- Changing out older appliances with new EnergyStar appliances.
- Exchanging less efficient water heaters with EnergyStar units or on demand systems.

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/Industrial Strategies

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

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in commercial and industrial facilities. Again, not all of the solutions will have an immediate

return on investment. Property owners will need to find strategies that will fit into their ability to pay for savings at the present time.

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

- Converting all incandescent light bulbs to Florescent Lights or Compact Florescent Lighting on small fixtures.
- Converting standard thermostats to digital/programmable thermostats.
- Installing additional insulation in an attic space.
- Changing out older less efficient air conditioners and furnaces/boilers to newer high-efficiency units.
- Exchanging less efficient water heaters with EnergyStar units or on demand systems.

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

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

Public Strategies

Similar to commercial and industrial uses, strategies for energy efficiency within public facilities can be more difficult to achieve than those in the other uses. Typically, these improvements will require a greater amount of investment due to the size of most of these facilities. However, in some cases there are grants available from time to time to assist public agencies with these improvements.

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in public facilities similar to commercial and industrial facilities.

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

- Converting all incandescent light bulbs to Florescent Lights or Compact Florescent Lighting on small fixtures.
- Converting standard thermostats to digital/programmable thermostats.
- Installing additional insulation in an attic space.
- Changing out older less efficient air conditioners and furnaces/boilers to newer high-efficiency units.
- Exchanging less efficient water heaters with EnergyStar units or on demand systems.

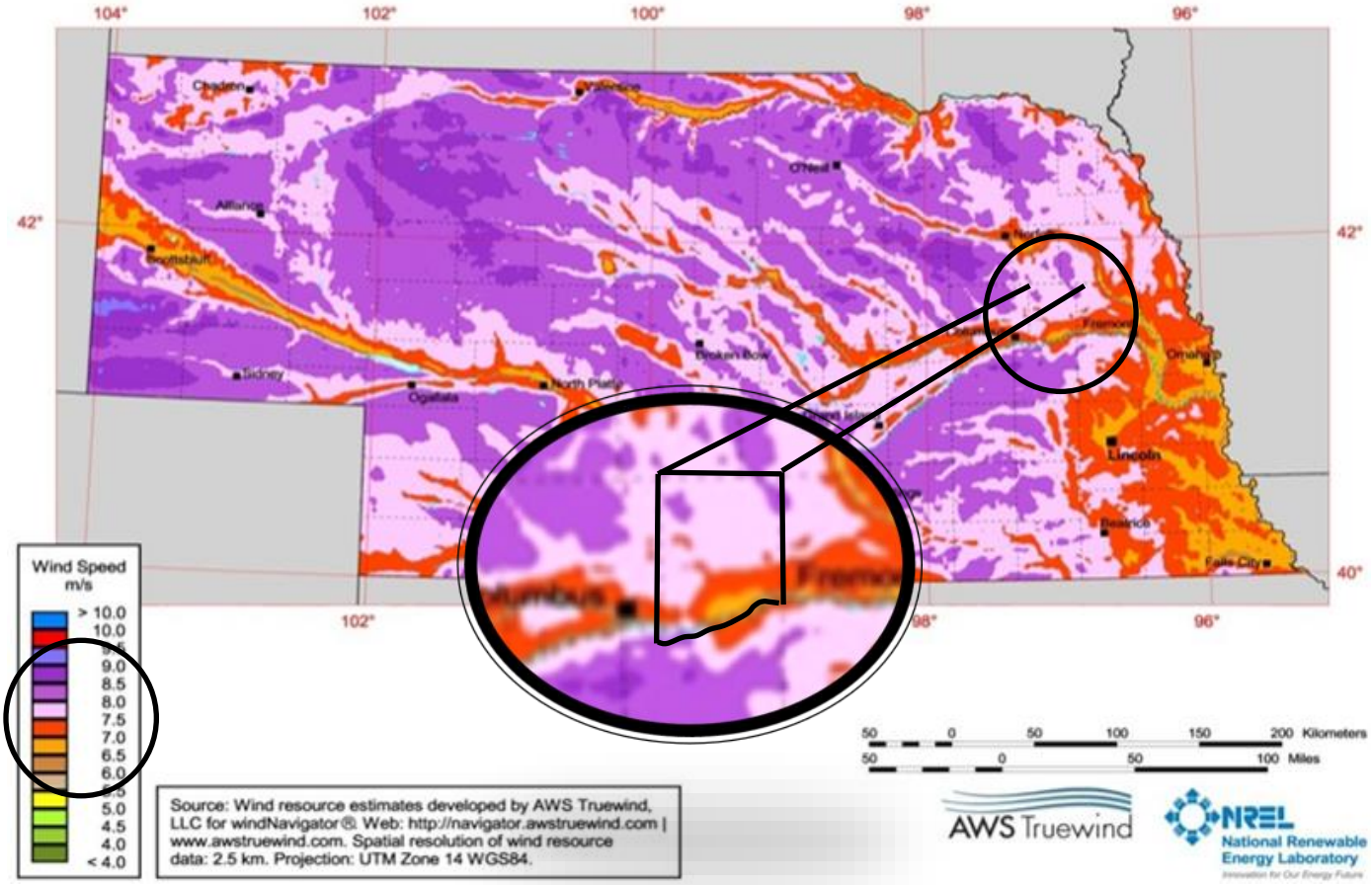
Some of the more costly ways to make the public facilities more energy efficient include:

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

Renewable Energy Sources

Renewable energy sources, according to most definitions include natural resources such as wind, sun, water, 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 source of renewable energy used in Nebraska is wind, sun, grander level (solar farms).

Figure 8.1: Annual Average Wind Speed at 80 Meters Nebraska



Source: AWS Truewind

Wind

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

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

Solar

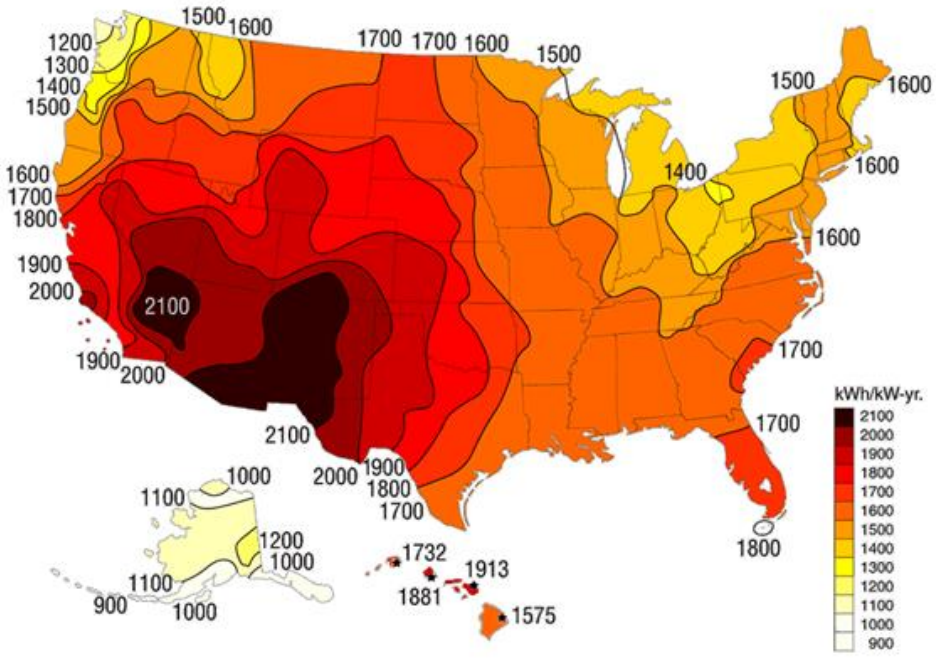
Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and are more aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that today's systems are not as bulky as their ancestors.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

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 120 and 200 watts per square meter at

an installed coat of $11 to $22 per watt, according to the American Solar Energy Society but these costs are becoming less every year as more solar units are commissioned and new more cost effective technologies are developed.

Based upon the diagram 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.

FIGURE 8.2: SOLAR CONTOURS
UNITED STATES



Source: Solar Energy Industries Association

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.
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.

Agriculture and Renewable Resources

The discussion of sustainability and renewable energy sources should be music to the ears of Nebraska agricultural community. The state's agricultural base has long been involved in the production of corn based ethanol and soy diesel.

However, at this point in time corn based ethanol tends to be heavy on water use versus the outputs of the process. In other states crops such as switch grass is being used in a more economical and environmentally manner (Water usage). Nebraska's agricultural community needs to work closely with industry leaders to produce more corn based ethanol with less water inputs.

Colfax County and Renewable Energy

For several years Colfax County has been viewed as a leader in renewable energy sources. Danny and Josie Kluthe installed Nebraska's first methane digester system to produce electricity from recovered methane. The methane is recovered the Kluthe' s 8,000 head swine operation. The Kluthe' s produce electricity for their operation and sell the surplus to Cuming County PUB/Nebraska Public Power District. The methane digester produces enough electricity to power fifty-three homes per year.

This digester operation includes several benefits, including:

- Odor reduction
- Electricity production
- Prevented release of methane into the atmosphere
- Nutrient-rich fluid created as a by-product of the process for fertilizing agricultural lands.

This operation is an example of how renewable energy sources can be used to produce electricity from what has been a common waste product.

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. A number of items can be completed by cities and counties to make these projects more attractive. Some 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 to apply only 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/FUNDING SOURCES

There are several programs available through each of the Power District to assist in purchasing and installing more energy efficient equipment in residences and businesses. In addition, there are funding opportunities through the Nebraska Energy Office in Lincoln.

Please consult the Power Districts in a particular part of Colfax County to see what is available.

ENERGY GOALS AND POLICIES

Energy Goals

Energy Goal 1

Colfax County will work to become more energy efficient during the planning period.

Policies and Strategies

ENG-1.1 The County in conjunction with local power utilities should continually promote the use of energy reducing compact fluorescent bulbs within the community.

ENG-1.2 The County should adopt zoning regulations allowing the use of solar and personalized wind turbines.

ENG-1.3 The County should adopt regulations encouraging the use of methane digesters in confined feeding operations.

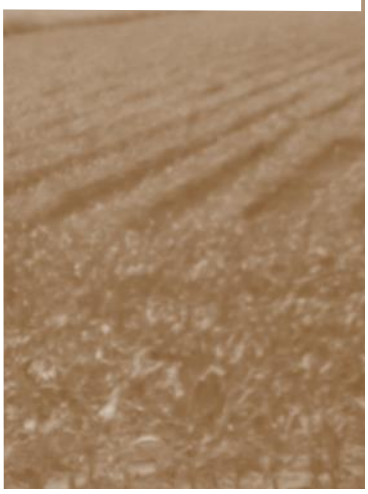
ENG-1.4 The County should promote more energy efficient construction practices within the County.

ENG-1.5 The City should develop standards allowing for the use of geothermal heating and cooling systems for different uses.









9

Land Use



Land Use

Introduction

Within any planning jurisdiction, whether a large growing urban area or a smaller rural county, there will be changes in land uses throughout the planning period. The purpose of the Colfax County Land Use Chapter is to provide a general guide to direct land use over time. The resulting land uses should be capable of coexisting with a minimum number of conflicts. This Chapter must reflect the existing conditions and be flexible in order to meet the needs of its citizens as well as their vision for the community's future.

The Colfax County Land Use Chapter provides the basis for the formulation of land use and the 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 Chapter should promote improvements in all the components of the local economy.

Colfax County Land Use Elements

The elements of the Colfax County Land Use Chapter include:

- Existing Land Use, and
- Future Land Use Plan

All 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 developed uses in place within a building or on a specific parcel of land. The number and type of uses can be constantly changing within a county, and produce numerous impacts that either benefit or detract from the county. Because of this, 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 the county faces during the course of the planning period.

Overall, development patterns in and around Colfax County have been influenced by topography, water, soils, and manmade features such as railroad lines and three Nebraska highways, and one U.S. Highway. 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 (includes churches and schools)
- Feed lots

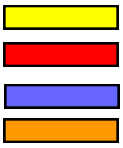
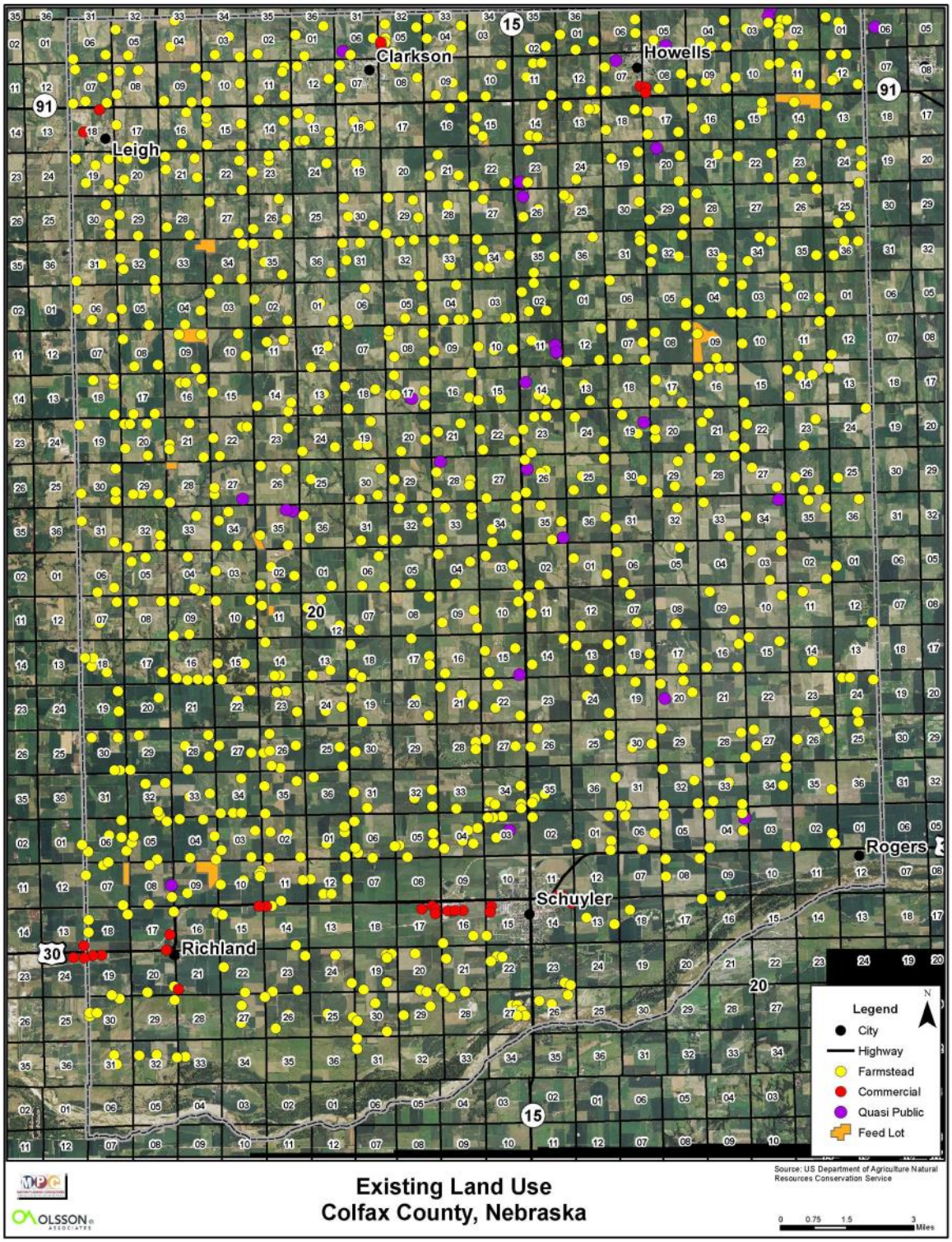


FIGURE 9.1
EXISTING LAND USE MAP
COLFAX COUNTY 2014



Source: Olsson Associates and Marvin Planning Consults, 2013

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 Colfax County's planning and zoning jurisdiction.

The plan is based upon existing conditions and projected future conditions for the county. The Land Use Plan also assists the county in determining the type, direction and timing of future growth and development activities. The criteria used in this Plan reflect several elements, including:

- the current use of land within and around the county
- the desired types of growth, including location of growth
- future development activities
- physical characteristics, opportunities and constraints of future growth areas
- current population and economic trends affecting the county

The Colfax County Future Land Use section of the comprehensive plan typically identifies more land for development than will be necessary during the planning period. The process of identifying more land area allows for several development activities and opportunities without giving one or even two property owners an advantage. Typically, the perceived value of land can increase merely as a result of a plan designating an area as one use or another. However, value should be added to land by the real and substantial investments in roads, water, sewer or parks, not by the designation of land in the Plan.

Efficient allocation of land recognizes the forces of the private market and the limitations of the capital improvement budget. This Plan acknowledges these factors play an important role in the growth and development of Colfax County. A Future Land Use Plan is intended to be a general guide to future land uses that balance private sector development (the critical growth element in any county) with the concerns, interests, and demands of the overall local economy.

LAND USE Categories

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

- Primary Agricultural
- Transitional Agricultural
- Platte River Corridor
- Residential
- Commercial
- Industrial
- Flex

FIGURE 9.2
FUTURE LAND USE MAP
COLFAX COUNTY 2014

Source: Olsson Associates and Marvin Planning Consults, 2013

Primary Agriculture Land Use

General Purpose

This land use provides for all agriculture practices. In this "agriculture first" land use, agriculture activities would be given primary consideration where conditions prove favorable. This is the land use category in Colfax County where livestock production and feeding operations are permitted and non-farm residential development are discouraged.

When developing the County's Zoning Regulations, it is suggested smaller livestock facilities, (up to 1,000 animal units) be a permitted use; while larger livestock feeding operations be regulated through a conditional use permit process in order to help minimize the affect on the environment, other natural resources, and the health, safety and general welfare of the public. A conditional use permit of such operations needs to consider ground water management areas, slope, soils and other natural or cultural resources as required by the County or any other state or federal agency.

Furthermore, in discouraging non-farm residential development, the minimum lot sizes and/or density in the Primary Agriculture would be regulated to preserve prime farmland and deter non-farm developments.

Typical Uses

1. Crop production, including grazing lands
2. Livestock operations for all types of animals
3. Private grain storage
4. Commercial grain storage
5. Manure/fertilizer applications
6. Public recreational, wildlife and historical areas
7. Renewable energy equipment
8. Tourism activities such as: hunting preserves, fishing etc.
9. Religious uses and structures
10. Educational uses and structures
11. Community/Recreational Center

Potential issues to consider

1. Slopes
2. Topography
3. Natural amenities such as trees, ponds, and streams
4. Site drainage
5. Flooding hazards.
6. Groundwater availability
7. Groundwater contamination
8. Minimum lot sizes and residential densities
9. Wetlands
10. Existing and/or proposed sanitary system
11. Potable well locations
12. Wellhead protection areas

Buildable lot policies

1. Minimum residential lot sizes should be kept at the lowest possible size that will accommodate both private water and sanitary sewer.

Residential densities

1. Residential densities within this land use category should be no more than two dwelling units per 1/4 section.

Development policies to consider

1. Cluster developments should be considered and used whenever soils, topography, natural amenities warrant.

Transitional Agriculture Land Use

General Purpose

The Transitional Agriculture Area represents a transitional area in the County where agriculture is protected, but limited. The location of these land use areas will be near jurisdictional intersections of the larger communities of Colfax County. The district would generally be located 1/2 mile around the two-mile etj of Schuyler and the one-mile etj of the other communities with planning and zoning. In addition, there will be a 1/2 mile band around the communities of Leigh and Rogers.

The Transitional Agriculture land use is intended to provide a location where agriculture can continue to thrive but may at some point in the future be influenced by growth in the adjacent communities. This land use area provides an agriculture buffer between more intensive agricultural activities and the growth areas of the communities. Livestock Feeding Operations are highly discouraged to locate or expand in these areas and the minimum lot requirements would be less than those required in the Primary Agriculture and comparable or slightly larger than those zoning districts of adjacent municipalities.

Typical uses

1. Crop production, including grazing lands
2. Livestock operations for all types of animals
3. Private and commercial grain storage
4. Manure/fertilizer applications
5. Public recreational, wildlife and historical areas
6. Renewable energy equipment
7. Tourism activities such as: hunting preserves, fishing etc.
8. Religious uses and structures
9. Educational uses and structures
10. Community/Recreational Center

Potential issues to consider

1. Slopes
2. Proximity to existing livestock facilities
3. Topography
4. Natural amenities such as trees, ponds, and streams
5. Site drainage
6. Flooding hazards.
7. Groundwater availability
8. Groundwater contamination
9. Minimum lot sizes and residential densities
10. Wetlands
11. Existing and/or proposed sanitary system
12. Potable well locations
13. Wellhead protection areas

Buildable lot policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.

Residential densities

1. Residential densities within this land use category should be no more than four dwelling units per 1/4 section.

Development policies to consider

1. Cluster developments should be considered and used whenever soils, topography, natural amenities warrant.

Platte River Corridor Land Use

General Purpose

This land use area follows the Platte River and has the environmental objective of protecting water supplies through a limited number of permitted uses. Preserving water quality and minimizing flood hazards are the leading priorities in considering any type of land use.

Residential development, limited agricultural uses, mining operations and recreation will be the primary uses in this land use. It is suggested if these areas are further developed, trails and designated open spaces should be considered to provide for increased recreational opportunities in the County. Open spaces should be provided to protect major recreational and natural areas and historic sites from adverse effects of major development activity. However, no new construction will be allowed in the designated floodway unless a Letter of Map Amendment (LOMA) can be obtained from FEMA.

Land uses in the Platte River Corridor may represent similar land use and zoning efforts along the Platte River in adjacent counties. It is recommended that all or a majority of uses in this land use area would require a conditional use permit.

Typical uses

1. Crop production, including grazing lands
2. Private grain storage
3. Manure/fertilizer applications
4. Public recreational, wildlife and historical areas
5. Tourism activities such as: hunting preserves, fishing etc.
6. Religious uses and structures
7. Educational uses and structures
8. Community/Recreational Center

Potential issues to consider

1. Floodway
2. Floodplain and flooding hazard
3. Proximity to existing livestock facilities
4. Wetlands
5. Depth to groundwater
6. Topography
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Groundwater contamination
10. Minimum lot sizes and residential densities
11. Existing and/or proposed sanitary system
12. Potable well locations
13. Wellhead protection areas

Buildable lot policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.

Residential densities

1. Residential densities within this land use category should be no more than two dwelling units per 1/4 section.

Development policies to consider

1. Cluster developments should be considered and used whenever soils, topography, natural amenities warrant.

Residential Land Use

General Purpose

This land use is intended to provide for residential development adjacent and in close proximity to the municipalities where conditions prove favorable. The residential land use is intended to coordinate future growth plans with the communities while creating a transition to surrounding districts. Industry or Livestock Operations of any size would not be permitted and buffers in the residential land use area would be critical. Lot size requirements would be comparable to those of adjacent municipalities.

Typical uses

1. Residential uses
2. Acreages and associated accessory uses
3. Religious uses and structures
4. Educational uses and structures
5. Community/Recreational Center

Potential issues to consider

1. Floodplain and flooding hazard
2. Slopes
3. Proximity to existing livestock facilities
4. Wetlands
5. Depth to groundwater
6. Topography
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Existing and/or proposed sanitary system
10. Potable well locations
11. Wellhead protection areas

Buildable lot policies

1. Residential lot sizes may vary depending upon the types of sanitary system installed and the source of potable water.

Residential densities

1. Similar to the adjacent community unless the development is on individual septic and water, then the minimum sanitary standards would apply.

Development policies to consider

1. Cluster developments should be considered and used whenever soils, topography, natural amenities warrant.

Commercial Land Use

General Purpose

The Commercial land use provides for larger commercial development where transportation routes and other conditions prove favorable. This land use is to promote the agricultural industry of Colfax County and to provide services and development opportunities at key locations within the County.

Typical uses

1. Agricultural/commercial uses including implement stores
2. Commercial grain facilities
3. Uses serving the motoring public (truck stops, convenient stores, etc.)
4. Religious uses and structures
5. Educational uses and structures
6. Community/Recreational Center

Potential issues to consider

1. Floodplain and flooding hazard
2. Slopes
3. Erosion controls
4. Wetlands
5. Depth to groundwater
6. Topography
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Existing and/or proposed sanitary system
10. Potable well locations
11. Wellhead protection areas

Buildable lot policies

1. No minimum other than adequate space for vehicular movement, parking and septic and water systems.

Development policies to consider

1. Developments of 1 acre or more may be required to meet the standards of NPDES permitting.
2. Developments that create more than a 5% increase in runoff may be required to construct a detention basin to control runoff.

Industrial Land Use

General Purpose

This land use provides for industrial development to continue where transportation routes and other conditions prove favorable, including rail access. These industrial land use areas are to promote the ag-industry of Colfax County and to provide services and development opportunities at key locations within the County.

Typical Uses

1. Light manufacturing and assembly
2. Meat packing
3. Storage and warehousing
4. Trucking terminals
5. Commercial grain facilities
6. Secondary Educational uses and structures
7. Renewable energy facilities including Ethanol and Bio-Diesel
8. Adult Entertainment

Potential Issues to Consider

1. Floodplain and flooding hazard
2. Slopes
3. Erosion controls
4. Wetlands
5. Depth to groundwater
6. Topography
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Existing and/or proposed sanitary system
10. Potable well locations
11. Wellhead protection areas

Buildable Lot Policies

1. No minimum other than adequate space for vehicular movement, parking and septic and water systems.

Development Policies to Consider

1. Developments of 1 acre or more may be required to meet the standards of NPDES permitting.
2. Developments that create more than a 5% increase in runoff may be required to construct a detention basin to control runoff.

Flex Land Use

General Purpose

This land use is intended to allow a mixture of commercial and lighter industrial uses. The type of specific use is very dependent upon its access to transportation routes, including the railroad, as well as making sure all conditions prove favorable. These commercial and industrial land use areas are to promote the ag-industry of Colfax County and to provide services and development opportunities at key locations within the County.

Typical uses

1. Agricultural/commercial uses including implement stores
2. Commercial grain facilities
3. Uses serving the motoring public (truck stops, convenient stores, etc.)
4. Religious uses and structures
5. Community/Recreational Center
6. Light manufacturing and assembly
7. Storage and warehousing
8. Trucking terminals
9. Post-secondary Educational uses and structures
10. Renewable energy facilities including Ethanol and Bio-Diesel
11. Adult Entertainment

Potential issues to consider

1. Floodplain and flooding hazard
2. Slopes
3. Erosion controls
4. Wetlands
5. Depth to groundwater
6. Topography
7. Natural amenities such as trees, ponds, and streams
8. Site drainage
9. Existing and/or proposed sanitary system
10. Potable well locations
11. Wellhead protection areas

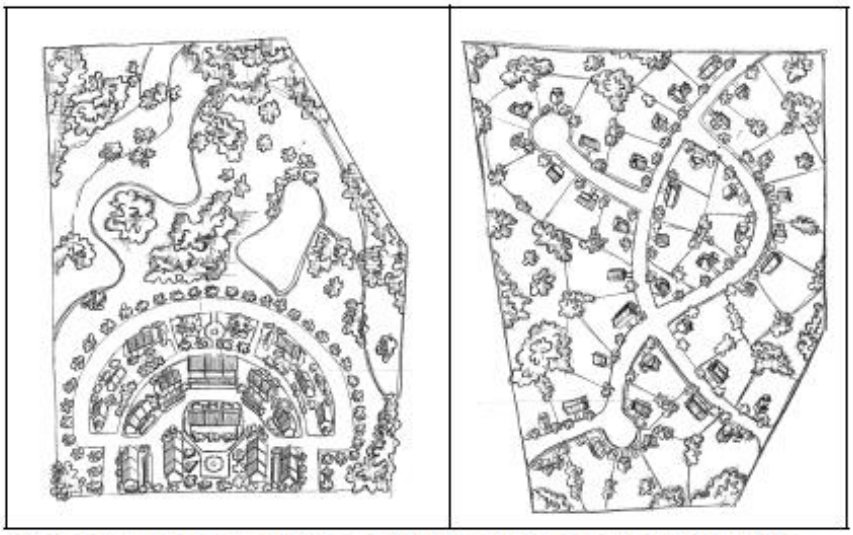
Buildable lot policies

1. No minimum other than adequate space for vehicular movement, parking and septic and water systems.

Development policies to consider

1. Developments of 1 acre or more may be required to meet the standards of NPDES permitting.
2. Developments that create more than a 5% increase in runoff may be required to construct a detention basin to control runoff.

Conservation Subdivisions



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 graphic above represents a standard subdivision and how it can be redrawn into a conservation subdivision. The primary usage of this technique in Colfax County is so a developer can maintain a specific density of building lots while protecting key environmental elements on the property. Some of these environmental elements include:

- Wetlands
- Steep slopes
- Floodplains
- Streams
- Natural prairie

The concept allows the developer and county to negotiate the lot sizes through a plan unit development (PUD) concept. In most cases the sensitive areas are placed in some type of conservation easement. The protected areas, in a majority of cases, are placed into a common area to be shared by all the residents; this in turn increases the overall value of the lots.

FUTURE LAND USE GOALS

Land Use Goal and Objectives

Guiding future growth and development in Colfax County in order to insure compatible uses locate together is essential during this planning period. During the past planning period, environmental issues have increased considerably in Colfax County especially concerning the Platte River environs.

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 Colfax County should work toward compact patterns of land uses.
GENLU-1.3 The County should minimize leapfrog development beyond the extraterritorial jurisdictions of the communities in Colfax County.
GENLU-1.4 The Colfax County Land Use Plan and Zoning Regulations should be designed to expedite the review and approval process where possible.
GENLU-1.5 All land uses and structures should be carefully reviewed for compliance with the duly adopted floodplain and floodway regulations in Colfax County.

Agricultural Land Use Policies and Strategies

AGLU-2.1 Colfax County should allow agricultural production throughout the county; except where there may be potential conflicts with other policies of this plan.
AGLU-2.2 Livestock production should be encouraged in Colfax County provided environmental conditions are appropriate.
AGLU-2.3 Livestock operations may be required to meet specific safeguards to protect the environment.
AGLU-2.4 New livestock operations should be located in areas where their impact on neighboring land uses may be minimal.
AGLU-2.5 Regulations should be established and implemented that create setback and buffer requirements to minimize the impacts of solid, liquid, and gas emissions from livestock operations.
AGLU-2.6 Establish adequate separation distances between livestock and residential uses.
AGLU-2.7 Establish adequate separation distances between residences and livestock operations that allow for potential expansion of livestock operations.
AGLU-2.8 Non-agricultural development within agricultural areas should be allowed only in specifically designated areas where the impact on agriculture is minimal.
AGLU-2.9 Non-agricultural development within the county may be limited based upon certain soil and environmental conditions.
AGLU-2.10 Criteria should be developed to designate areas of Colfax County as "Prime Farmland". Special consideration for preserving these areas through special land use controls and practices should assist in protecting these lands for traditional agricultural purposes.
AGLU-2.11 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 residential and agricultural uses.
AGLU-2.12 Protect the quality of groundwater in agricultural areas of Colfax County.
AGLU-2.13 Work with livestock producers on a continual basis in evaluating protections and regulations.

Platte River Corridor Land Use Policies and Strategies

PRCLU-3.1 The Platte River Corridor should be protected due to the nature of the soils in the area and the occasional flooding that occurs in the area.
PRCLU-3.2 The County should not allow the introduction of new livestock operations into the Platte River Corridor, especially in the designated floodway.
PRCLU-3.3 The establishment of chemical storage facilities including the manufacturing of chemicals should not be allowed in this area.
PRCLU-3.4 Existing uses within the Platte River Corridor that have a high contaminate potential should be

relocated a more suitable location when possible.

PRCLU-3.5 The County should promote the recreational potential of the area and work with existing property owners to establish specific eco-tourism opportunities.

Residential Land Use Policies and Strategies

RESLU-4.1 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.

RESLU-4.2 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-4.3 Utilize informational tools such as slopes, soil types, floodplain, road and bridge development and maintenance plans, when identifying areas for residential development.

RESLU-4.4 Develop subdivision regulations that provide for a quality living environment while avoiding inefficient and expensive public infrastructure expansions.

RESLU-4.5 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-4.6 Encourage new residential development to locate near urban areas of Colfax County , especially when direct access to existing, hard-surfaced roads or highways can be accomplished.

RESLU-4.7 Establish zoning and subdivision design standards that require buffers, and screening standards and functional usable green space, for new developments.

RESLU-4.8 All proposed rural area developments should be based on reasonable expectations and no large-scale development should be approved without:

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 provide for operation and maintenance services.
4) Should be appropriately, if not uniquely, suited to the area or site proposed for development;
5) Should not be located in any natural hazard area, such as a floodplain or area of geologic hazard, steep slope, severe drainage problems or soil limitations for building or sub-surface sewage disposal, if relevant
6) Should be furnished with adequate access – when possible a minimum of two entrances and exits.

RESLU-4.9 Examine implementation of a planned unit development (PUD) concept which provides a viable alternative to conventional urban development patterns, while providing a means to encourage creative yet responsible/sensitive developments.

RESLU-4.10 Colfax 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.

Commercial Land Use Policies and Strategies

COMLU5.1 Encourage the location and clustering of commercial uses at major transportation intersections.

COMLU5.2 Utilize frontage roads within clustered commercial centers when locating along major roads/ highways.

COMLU-5.3 Commercial uses should be required to provide their own adequate water supply without negatively impacting existing neighboring properties.

COMLU-5.4 Landscaping standards for all new commercial construction and expansion to existing operations should be implemented.

COMLU5.5 Discourage the construction of "strip" commercial developments in rural areas of the county.

Industrial Land Use Policies and Strategies

INDLU-6.1 Work with Union Pacific to identify strategies for spur lines/sidetracks that will work with their railroad systems in Colfax County, while providing rail access to future industrial uses

INDLU-6.2 Industrial development not utilizing rail transport should be discouraged from locating next to a railroad right-of-way .

INDLU-6.3 Colfax County should identify new industrial sites within the county where industrial development can be successfully marketed.

INDLU-6.4 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-6.5 Industrial areas located outside a community's extraterritorial jurisdiction should be compatible with the industrial development goal and should be located where 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-6.6 Industrial uses should be located so that an adequate buffer space is provided between incompatible land uses.

INDLU-6.7 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-6.8 The County should encourage industrial development that bases its products on renewable and indigenous raw materials.

INDLU-6.9 The County should recognize and encourage small-scale industries as viable alternatives to larger, conventional enterprises.

10

Transportation

Existing Transportation System

Street and Road Classification System

All of the public highways, roads, and streets in Nebraska are divided into two broad categories, and each category is divided into multiple functional classifications. The two broad categories are Rural Highways and Municipal Streets. State statute defines Rural Highways as "all public highways and roads outside the limits of any incorporated municipality," and Municipal Streets as "all public streets within the limits of any incorporated municipality." Neb. Rev. Stat. § 39-2102 (RRS 1998)

The functional classifications are used to define typical traffic patterns and jurisdictional responsibility. The functional classifications for Rural Highways are defined by state statute as follows:

(1) ***Interstate***, which shall consist of the federally designated National System of Interstate and Defense Highways;

(2) ***Expressway***, which shall consist of a group of highways following major traffic desires in Nebraska which rank next in importance to the National System of Interstate and Defense Highways. The expressway system is one which ultimately should be developed to multilane divided highway standards;

(3) ***Major Arterial***, which shall consist of the balance of routes which serve major statewide interests for highway transportation. This system is characterized by high-speed, relatively long distance travel patterns;

(4) ***Scenic-Recreation***, which shall consist of highways or roads located within or which provide access to or through state parks, recreation or wilderness areas, other areas of geographical, historical, geological, recreational, biological, or archaeological significance, or areas of scenic beauty;

(5) ***Other Arterial***, which shall consist of a group of highways of less importance as through-travel routes which would serve places of smaller population and smaller recreation areas not served by the higher systems;

(6) ***Collector***, which shall consist of a group of highways which pick up traffic from many local or land-service roads and carry it to community centers or to the arterial systems. They are the main school bus routes, mail routes, and farm-to-market routes;

(7) ***Local***, which shall consist of all remaining rural roads, except minimum maintenance roads; and

(8) ***Minimum Maintenance***, which shall consist of (a) roads used occasionally by a limited number of people as alternative access roads for areas served primarily by local, collector, or arterial roads, or (b) roads which are the principal access roads to agricultural lands for farm machinery and which are not primarily used by passenger or commercial vehicles.

- Neb. Rev. Stat. § 39-2103 (RRS 1998) (emphasis added).

The statute goes further by stating that certain rural highways classified under subdivisions (1) to (3) of section 39-2103 "should, combined, serve every incorporated municipality having a minimum population of one hundred inhabitants or sufficient commerce, a part of which will be served by stubs or spurs, and along with rural highways classified under subdivision (4) of this section, should serve the major recreational areas of the state." Sufficient commerce is defined in Neb. Rev. Stat. § 39-2103 as "a minimum of two hundred thousand dollars of gross receipts under the Nebraska Revenue Act of 1967." In other words, every incorporated municipality with a population of 100 or greater, or one that has sufficient commerce, should be served by either (1) an Interstate, (2) an Expressway, or (3) a Major Arterial.

The State of Nebraska has jurisdictional responsibility for all roads classified as interstate, expressway, and major arterial under the Rural Highway classification, and all roads classified as interstate under the Municipal Streets system. The jurisdiction over any municipal extensions of these classifications transfers to the municipality whenever the road exceeds the design standards of the road leading into the municipality. Neb.

Rev. Stat. § 39-2105 (1) (RRS 1998). When the design of a rural road differs at different points, the responsibility of the state is limited to the lesser of the two designs, and the municipality is responsible for the remainder of the design.

Scenic-Recreation roads remain under jurisdiction of the governmental subdivision that had jurisdiction prior to the time the road was designate as Scenic-Recreation. Neb. Rev. Stat. 39-2105 (4) (RRS 1998).

Composition of Existing Transportation System

The transportation network within Colfax County is well developed with Major U.S. Highways including U.S. Highways 30, Nebraska State Highways 15, 57, and 91, as well as developed County arterials, and local roads.

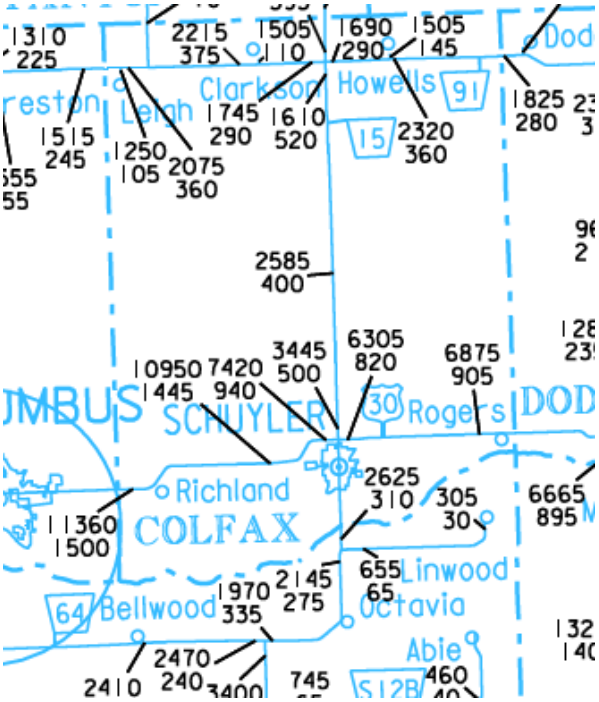
Federal Highways

Figure 10.1 indicates the traffic volumes of highway system in Colfax County in 2012. U.S. Highway 30 runs east and west through Colfax County and runs on the northern edge of Schuyler. The vehicular traffic counts for U.S. Highway 30 ranged from 6,305 cars near Schuyler and it increases going in both directions; going east it increases to 6,875 near Rogers and going west toward Columbus it reaches 10,950 cars (peak).

State Highways

There are three state highways running through Colfax County and they include Nebraska 15, 57, and 91; plus, the different spurs between the smaller communities and state highway system. The traffic counts for all of the highways have traffic counts range between 1,600 to 2,600 vehicles per day.

Figure 10.1
Traffic-flow Map
Colfax County 2012



Source: Nebraska Department of Roads

Figure 10.2:
Transportation Plan Map
Colfax County, Nebraska

Railroad Service
The closest rail freight service to Colfax County is in Omaha for both the Union Pacific Railroad and Burlington Northern Santa Fe.

The closest passenger services is Amtrak, located in Omaha

Bus Service
The nearest commercial bus service is available in Schuyler via Arrow Stages Lines/Black Hills Stage with service to Omaha and Norfolk, NE.

Commercial Airport Service
Epply Airfield in Omaha is the nearest point for commercial service.

Small craft Public Airports
The Columbus Airport is owned and operated by the City of Columbus. There are two runways in use, the main runway is 6,800 feet long and 100 feet wide with a concrete surface and the second runway is turf and measures 4,135 feet long and 150 feet wide.

The David City Airport is owned and operated by the City of David City. There are two runways in use, the main runway is 3,675 feet long and 60 feet wide and is an asphalt surface. The second runway is turf and measures 2,100 feet long and 60 feet wide.

TRANSPORTATION GOALS

Transportation Goal 1
The transportation goal of Colfax County is to develop and support an efficient road system to serve current and future circulation and access needs.

Transportation Policies and Strategies

TRAN-1.1 Development in Colfax County should be guided to safely utilize existing public investment in roads, and programs to reduce road development or maintenance costs.

TRAN-1.2 The interaction of existing transportation routes and drainage ways should be studied to determine the need for bridge and road improvements.

TRAN-1.3 New development should be reviewed with due consideration to the carrying capacity of the existing road system in the area.

TRAN-1.4 Development should be discouraged from occurring in areas where the road system is insufficient to handle any additional traffic load.

TRAN-1.5 Improve, develop, and maintain well-traveled roads with hard surfacing, when possible.

TRAN-1.6 Right-of-way and pavements should be sufficiently wide and of sufficient strength to accommodate anticipated future traffic loads.

TRAN-1.7 Develop land use policies that work strongly with existing and proposed transportation systems and upgrades.

TRAN-1.8 All transportation-related decisions should be made in consideration of land use impacts including but not limited to adjacent land use patterns, both existing and planned, and their designated uses and densities.

TRAN-1.9 Colfax County should require new development to:

1) Limit access points on highways designated as arterials when alternative access points are feasible.
2) Minimize direct access points onto arterial right-of-ways by encouraging the utilization of common driveways.
3) New development should not be located along roads officially designated as "Minimum Maintenance"

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11

Implementation

Achieving Colfax County's Future

Successful community plans have the same key ingredients: "2% inspiration and 98% perspiration." This section of the plan contains the inspiration of the many County officials and residents who have participated in the planning process. However, the ultimate success of this plan remains in the dedication offered by each and every resident.

There are numerous goals and objectives in this plan. We recommend reviewing the relevant goals during planning and budget setting sessions. However, we also recommend the County select specific goals and policies to begin implementing. As each is accomplished then the County needs to identify additional ones to focus on.

Action Agenda

The Action Agenda is a combination of the following:

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

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

Support Programs for the Action Agenda

Four programs will play a vital role in the success of Colfax County's plan. These programs are:

1. **Zoning Regulations**--updated land use districts can allow the county to provide direction for future growth.
2. **Subdivision Regulations**--establish criteria for dividing land into building areas, utility easements, and streets.
3. **Plan Maintenance**--an annual and five-year review program will allow the community flexibility in responding to growth and a continuous program of maintaining the plan's viability.

Comprehensive Plan Maintenance

Annual Review of the Plan

A relevant, up to date plan is critical to the on-going planning success. To maintain both public and private sector confidence; evaluate the effectiveness of planning activities; and, most importantly, make mid-plan corrections on the use of county resources, the plan must be current. The annual review should occur during the month of January.

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

- whether the plan is current in respect to population and economic changes; and
- The recommended policies are still valid for the County and its long-term growth.

The Planning Commission should hold a meeting on this report in order to:

1. Provide citizens or developers with an opportunity to present possible changes to the plan, and
2. Bring forth any issues, or identify any changes in conditions, which may impact the validity of the plan.

If the Planning Commission finds major policy issues or major changes in basic assumptions or conditions have arisen which could necessitate revisions to the Comprehensive Plan, they should recommend those revisions or further study of regarding changes. This process may lead to identification of amendments to the Comprehensive Plan and would be processed as per the procedures in the next section.

Plan Amendment Procedures

It is anticipated during each year individuals and groups may come forward with proposals to amend the Comprehensive Plan. We would recommend that those proposals be compiled and reviewed once a year at the Annual Review, unless the plan needs to be amended to allow compliance with a requested zoning amendment.

Reviewing all proposed amendments at one time allows for the effects of each proposal can be evaluated for impacts on other proposals and all proposals can be reviewed for their net impact on the Comprehensive Plan.

When amendments have been made during the course of the year, these too need to be evaluated in comparison to the ones that have been held on to until the annual review.

The County should compile a list of the proposed amendments received during the previous year; prepare a report providing applicable information for each proposal, and recommend action on the proposed amendments. The Comprehensive Plan amendment process should adhere to the adoption process specified by Nebraska law and provide for the organized participation and involvement of citizens.

Unanticipated Opportunities

If major new, unanticipated, innovative development opportunities arise which impact several elements of the plan and which are determined to be of importance, a plan amendment should be proposed and considered separate from the Annual Review.

Methods for Evaluating Development Proposals

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

If a development proposal is not in conformance or consistent with the policies developed in the Comprehensive Plan, serious consideration should be given to making modifications to the proposal or the following criteria should be used to determine if a Comprehensive Plan amendment would be justified:

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