

Comprehensive Plan Update & Zoning Regulations

Hayes County, Nebraska



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COMPREHENSIVE PLAN UPDATE

HAYES COUNTY, NEBRASKA

Project No. 238-P1-021

2011-2021

Prepared By:



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Acknowledgements

Hayes County would like to thank all of the residents, property owners and business owners who participated in the development of the Hayes County Comprehensive Plan!

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Vision for Hayes County

Hayes county residents and business owner are enormous assets and their participation was essential to the planning process. The Hayes County Comprehensive Plan includes a thorough public participation program; give stakeholders the opportunity to frame the goals and directions of the Plan. This chapter of the Plan presents a vision for the county, from county members.

The vision for Hayes County is to have continuing community input of goals and ambitions for the county. The idea is to promote and grow a diverse economic base while keeping the emphasis in agriculture. Developing housing that suites current and potential residents needs to be important, as well as supporting the Hayes Center school district. Sparking development of basic amenities for residents while spurring job creation, this will in turn help keep money within the county. Create a variety of job options, agricultural and non-agricultural. Maintain infrastructure like roads, bridges, and public buildings. Promote sustainability, renewable energy sources, and the conservation of natural resources. Create a Capital Investment Plan (CIP) and continually refer back to this plan, the CIP, and other plans that will help Hayes County reach its goals.

Introduction

A Comprehensive Plan is a blueprint for the county's future. It provides guidance on where and how the county will invest and change over the next ten (10) years. It contains maps, visions and goals for the future, and policies to address topics ranging from land use and economics, transportation and county services. The purpose of a Comprehensive Plan is to provide long-range guidance to property owners, residents, elected and appointed officials, county staff, and others to inform decisions on land use issues, such as where and what type of future development should occur.

Compliance with State & Local Requirements

Governmental & Jurisdictional Organization

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

The planning and zoning jurisdiction for the incorporated communities in Hayes County that have adopted Comprehensive Plan and Zoning Ordinances includes the area within one-mile of their corporate limits, pursuant to [Neb. Rev. Stat. § 17-1002.](#)

[Nebraska Revised Statute § 17-1002.](#)

Designation of jurisdiction; suburban development; subdivision; platting; consent required; review by county planning commission; when required.

(1) Except as provided in section 13-327, any city of the second class or village may designate by ordinance the portion of the territory located within one mile of the corporate limits of such city or village and outside of any other organized city or village within which the designating city or village will exercise the powers and duties granted by this section and section 17-1003 or section 19-2402.

(2) No owner of any real property located within the area designated by a city or village pursuant to subsection (1) of this section may subdivide, plat, or lay out such real property in building lots, streets, or other portions of the same intended to be dedicated for public use or for the use of the purchasers or owners of lots fronting thereon or adjacent thereto without first having obtained the approval of the city council or board of trustees of such municipality or its agent designated pursuant to section 19-916 and, when applicable, having complied with sections 39-1311 to 39-1311.05. The fact that such real property is located in a different county or counties than some or all portions of the municipality shall not be construed as affecting the necessity of obtaining the approval of the city council or board of trustees of such municipality or its designated agent.

(3) No plat of such real property shall be recorded or have any force or effect unless approved by the city council or board of trustees of such municipality or its designated agent.

(4) In counties that have adopted a comprehensive development plan which meets the requirements of section 23-114.02 and are enforcing subdivision regulations, the county planning commission shall be provided with all available materials on any proposed subdivision plat, contemplating public streets or improvements, which is filed with a municipality in that county, when such proposed plat lies partially or totally within the extraterritorial subdivision jurisdiction being exercised by that municipality in such county. The commission shall be given four weeks to officially comment on the appropriateness of the design and improvements proposed in the plat. The review period for the commission shall run concurrently with subdivision review activities of the municipality after the commission receives all available material for a proposed subdivision plat.

As these communities grow and annex land into their corporate limits, their extraterritorial jurisdictions may extended further into the County. There are two incorporated communities located in Hayes county and a portion of a third. These communities included the villages of Hayes Center, Hamlet and a portion of Palisade. Although these communities have not adopted a Comprehensive Plan and Zoning Ordinances, it's a possibly in the future. The planning and zoning jurisdiction of Hayes County is governed by Neb. Rev. Stat. § 23-114.02. The County's jurisdiction included the unincorporated portions of the County, excluding the established extraterritorial jurisdiction of each community and their corporate limits. As these communities expand and grow, their jurisdictions do as well. The ability of these villages and cities to expand their extraterritorial jurisdiction supersedes all county regulations.

The Plan has been prepared in accordance with state statutes and requirements.

Nebraska Revised Statute § 23-114.02

Comprehensive development plan; purpose

The general plan for the improvement and development of the county shall be known as the comprehensive development plan and shall, among other elements, include:

(1) A land-use element which designates the proposed general distribution, general location, and extent of the uses of land for agriculture, housing, commerce, industry, recreation, education, public buildings and lands, and other categories of public and private use of land;

(2) The general location, character, and extent of existing and proposed major streets, roads, and highways, and air and other transportation routes and facilities;

(3) When a new comprehensive plan or a full update to an existing comprehensive plan is developed on or after July 15, 2010, but not later than January 1, 2015, an energy element which: Assesses energy infrastructure and energy use by sector, including residential, commercial, and industrial sectors; evaluates utilization of renewable energy sources; and promotes energy conservation measures that benefit the community; and

(4) The general location, type, capacity, and area served of present and projected or needed community facilities including recreation facilities, schools, libraries, other public buildings, and public utilities and services. The comprehensive development plan shall consist of both graphic and textual material and shall be designed to accommodate anticipated long-range future growth which shall be based upon documented population and economic projections.

Effective Date: July 15, 2010

It is the duty of the commission to make and adopt a master plan for the physical development of the municipality. The master plan of a county shall be an advisory document to guide land development decisions.

Additionally, this Plan has been prepared in accordance with local regulations. Hayes County Zoning regulations Section § 102, revised and adopted in August 2000, says that the jurisdiction “shall apply within the boundaries of Hayes County, Nebraska, excluding the land included, now or in the future, in the corporate limits of the incorporated municipalities within the county and any legally established planning and zoning jurisdictional areas of these municipalities as may be defined by on any Official Zoning Map of these municipalities.” Furthermore, this Plan did not only focus on the area of Hayes County jurisdiction. Evaluation of municipalities within Hayes County, adjacent counties and municipalities, along with existing and future land use maps, zoning regulations and comprehensive plans were vital in assessing both supporting and conflicting future growth strategies.

The Planning Commission shall develop and prepare a Comprehensive Plan to include the following topics: established character; goals and objectives; population; land use; economic base; public facilities; parks and open space; transportation; prevention of pollution; and resource conservation.

The Planning Commission, after a public hearing, shall make its recommendation to County Board of Commissioners. County Board of Commissioners, after a public hearing, shall adopt and approve the Comprehensive Plan.

Why Update the Comprehensive Plan?

The existing Hayes County Comprehensive Plan has an effective date of 2000 through 2010. The Hayes County Comprehensive Plan is the county's long-term Comprehensive Plan that establishes vision and direction for the future (to the year 2021). Its objectives are to confirm the county's vision for the future, and to set the policy framework to help guide future decisions related to development and investment. It will help the county thoughtfully address future needs for economic development, transportation, commercial and retail development, housing, services and utilities, parks and open space, and other county and community benefits. It will also help to ensure a sustainable and fiscally responsible future, by setting the desired direction for future development regulations, policy decisions, and community programs.

The most recent Comprehensive Plan for Hayes County was adopted in 2001. Since then, there have been changes in the county and region that affect the county's direction for the future. For example, the construction of the ethanol plants, wind farms, and diversity in livestock operations have begun throughout this region. In the coming years, the county must be ready to accommodate new regional businesses, services and associated developments.

Building on Previous Planning Efforts

Hayes County region has a solid record of community participation and planning for the future. The existing Comprehensive Plan builds on these previous planning efforts. The Plan update included review of these previous efforts and documents. Many of the goals, policies, and ideas for the future represented in the previous planning efforts are still relevant, and are carried forth in this plan. Some examples of overarching themes in this plan that are carried forth from previous planning efforts include:

Previous Planning Efforts - Hayes County (2000):

- Commitment to quality development and redevelopment;
- Preserved and enhanced Hayes County municipalities;
- Continued to provide quality community services, open spaces, and civic activity areas;
- Encouraged alternative transportation opportunities and intergovernmental cooperation on regional issues;
- Focused on increasing housing options to attract a range of household types;
- Prioritized the redevelopment of key commercial areas;

Previous Planning Efforts - Village of Hayes Center (2001):

- Enhanced community character and gateways (Hayes Center Comprehensive Plan 2002);
- Promoted development and redevelopment of land already served by infrastructure as a first priority, and extension of infrastructure to new areas second (Hayes Center Comprehensive Plan 2001);

Previous Planning Efforts - Village of Palisade (2008):

- Paving and transportation street improvements;
- Infrastructure improvements for Water, Sewer, and Electrical;
- Dilapidated building and structure removal;
- Leverage Tax Increment Financing (TIF) for economic growth;
- Investigated potential affordable housing opportunities made available through CDBG programs.

Goals for the Comprehensive Plan

While this Plan embodies many of the ideas, goals, and policies established in previous plans, there are some noteworthy new directions and slight changes in course presented in this plan. These new directions resulted from county and community feedback, reaction to current trends and conditions, and policy direction from elected and appointed officials. These new directions include:

- Emphasis on sustainability;
- Strategic, not parcel-specific future land use plan;
- Relationship between land use and economics, including the market realities of redevelopment;
- Focus on transportation network connections and increasing multi-modal options.

Information Harvesting

The Hayes County Board of Commissioners determined that a steering group would be the most effective way to facilitate the direction of the comprehensive plan update. They appointed a steering group chairman, Joey Large, to facilitate and formulate a steering group committee.

Some communities within rural Nebraska are declining in population. It is the desire of Hayes County to continue a rural primarily agricultural way of life that they wish to maintain and grow. Residents in rural settings are continuing desire to have the same amenities found in more populous and urban settings, such as retail, health care, and communication and transportation infrastructure.

Steering Group Committee

A Comprehensive Plan Steering Committee, representing a wide variety of community interests, was the primary contributor of this process. Committee members met regularly to assist in identifying issues, developing vision statements, and prioritizing the community's goals. They also reviewed the progress of the overall plan.

County Workshop / Priorities Meetings

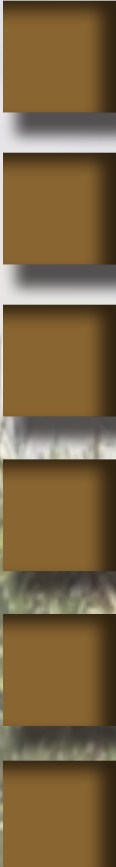
A public and steering workshop meeting was held on November 16, 2010 where the requirements and purpose of a comprehensive plan was presented to participants. Also discussed was the process for development of land. This presentation provided insight to the process of choosing a site for land use conversion, evaluation of infrastructure, wetlands, floodplain, zoning, platting, administrative approvals, construction and marketing. Participants then discussed the likes, dislikes and goals related to economic growth, education, transportation, health care, and tactics for implementing these goals. This became the beginning basis of needs and goals of the Hayes County residents.

Planning Period

The planning period for this Comprehensive Plan is from 2011-2021. This plan should be reviewed in 2012, 2016, and a complete update should be done in 2021. It is important to continually refer to and update this plan throughout the planning period.

Establishing an annual review process of this Comprehensive Plan and associated zoning regulations will be important to the success of this plan and to Hayes County. This process should include public hearings to discuss whether the plan is still valid or updates need to be made. Actual documentation of these meetings is pertinent in providing proof of the public's continued input on this plan.

Section 1: County Profile



The County Profile considers county characteristics that will form the foundation that county planning over the next ten years should be based on. This profile is a compilation of information that is derived through outside research, conversations with local residents and officials, on site assessments, and data analysis. This County Profile will consist of the following components:

- Description
- History
- Population
- Housing
- Economy & Capital Investment
- Agricultural

Description

Hayes Center was once described as an “inland town” in that railroad access is very limited. Transportation through the county is also minimal; however the county’s strategic location and limited man-made development gives it a rare ability to continue to strengthen it’s agricultural and eco-tourism markets.

Hayes County is located in the southwest corner of Nebraska and as seen in the map (Figure 1.1), it touches seven (7) other counties: Perkins; Lincoln; Frontier; Red Willow; Hitchcock; Dundy; and Chase. The county stretches 24 miles long by 30 miles wide and covers a total of 455,040 acres². Three communities are located within the county: Hayes Center; Hamlet; and the northern section of Palisade. Hayes Center is the county seat of the county as well as the home of the county’s only school system: Hayes County School District. As seen in Figure 1.2, the county seat is 273 miles from the State Capital City, Lincoln, and 263 miles from Denver, CO. Interstate 70 is located 80 miles south of Hayes Center while Interstate 80 is located 50 miles north. One (1) major highway, State Highway 25, runs north and south through the county while U.S. Highway 6 grazes the southern border of Hayes County.

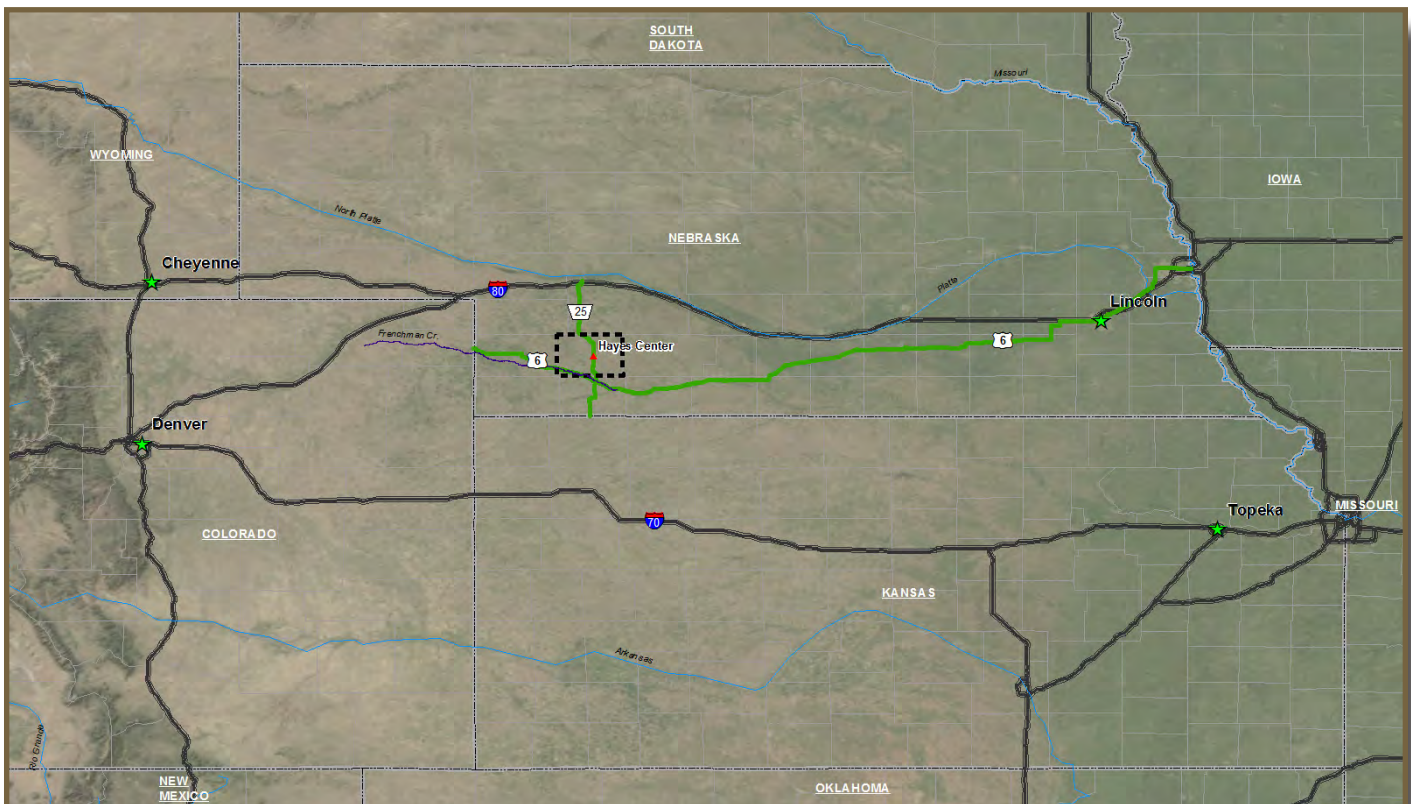
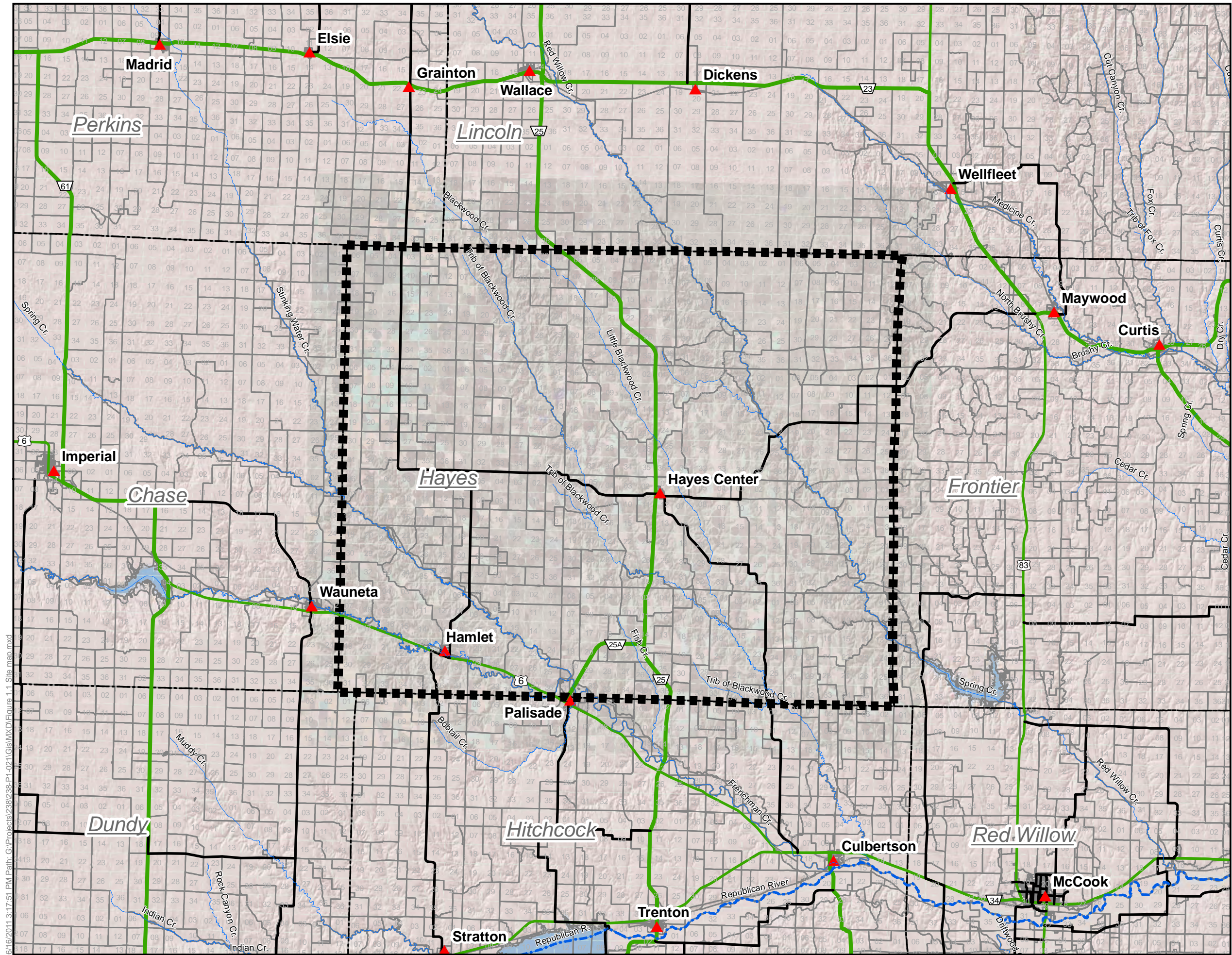


Figure 1.2- Location Map



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N

0 2.5 5 Miles

Figure 1.1
Study Area MAP
Hayes County, Nebraska

Land use and development decisions must account for historical and cultural artifacts. Certain locations in the county should be preserved and promoted to create tourism opportunities as well as to ensure the story of Hayes County is passed onto each generation.

History



The original citizens of the Hayes County region were Native Americans and buffalo who lived off of the land. Due to the hostility of local tribes, Hayes County was not organized as a county until 1877; ten years after the State of Nebraska was entered into the Union. The first homesteads in Hayes County were located along Red Willow Creek in 1874.

The first white settlers in Hayes County were hunters. Famous frontier characters hunted this territory in order to feed the labor force building the Union Pacific Railroad in 1868-69. Hayes County became famous as a hunting ground and eventually hosted the Grand Duke Alexis, the brother of the reigning Czar of Russia. This hunting group camped eight miles northwest of the present Hayes Center. During the hunt, the famous Sioux Chief, Spotted Tail, and one hundred of his warriors demonstrated the Indian method of hunting followed by a war dance. The hunt was considered successful as the Duke killed several buffalo. Local hunters as well as sportsmen that travel across the country and world continue to embark on an annual hunting mission in Hayes County in honor of this world famous event. By 1880, cattlemen became the majority of the population in Hayes County. Once settlers arrived, conflicts began to occur as cattlemen believed that farmers were taking their range. Land use compromises continue to be an important issue for Hayes County.

Due to the value of the land in Hayes County, violence between the Pawnee and Sioux tribes and settlers also broke out and led the eventual arrival of General George Custer and the Seventh Cavalry in 1867. General Custer and his troops had been sent on a mission starting at Fort McPherson and sweeping through Hayes County to eventually rid the territory of hostile Native American tribes. The trail crossed the eastern portion of Hayes County near Frenchman Creek. The Texas Cattle Trail crossed Hayes County on the western side, following Stinking Water Creek and moving onto Ogallala, NE. Due to its central location between these two major trails, Hayes Center was formed. Due to the fact that every resident had a windmill, Hayes Center earned the nickname "Windmill City".



Main-Street in 1890. Windmill the only water supply for the town. [Fielding]

By 1890, this public windmill in the middle of Main Street was the only water supply for the town. Hayes Center earned the nickname:

"Windmill City".



Hayes County was initially part of a larger county, Shorter County, which included the majority of Southwest Nebraska. It later became a part of Lincoln County before becoming Hayes County. Hayes Center became the county seat in 1885. The first county office was a room rented in a private home for ten (10) dollars a month. The first county courthouse was built in 1891. After it burned down, a second courthouse was erected in 1906 before the county courthouse that is in service today was built in 1954. Hayes Center continues to serve the county as the seat and has a population of approximately 250.

Bird's eye view of Palisade in 1913. The village reached its highest population in 1950 with a count of 800 residents. Today the village is home to 351.

In addition to Hayes Center, two other communities continue to exist in Hayes County. Originally named Hudson, Hamlet was established in 1890 and is located in the southwest corner of the county along U.S. Highway 6. Approximately 54 persons reside in Hamlet.

Hayes County also shares the Village of Palisade with Hitchcock County, located along the county's southern border. Palisade was established in 1887 and is also located along U.S. Highway 6. The headquarters for Southwest Public Power is located in Palisade as well as a 2010 population of 351.

Hamlet, meaning "small town," was indeed that. Pictured at a distance, it is a mere dot on the landscape in the Frenchman Valley.



Population

Past, current and future population patterns are a critical piece of the county comprehensive plan. All other planning elements that are contained within this document are based on projections resulting from population patterns analysis. Rural counties require an in-depth population analysis in order to determine which cohorts within the overall count are declining rapidly as well as continuing to grow.

Table 1.3.1 Hayes County Population Estimate, 2010

Residential Meters in 2010	
Southwest Public Power District	431
McCook Public Power District	17
Midwest Electric Cooperative Corporation	25
Total Active Residential Meters	473
Residential Units Based on 2010 Hayes County Tax Assessor Data	
Residential Units on 2010 Tax Roll	501
New Homes Currently Under Construction	4
Total Residential Units	505
Estimated Vacancy Rate (active residential meters/total residential units)	6.34%
Total Occupied Housing Units (vacancy rate x total residential units)	473
Average Household Size, 1990-2000	2.515
Total Population Estimate, 2010 (household size x total occupied housing units)	1114
Source: Southwest Public Power District, McCook Public Power District, Midwest Electric Cooperative Corporation, Hayes County Tax Assessor, U.S. 1990 & 2000 Decennial Census	

Table 1.3.1 is an explanation of how the 2010 population count for Hayes County was derived. At the beginning stages of this plan, 2010 census data was unavailable. Additional information was collected from the Hayes County Assessor's office and considered in conjunction with active residential meter counts from the three power companies that serve the county. A vacancy rate was estimated based on the ratio of active power meters and residential units on the 2010 assessor's rolls added to new homes under construction. This vacancy rate was then re-applied to total residential units on the assessor's rolls; the resulting product was then multiplied by the average persons per household derived from the 1990 and 2000 censuses. The resulting number, 1,114 persons, represents the 2010 population of Hayes County, which will become the basis for the Hayes County Comprehensive Plan.

Table 1.3.2 Population Trends (based on Table 1.1), 1990-2010

	1990	2000	% Change from 2000	Growth Rate	2010	% Change from 2000	Growth Rate
Hayes County	1,222	1,068	-12.60%	-1.26%	1,114	4%	0.43%
Table 1.3.2a Population Trends (based on Census), 1990-2010							
	1990	2000	% Change from 2000	Growth Rate	2010	% Change from 2000	Growth Rate
Hayes County	1,222	1,068	-12.60%	-1.26%	959	-10%	-1.02%
Source: Southwest Public Power District, McCook Public Power District, Midwest Electric Cooperative Corporation, Hayes County Tax Assessor, U.S. 1990 & 2000 Decennial Census							

Tables 1.3.2 and 1.3.2a represent the difference between utilizing only census numbers and performing further calculations in order to arrive at a more accurate population count. The difference between Table 1.3.2 and Table 1.3.2a is significant as one displays loss while the other displays growth. The risk is that using one set of data may lead to overly optimistic projections. However, using overly pessimistic projections may result in insufficient planning for services and create sectors of the population within the county that are under served.

In 2000, the census participation rate for Hayes County was 80 percent, which may have led to a lower population count than what actually took place. In 2010, the participation rate was 54 percent, which will again lead to a count that is less than accurate. Due to participation rates of less than 100 percent, figures from Table 1.3.1 will be utilized in order to analyze the 2000-2010 population change as well as the projected population counts for 2020. Assuming that the 2000 U.S. Census population count is lower than reality, the level of growth displayed in Table 1.3.2 is most likely slightly inflated. Growth rate can be defined as the amount of population change that took place in an area per year during a certain period. According to Table 1.3.2, Hayes County gained five (5) residents per year. A sounder assumption would be that Hayes County grew by one to two (1-2) persons per year, or at a minimum, maintained its population throughout the last decade.



Table 1.3.3 displays population change for some adjacent counties. Like Table 1.3.2, Table 1.3.3 utilized decennial census data for 1990 and 2000 population counts and county assessor data for 2010. An appropriate rate based on local dynamics was assumed for each county and also applied in order to arrive at as accurate as possible population count. According to these figures, Frontier almost maintained their population while Dundy and Hitchcock County lost residents and Perkins experienced growth. According to Tables 1.3.2 and 1.3.3, Hayes County ranks only second to Perkins in its ability to maintain and grow its population base.

Although the region continues to battle population loss, some sectors are not only maintaining, but also showing slight patterns of growth. This information is important as county capital improvement plans should understand population patterns and make every effort to plan in order to ensure that services continue to be adequate for every resident in Hayes County today, as well as 2020.

Table 1.3.3 Population Trends in Adjacent Counties, 1990-2010

	1990	2000	% Change from 2000	Growth Rate 90-00	2010 Est.	% Change from 2000	Growth Rate 00-10
Dundy	2,582	2,292	-11.23%	-1.12%	2,017	-13.65%	-1.37%
Frontier	3,101	3,099	-0.06%	-0.01%	3,096	-0.10%	-0.01%
Hitchcock	3,750	3,111	-17.04%	-1.70%	2,271	-36.97%	-3.70%
Perkins	3,367	3,200	-4.96%	-0.50%	3,238	1.18%	0.12%

Source: 2000 Decennial Census, U.S. Census Bureau, Nebraska Public Power District, Dundy, Frontier, Hitchcock, and Perkins County Assessor



In addition to considering alternative population figures, it is important to understand how certain sectors of an overall population are changing. Table 1.3.4 displays how population composition has evolved from 1999-2009. According to Table 1.3.3, the proportion of 0-19 year-olds decreased along with 30-49 year-olds. This signals a loss of families in the area, which can be addressed in the next ten years through effective community planning. For instance, three important issues for young families are economic opportunity, decent and affordable housing, and a quality school system. Hayes County currently has a quality school system, but housing may be the most urgent issue to address next. Table 1.3.3 also displays that 20-29 year-olds as well as 50-69 year-olds also grew as a percentage of the overall population. This growth could be a sign of more retirees and single adults moving into the area or staying in the county after graduating high school and raising their families.

The growing proportion of residents entering their retirement years should encourage the Hayes County Planning Commission to investigate adding housing and services geared towards meeting the needs of these particular population sectors. Particular areas of concern that should be focused on include health care and senior/multi-family housing arrangements. Additionally, services should be added that currently require travel and recreational and volunteer opportunities designed for keeping single adults and seniors engaged in their communities.



Table 1.3.4 Population Composition, 1999-2009

Cohort	1999				2009			
	Male	Female	Total	% of Total	Male	Female	Total	% of Total
0 to 9 years	73	61	134	12.6%	62	48	109	9.8%
10 to 19 years	98	80	178	16.7%	78	92	170	15.2%
20 to 29 years	44	43	87	8.2%	70	57	127	11.4%
30 to 39 years	72	58	130	12.2%	49	43	92	8.2%
40 to 49 years	80	86	166	15.6%	85	80	165	14.8%
50 to 59 years	83	80	163	15.3%	110	94	204	18.4%
60 to 69 years	49	48	97	9.1%	64	52	116	10.4%
70 to 79 years	38	39	77	7.2%	35	41	76	6.8%
80+ years	13	21	34	3.2%	26	30	56	5.0%
Total Population	550	516	1066	100.0%	577	537	1114	100.0%

Source: US Census Bureau, Population Estimates Program



Table 1.3.5 is the result of a migration analysis that was performed in order to understand the level of in-migration/out-migration that took place in Hayes County from 2000-2010. This analysis is performed through utilization of:

- 1999 population estimates provided by the U.S. Census
- Survivability data provided by the U.S. Department of Vital Statistics
- Fertility data provided by the Nebraska Department of Health and Human Services
- Population estimates derived by applying the figures generated in Table 1.3.1.

Table 1.3.5 In/Out Migration, 1999-2009			
Cohort	2009 Projected Population	2009 Actual Population	Variance (Census-Projected) *positive number = in-migration
0 to 9 years	152	109	-42
10 to 19 years	134	170	36
20 to 29 years	177	127	-50
30 to 39 years	86	92	6
40 to 49 years	127	165	38
50 to 59 years	159	204	46
60 to 69 years	146	116	-30
70 to 79 years	75	76	0
80+ years	60	56	-5
Total	1116	1114	-2
Source: U.S. Census Bureau; M&A			

The analysis assumes that a wall was built around Hayes County from 2000-2009; no one moved in and no one moved out. Therefore, all changes in population are due to birth or death. The 2009 projected population demonstrates what would have happened if the wall had in fact existed and no one moved in or out of Hayes County.

The 2009 actual population column is a closer depiction of what actually took place as far as population growth in Hayes County. Comparing the projected column to the actual column allows us to assess the level of in/out-migration that took place. According to Table 1.3.5, the population sectors that had more people move out of the county than move in are the 0-9 year-olds, 20-29 year-olds, and 60-69 year-olds. The loss of 20-29 and 60-69 year-olds shows that although their proportion of the population grew, they still had more individuals in their cohort leave the county than enter.

The decrease of 0-9 year-olds demonstrates that fewer new babies were born or moved into Hayes County than was predicted through use of state fertility rates. The growth in 30-59 and 10-19 year-olds shows that although their proportion of the total population shrank, there are more families moving into the area than moving out.

Education costs are generally the largest expense in a public budget. However, the local school is the source of a rural area's identity and sense of community as well as a bridge from the present conditions to future development. In order to attract young families, Hayes County Planning Commission will need to continue making the development of their only school district a priority. Table 1.3.5 displays enrollment data over a ten year period. Classes have been color coded in order to follow a class through the entire school system. While some classes are small, others show either growth or the ability to maintain its class size over several years. For instance, the graduating class of 2008 actually gained nine (9) students since 2000 while the graduating class of 2006 also showed positive growth. After a six (6) percent loss the previous year, total enrollment actually demonstrated slight growth between the 2009-10 and 2010-11 school years; there should be a focus to maintain these numbers as well as trying to grow them.

Student mobility rate is calculated by the Nebraska Department of Education using the number of students who entered or left school between the last Friday in September and the last day of school in May. An individual child is counted only once, regardless of how many times he/she may have moved into or out of the school district. This number is divided by the K-12 Fall Membership taken the last Friday in September. The mobility rate provides a measurement of the stability of the school district; therefore, the county's population. A high mobility rate may indicate a large amount of families moved into Hayes County. It may also indicate that a high number of families moved out of the county.

Table 1.3.6 School Enrollment, Hayes Center, 2000-2011														
	K	1	2	3	4	5	6	7	8	9	10	11	12	Total Enrollment
2000 to 2001	5	13	9	12	16	17	11	14	10	13	15	19	15	169
2001 to 2002	12	7	16	10	11	19	20	13	16	10	14	15	22	185
2002 to 2003	11	10	5	16	10	9	19	18	14	17	10	12	13	164
2003 to 2004	9	12	8	6	18	10	9	22	21	18	21	13	13	180
2004 to 2005	7	9	11	8	7	19	10	10	21	29	18	26	16	191
2005 to 2006	7	7	9	12	8	6	19	10	10	21	30	19	25	183
2006 to 2007	2	8	5	9	11	9	7	19	11	10	20	27	18	156
2007 to 2008	9	3	9	5	8	13	10	8	21	11	10	17	26	150
2008 to 2009	12	11	3	9	8	10	15	11	10	21	12	11	17	150
2009 to 2010	7	13	12	3	9	8	9	16	8	9	23	12	11	140
2010 to 2011	11	9	11	11	3	11	7	10	17	8	11	21	11	141
Source: Nebraska Department of Education, 2011														

According to Table 1.3.7, 9.29 percent of the overall student population either moved into or out of the school district in the 2009-10 school year. Table 1.3.6 demonstrated a decrease in total enrollment, which forces the assumption that the higher mobility rate in 2009-2010 is due to students and their families leaving the county. Based on current enrollment figures, the mobility rate for 2010-11 will be a minimum 5.67 percent, which means that by February 1, 2011, eight (8) K-12 students will have either left or entered the Hayes County School District. Currently, of those eight (8) students, four (4) students have entered the school district while four (4) have left.



Table 1.3.7 Student Mobility Rate, 2005-2010		
School Year	Hayes County	Nebraska
2005 to 2006	6.56%	13.77%
2006 to 2007	7.69%	12.64%
2007 to 2008	4.67%	12.38%
2008 to 2009	6.67%	12.02%
2009 to 2010	9.29%	11.89%
2010-2011 (minimum)	5.67%	-
Source: Nebraska Department of Education		

Table 1.3.8 Population Projection Scenarios, 2020		
Projected Growth Rate	Projected 2020 Population	Residents Lost/Gained Each Year
-1.26%	974	(14)
-0.90%	1014	(10)
0.43%	1162	5
0.50%	1170	6
0.90%	1214	10
1.02%	1228	11
Source: U.S. Census Bureau, Hayes County Assessor, M&A		

Tables 1.3.1 thru 1.3.7 form the basis for the numbers displayed in Table 1.3.8. Population Projection Scenarios for Hayes County displays the application of several growth rates to the 2010 population of Hayes County in order to develop a realistic estimate that can be planned for by 2020. The population projection is the most important planning tool that is produced through the comprehensive planning process.

The population projection scenario table becomes the basis that county planning decisions associated with capital improvement, future land use maps, and economic development relies on. Therefore, it is imperative that the Hayes County Planning Commission and Board of Commissioners have a solid understanding of the current population of their county. Without an accurate population count, a population projection becomes counterproductive as it produces population counts that are inaccurate, thereby leaving county residents under served.

During the 90s, Hayes County experienced a growth rate of -1.26 percent of the population lost each year. Population estimates based on Table 1.3.1 assume that the county experienced a growth rate as high as .43 percent from 2000-2010. Through effective county planning and the achievement of growth goals identified through this comprehensive plan, Hayes County could steadily grow at a rate of .50 percent, which would assume the addition of six (6) individuals per year to the county over the next ten years. This goal can be met through the addition of combinations such as one family, one retiree couple, and one single individual per year. Housing and job development goals should be set with the annual addition of these six (6) individuals.

Housing



The housing stock in rural Hayes County is a crucial piece in maintaining its viability. Whether identifying projects to build new market rate housing or preserve decent affordable housing, Hayes County must work to constantly assess and improve its housing situation.

Community revitalization is also possible through the identification of housing needs that can be met outside of the traditional single family detached dwelling. When considered in conjunction with population data, housing information analysis will enable Hayes County to identify housing developments that are most appropriate for its success.

Table 1.4.1 provides a picture of the overall age of the housing stock in Hayes County. While new home construction was significantly stronger from 2000-2010 than it was in the 90s, almost half of the housing stock in Hayes County was built before 1940.

An owner occupied rehab housing assistance program is available through the Southwest Nebraska Community Betterment Corporation (SNCBC). Eligible rehabilitation projects are primarily focused on energy efficiency, roof repairs, and safety. Older homes will most likely require repairs that can be met through this program. In addition to developing new housing stock, Hayes County should take advantage of this SNCBC program as well as other housing rehab programs available at the state and federal level. Programs such as these must be utilized in order to serve the county's low-moderate income home owners as well as maintain a decent and affordable housing stock.



Table 1.4.1 Total Housing Units, 2000-2010		
Year Housing Unit Built	# of Units	% of Total
2000 or later	27	5.4%
1990 to 1999	17	3.4%
1980 to 1989	34	6.7%
1970 to 1979	60	11.9%
1960 to 1969	35	6.8%
1950 to 1959	51	10.1%
1940 to 1949	67	13.3%
1939 or Earlier	214	42.4%
Total Units	505	100%
Median Year Structure Built	1945	

Source: Nielsen SiteReports, Hayes County Assessor, M&A, 2011

Table 1.4.2 displays the change in housing values as a proportion of the total housing count. The new housing construction that began in 2000 through 2010 is evident in the increase of homes valued at greater than \$300,000. The proportion of homes valued at less than \$20,000 is also shrinking, which may be a result of two changes to the housing situation: improvements to the overall housing stock or homes being removed from the list of habitable housing units. If the latter is true, then Hayes County has actually lost some housing stock rather than made improvements. Since the SNCBC's housing rehabilitation program began in 2002, approximately 20 homeowners, or four (4) percent, have been able to take advantage of the opportunity to improve the state of their homes, which ultimately increased the value of their homes. The decrease in the proportion of homes valued less than \$60,000 is most likely a combination of the two: improvements and demolition or removal from housing counts.

Monitoring household size enables planners to analyze how demographic trends such as family size change over time. Table 1.4.3 displays the change in household size in Hayes County over the past twenty years. The decrease of more than three (3) persons per household as a percentage of the entire population is indicative of 1) families decreasing in size 2) retirees with children that are now out of the house are increasing and 3) reinforcement of population figures that show more families are leaving than settling in Hayes County.

Table 1.4.2 Change in Home Value, 2000-2010		
	% of Total, 2000	% of Total, 2010
Value Less than \$20,000	36.5%	20.8%
Value \$20,000 - \$39,999	22.6%	15.8%
Value \$40,000 - \$59,999	11.3%	13.4%
Value \$60,000 - \$79,999	9.4%	12.8%
Value \$80,000 - \$99,999	3.8%	8.4%
Value \$100,000 - \$149,999	12.6%	10.7%
Value \$150,000 - \$199,999	0.0%	5.7%
Value \$200,000 - \$299,999	3.8%	6.0%
Value \$300,000 - \$399,999	0.0%	1.7%
Value \$400,000 - \$499,999	0.0%	0.7%
Value \$500,000 - \$749,999	0.0%	2.7%
Value \$750,000 - \$999,999	0.0%	0.7%
Value \$1,000,000 or more	0.0%	0.7%
Source: Nielsen SiteReports, U.S. Census Bureau		

Table 1.4.4 displays the housing mix by tenure. While some renter occupied housing is a necessary part of any community or county, a large proportion is unhealthy for growth as home owners are more likely to identify with and invest in their community. Ideally, rental housing is a temporary solution for a new family/person moving into the county until they can secure home ownership. Multi-family housing is another form of rental housing that is typically needed in order to provide housing for single individuals, retirees, or anybody who does not desire to undertake the responsibilities associated with home ownership.

Table 1.4.3 Change in Household Size, 1990-2010			
Size of Household	% of Total	% of Total	% of Total
1-person	22.7%	26.5%	27.6%
2-person	39.2%	41.2%	41.0%
3-person	14.4%	9.5%	9.3%
4-person	12.5%	10.0%	10.0%
5-person	8.3%	8.6%	8.3%
6-person	1.7%	2.6%	2.4%
7 or more	1.3%	1.6%	1.5%
Source: Nielsen SiteReports, U.S. Census Bureau			

Table 1.4.4 Housing Tenure, 1990-2010			
	% of 1990	% of 2000	% of 2010
Renter	30%	28%	27%
Owner	70%	72%	73%
Source: Nielsen SiteReports, U.S. Census			

Table 1.4.5 Type of Housing Units, 2011		
	Number of Units	% of Total
Single Family Detached	505	100%
Multi-Family Apartment	0	0%
Multi-Family Townhome	0	0%
Multi-Family Duplex	0	0%
Source: Hayes County Assessor, 2011		

Hayes County does have four (4) single bedroom rental units. These units are funded by the Department of Housing and Urban Development (HUD), Section 8, subsidized housing especially for low income elderly persons. These apartments are called Hayes Villa and they are located in Hayes Center. This is a form of senior, independent living in Hayes County. Although from Table 1.4.5, information from the Hayes County Assessor for 2011, does not show any multi-family living. A healthy percentage of renter occupied units is generally close to 30 percent. The growing proportion of owned homes combined with the gradually shrinking proportion of renter occupied units in Hayes County is acceptable. Currently, Hayes County has no multi-family housing units available throughout the entire county. In order to diversify and create a stronger housing mix and population base, at least one multi-family housing unit development should receive serious consideration.



The price of the county's housing supply in relation to the income of its residents can help planners determine if the appropriate type and amount of housing stock is available in the county. Typically, housing costs should account for no more than 30 percent of a household budget. Households that must spend more than 30 percent of their income to pay for basic housing will have less income to cover other essentials and fewer resources to maintain their homes and neighborhoods. Table 1.4.6 is based on incomes and values of persons and homes in Hayes County. This analysis assumes owner occupied units are valued at two (2) to two and a half (2 ½) times the owner's annual income.

The balance column of the analysis demonstrates that the county is short housing units in the \$60-200,000 price range, yet has a surplus of units in the \$0-24,999 income range. Table 1.4.6 also shows a surplus of homes priced less than \$60,000. According to this table, residents in the county could afford to upgrade in housing, yet lack any options to make that move. This table also shows that the county is not meeting the needs of residents at or near the median income (\$31,948). Therefore, if homeowners in the \$25-99,999 income range choose to upgrade in housing without undergoing new construction, they will move out of the county. Residents upgrading to higher priced market rate housing may also free up affordable housing units for younger families and adults that the county should be working to recruit.

Table 1.4.6 Housing Affordability Analysis, Owner Units, 2011

Income Range	% of County Median	% of Households	# of Households (Units Needed)	Affordable Range for Housing Units	# of Owner Available Units	Available-Needed Units
\$0-24,999	78%	37.1%	186	\$0-60,000	253	67
\$25,000-49,999	78-157%	34.5%	173	\$61-100,000	107	-66
\$50-74,999	157-235%	14.0%	70	\$101-150,000	54	-16
\$75-99,999	235-313%	8.0%	40	\$151-200,000	29	-11
\$100-149,999	313-470%	3.8%	21	\$201-300,000	30	9
>\$150,000	>470%	1.8%	11	>\$300,000	32	21
Median Income	\$31,948					

Source: Nielsen SiteReports, Hayes County Assessor, M&A

Quality and availability of decent housing is one of the primary decision points for families and individuals when considering moving into an area. Hayes County needs to take steps to improve their current housing situation. Although new home construction activity has seen significant increases since 2000, a shortage of market rate and multi-family units continues to exist. In order to maintain as well as grow and diversify the population base, Hayes County officials must investigate housing development.

The ability of Hayes County to predict the need for development in the future relies heavily on economic trends. Therefore, a description of local economic factors is a crucial component of the county comprehensive development plan. Another important aspect to a county's economy is annually planning a predictable investment plan. This type of financial plan is called Capital Investment Plan (CIP) and should use a 5-6 year time horizon to schedule and help decide which project to fund based on following the guidelines of the Comprehensive Plan. The CIP is used to help think about a budgeting for the future, to help plan for financing future infrastructure, and to help with the decision-making process.

Economy & Capital Investment

Table 1.5.1 breaks down Hayes County's income earners by age and amount of income. Household incomes are distributed fairly evenly across age groups and income levels. The largest percentage of income earners are 55-64 year-olds that are earning \$35-49,000 annually. The second largest group consists of 75-84 year-olds who are earning less than \$15,000 annually. This group is most likely seniors that are living on fixed incomes, which may signal the need for assistance from public resources in the form of housing, transportation, and healthcare. The third largest group is made up of 45-65 year-olds earning \$50-74,000 annually. Typically, persons in the 45-54 age range are reaching the peak of their income earning power. This provides a representation of the best jobs in Hayes County that are also the most available. Due to the nature of the agriculture economy in Hayes County, it is probable that this table is highly representative of farm income ranges. In addition to farm income, education jobs related to the Hayes County School District are most likely represented by the upper levels of income earners.

Table 1.5.1 Household Income by Age of Householder, 2010

2010 Estimate Age/Income	Age 15 - 24	Age 25 - 34	Age 35 - 44	Age 45 - 54	Age 55 - 64	Age 65 - 74	Age 75 - 84	Age 85+
% of Total Households	2.93%	11.46%	9.27%	20.24%	20.98%	13.41%	15.12%	6.59%
Income Less than \$15,000	0.2%	1.1%	1.3%	1.7%	2.1%	3.0%	4.2%	2.5%
Income \$15,000 - \$24,999	1.1%	1.9%	2.1%	3.8%	2.1%	0.2%	3.2%	1.7%
Income \$25,000 - \$34,999	0.6%	3.4%	0.8%	2.7%	3.8%	1.7%	1.9%	1.1%
Income \$35,000 - \$49,999	0.2%	1.5%	1.5%	3.6%	4.4%	0.6%	2.1%	0.0%
Income \$50,000 - \$74,999	0.0%	1.1%	1.3%	4.0%	3.8%	1.7%	0.4%	0.0%
Income \$75,000 - \$99,999	0.4%	0.2%	0.4%	1.5%	1.9%	1.3%	0.8%	0.4%
Income \$100,000 - \$124,999	0.0%	0.8%	0.4%	0.2%	0.0%	1.3%	0.0%	0.0%
Income \$125,000 - \$149,999	0.0%	0.0%	0.2%	0.0%	0.0%	0.8%	0.0%	0.0%
Income \$150,000 - \$199,999	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%
Income \$200,000+	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.0%

Source: Nielsen SiteReports, 2011

Table 1.5.2 Employed 16+ year olds by Occupation, 2010

Industry	% of Total
Management	31.5
Farm/Fish/Forestry	13.4
Office/Admin Support	12.2
Transportation/Moving	8.8
Construction/Extraction	5.0
Sales/Related	4.8
Building Grounds Maint	4.1
Edu/Training/Library	3.9
Food Prep/Serving	3.3
Health Practitioner/Tec	2.9
Personal Care/Svc	2.0
Arts/Entertain/Sports	1.7
Production	1.7
Life/Phys/Soc Science	1.3
Healthcare Support	1.1
Business/Financial Ops	0.9
Maintenance Repair	0.9
Community/Soc Svcs	0.6
Architect/Engineer	0.0
Computer/Mathematical	0.0
Legal	0.0
Protective Svcs	0.0

Source: Nielsen SiteReports



Table 1.5.2 displays the industries that Hayes County income earners are employed by. The largest form of employment is management positions, which includes farm managers. The second largest employment industry is farm/fish/forestry which represents farm occupations as well. This table shows that Hayes County has a strong agriculture base as a source of jobs. Policy and development decisions at the county level should continue to be made in a fashion that will strengthen the farm economy. Likewise, this table also shows that Hayes County should develop economic opportunities that will diversify and therefore strengthen the employment base. For instance, no employment opportunities for professionals currently exist within the county. The county should explore options for creating new sectors of employment, especially for professionals. The Bureau of Labor Statistics expects healthcare to be the fastest growing employment industry in the next decade. The largest sector of healthcare employment is expected to be made up of home health care professionals; especially those professionals that care for the elderly.

With an aging population, this sector has a strong chance of becoming a significant source of employment for Hayes County's working population. At the same time, home healthcare may also be the most effective and efficient way of closing the healthcare gap for elderly residents in Hayes County.

Education trends are another method to measure the state of the county's economy. Table 1.5.3 displays educational attainment for persons in Hayes County that are older than 25. According to the table, the amount of adults with less than a high school education is decreasing in size while the amount of adults receiving post-secondary degrees is growing. This positive trend should bring up the level of incomes earned in Hayes County as well as the local standard of living. The county should take positive steps to engage its increasingly educated workforce.

Table 1.5.3 Educational Attainment (25+), 2000-2010

	2000	2010	Change 00-10
Less than 9th Grade	29	20	-31%
Some High School, No Diploma	50	38	-24%
High School Graduate/GED	295	299	1%
Some College, No Degree	219	218	-0.5%
Associate Degree	50	67	34%
Bachelor's Degree	68	78	15%
Master's Degree	13	16	23%
Professional School Degree	3	3	0%
Doctorate Degree	0	0	-

Source: Nielsen SiteReports, U.S. Census Bureau

Commuter trends enable officials to measure whether or not the workforce is working inside of the county. Table 1.5.4 displays how commuter trends have evolved over the past ten years. The county is 24 miles long by 30 miles wide; workers inside of Hayes County that travel more than 30 minutes are most likely leaving the county every day to report to work. While all but one sector of commuters grew, those traveling more than 30 minutes grew the fastest. When workers leave the county to report to work they are taking different forms of commerce with them this includes money spent on meals or the increased ease to do business, such as banking or shopping, in the communities where they work. This table emphasizes the need for Hayes County to create quality employment opportunities inside the county.

Table 1.5.4 Average Commute Time to Work, 2010

	2000	2010	% Change 00-10
Less than 15 Minutes	219	225	2.7%
15-29 Minutes	107	109	1.9%
30-44 Minutes	56	63	12.5%
45-59 Minutes	25	25	0.0%
60+ Minutes	17	18	5.9%

Source: Nielsen SiteReports, U.S. Census Bureau

Table 1.5.5 Unemployment Rate, 1990-2010

1990	2000	2010
3.9%	2.1%	2.3%

Source: U.S. Census, Nielsen SiteReports

Table 1.5.5 displays the unemployment rate in Hayes County, which continues to enjoy a low unemployment rate. While a low unemployment rate signals a strong economy, it can also discourage employers from moving into the county as they fear they will not be able to find workers. Should Hayes County choose to recruit new industry or employers, population in the form of quality labor will need to be recruited as well.

Hayes County has the potential to attract additional local and regional consumer spending with current demand exceeding supply. Table 1.5.6 identifies the gap between consumer demand and retail sales. A positive value in the opportunity gap/surplus column signifies opportunity while a negative value represents a surplus for the specified retail. The negative value represents how many dollars Hayes County representatives are spending on goods outside of the county. For instance, residents are spending over \$1.7 million in general merchandise stores; because no general merchandise stores exist in Hayes County, \$1.7 million left the county in 2010.

Table 1.5.6 Retail Market Power, 2010

Retail Stores	2010 Demand (Consumer Expenditures)	2010 Supply (Retail Sales)	Opportunity Gap/Surplus
GAFO *	3,077,309	0	3,077,309
Total Retail Sales Incl Eating and Drinking Places	14,027,720	3,108,824	10,918,896
Motor Vehicle and Parts Dealers	2,958,589	0	2,958,589
General Merchandise Stores	1,773,023	0	1,773,023
Food and Beverage Stores	1,948,044	381,079	1,566,965
Gasoline Stations	1,367,760	0	1,367,760
Building Material, Garden Equip Stores	1,264,549	0	1,264,549
Health and Personal Care Stores	967,030	0	967,030
Non-Store Retailers	923,828	0	923,828
Clothing and Clothing Accessories Stores	493,002	0	493,002
Miscellaneous Store Retailers	368,358	0	368,358
Electronics and Appliance Stores	247,455	0	247,455
Furniture and Home Furnishings Stores	234,756	0	234,756
Sporting Goods, Hobby, Book, Music Stores	208,713	0	208,713
Foodservice and Drinking Places	1,272,613	2,727,745	-1,455,132

Source: Nielson SiteReports

* GAFO (General Merchandise, Apparel, Furniture and Other) represents sales at stores that sell merchandise normally sold in department stores. This category is not included in Total Retail Sales Including Eating and Drinking Places.

In addition to demonstrating how many dollars are leaving/staying in the county, Table 1.5.6 shows where strong economic opportunity exists. If the county wanted to recruit a parts store, it can easily demonstrate to potential retailers that a demand does exist in Hayes County and that residents are spending over \$2.9 million on vehicles and parts annually. This case is similar for general merchandise, food and beverage, and building equipment stores. The last column of numbers represents whether there is an opportunity gap for a correlating economic option or if there is a surplus in the county. This was done for 2010, and the only surplus of money spent in the county was in the food service/beverage establishments. Every other category in Table 1.5.6 shows that more money is being spent in other areas besides Hayes County. Hayes County needs to create goals and a plan that will keep some of these funds in the county, while providing amenities for residents.



After taking all of these aspects of Hayes County's economy into consideration it is important to plan for the future based on current assessment. The Capital Investment Plan (CIP) can help facilitate this future plan. The CIP is used to help with county budgeting, to help plan for financing future infrastructure projects, and to help with the decision-making process. Where the money will come from should also be considered and discussed when creating the CIP. When looking at Table 1.5.6 it is evident that there are many potential dollars that are leaving the county. When creating the CIP it should be important to plan for ways to keep this money in the county. One of the reasons this money is leaving the county is because 215 people or 23 percent of the county's residents are commuting 15 or more minutes for work. One way to keep cash flow in the county is to have amenities for the residents to use, and jobs for people to work at. These amenities need to be planned for in advance because of the costs and commitments that are involved.

Following trends is another way of planning for future capital investments; by following trends, decision-makers can try to predict which infrastructure improvement areas will benefit the county the most. Financing for future infrastructure is important to any community or county. When considering the aging population in Hayes County and the lack of healthcare facilities, this could be one major improvement in the county and should be considered during planning for the future. The CIP is a great planning tool that should be utilized in Hayes County. Planning for the future is one of the most effective ways for being successful.

The strong presence of agriculture in Hayes County requires deeper investigation of characteristics that describe how agriculture has changed since 2000. Agriculture has in the past and will continue to shape the way that Hayes County develops.

Agriculture



Regardless of national trends, Table 1.6.1 demonstrates that the number as well as size of farms is increasing in Hayes County. This reinforces the ability of agriculture to continue to hold a strong presence in the county's local economy. This table also demonstrates that farm managers/operators are aging, which will lead to the eventual transfer of land from one generation to the next.

Table 1.6.2 represents the value of the goods that are produced by the farms in Hayes County. While crop sales produces over 50 million dollars of revenue, livestock sales takes up a larger portion of the agricultural products market. These figures should be taken into consideration in the drafting of the county zoning ordinance. Land use decisions will affect the level of crop or livestock sales that will be possible. For instance, feedlots may produce more revenue than a field of crops. Resources needed and land suitability, for each product, should also be taken into consideration.

Table 1.6.1 Farm Characteristics, 2002-2007

	2002	2007	% Change
Number of Farms	260	275	6%
Total Land in Farms (acres)	408,290	453,818	11%
Average Size of Farm (acres)	1,570	1,650	5%
Average Age of Principal Farm Operator	56		
Source: USDA, National Agricultural Statistics Service			

Table 1.6.2 Market Value of Farm Products, 2007

	2007	% of Total
Crop Sales	\$52,821,000.00	46%
Livestock Sales	\$62,648,000.00	54%
Total	\$115,469,000.00	100%
Source: USDA, National Agricultural Statistics Service		

Table 1.6.3 Number of Cattle, 2002-2007

2002	2007	% Change
51,819	55,625	7%
Source: USDA, National Agricultural Statistics Service		

Table 1.6.3 takes the information in Table 1.6.2 one step further and provides a count on the number of cattle in Hayes County. According to these figures, the number of cattle in Hayes County has grown and will most likely continue to increase. If the cattle industry continues to grow in Hayes County, the county will need to take progressive steps to accommodate both producers and citizens that will be affected by animal feeding operations (AFO).



Section 2: Public Facilities

The Public Facilities section acts as an inventory of current amenities available to the public because of the county. This is a good section to review and hopefully add upon in the future with growing facilities and a growing population. This section is also helpful for others to read to see what the county has to offer. This Public Facilities section will cover the following components:

- Recreational Facilities
- Education System
- Emergency Management
- Transportation
- Utilities
- Healthcare
- Public Buildings/Facilities
- Public Services

Hayes County is located in Prairie Lakes Country, a region within the Nebraska Games and Parks Commission. Prairies Lakes Country includes portions of twenty-three counties in Nebraska. This region covers the area within a rectangle formed by Perkins, Dundy, Hamilton and Nuckolls counties. The Nebraska Games and Parks Commission describes this area as "A gracefully undulating plain bespeckled with many man-made lakes frequented by flocks of migratory waterfowl." Hayes County is also completely within the Middle Republican Natural Resources District. There are many opportunities in this region for recreation and education within the state parks. Below is a highlight of state parks found in Hayes County and some of its surrounding counties.

Recreational Facilities



Hayes County

Hayes County does not have any State Parks, State Recreation Areas, or Historical Parks. There are, however, two Wildlife Management Areas (WMAs) that are managed by the Nebraska Game and Parks Commission.

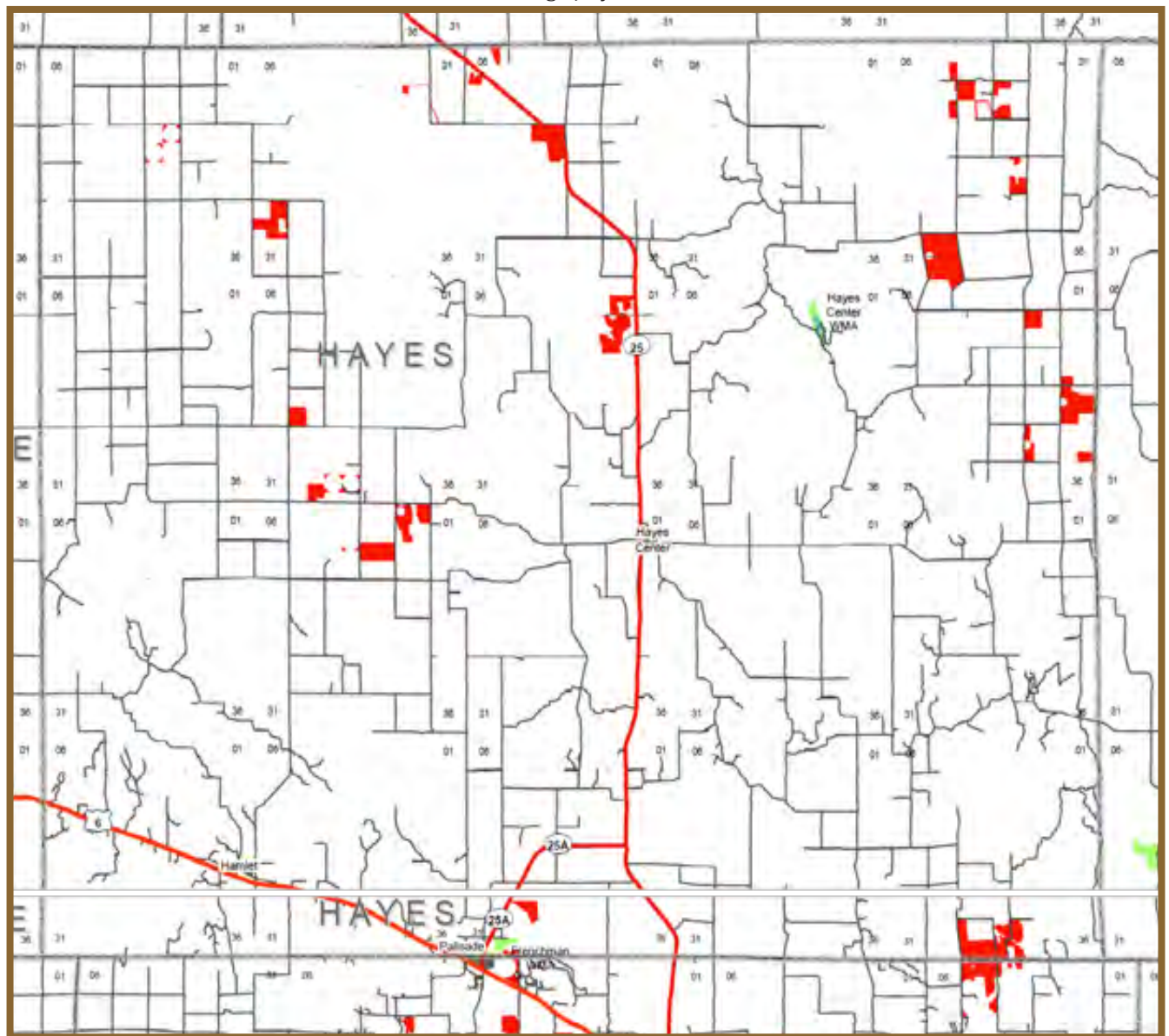
The Hayes Center WMA is located approximately 12 miles north of Hayes Center. This WMA includes 118 total acres with 78 acres of those 128 being land and 50 acres of water. Hunting and fishing are allowed. The lists of animal species that are allowed to be hunted include deer, dove, pheasant, quail, rabbit, turkey, and waterfowl. Available fish species include bluegill, channel catfish, and largemouth bass. Boat motors are limited to electric.

Frenchman WMA is located in extreme southern Hayes County, just along the Hitchcock County border, approximately 1-1/2 miles north of Palisade. This WMA includes 98 acres with roughly 20 acres of that 98 being water, mostly in gravel pits. Fishing is allowed but again boat motors are limited to electric. Fish species include channel catfish, crappies, largemouth bass, and northern pike. Hunting is also allowed at the WMA. The lists of animal species that are allowed to be hunted include deer, dove, pheasant, quail, rabbit, turkey, and waterfowl like the Hayes Center WMA.

The Nebraska Game and Parks Commission has joined Pheasants Forever, the Nebraska Environmental Trust, the U.S. Department of Agriculture, hunters, anglers, landowners, private organizations, and government agencies on programs to address wildlife habitat and hunting, fishing, and trapping access throughout the state. Figure 2.1 — Wildlife Habitat Public Access maps areas throughout Hayes County that are open to the public in 2010. The areas in red show public hunting and trapping land, and the areas marked in green show Nebraska Game & Parks Commission WMAs.

Figure 2.1. – Wildlife Habitat Public Access

Source: 2010 Nebraska Public Access Atlas, valid through July 2011



The areas surrounding Hayes County offer an abundant supply of recreational facilities, including State Recreation Areas, Wildlife Management Areas, and a State Historical Park. Below are the facilities in the counties surrounding Hayes County; these facilities are generally within 40 miles of Hayes Center.



Chase County

Champion Mill State Recreation Area (SRA) and Historical Park is located off of Highway 6 about 25 miles from the western edge of Hayes County, or about ½ mile from Champion. The recreation area contains approximately 2-1/2 acres of land, and 11 acres of water. The recreation area offers camping for a fee, hiking, boating, and fishing. There are also water activities available. Hunting is not allowed. The historical park portion contains nearly four acres of land and a mill pond. There is a restored, water-powered flour mill on the grounds, which is open year round. Interpretive facilities are open from Memorial Day to Labor Day.

Enders Reservoir SRA is five (5) miles east and 4-1/2 miles south of Imperial and was completed in 1951. The SRA has a 1,707 acre lake with a 26-mile shoreline. It stores water that is used to irrigate approximately 21,000 acres of land in the region. There is camping, picnic tables, fishing, hunting, boat ramps and modern restrooms at this facility. This entire area covers 2,818 acres. The lists of animal species that are allowed to be hunted in this area include deer, dove, pheasant, quail, rabbit, turkey, and waterfowl. Fish species include channel catfish, crappie, muskellunge, northern pike, smallmouth bass, walleye, white bass, wiper, and northern pike. There are no regulations for boat types as long as they are operating under low water conditions, but there are other regulations that must be followed during waterfowl hunting season.

Enders WMA covers 2,892 acres on the western side of the lake. Hunting regulations are the same for the WMA as they are for the SRA at Enders; hunting is allowed on public property along the river, west of the refuge. In all, there are about 1,500 acres of land with managed habitat, open to hunters.

Wanamaker WMA owned by the State of Nebraska that is located approximately one (1) mile west of Imperial. This WMA is comprised of approximately 160 acres of land. This land mainly consists of planted grasslands and shelterbelts. There is no water or timber in this WMA. Hunting is not allowed. This area is great for seeing migrating and breeding birds such as: passerines, waterfowl, shorebirds, and grassland songbird species.

Dundy County

Rock Creek Lake SRA is in the southwestern corner of the state, about four (4) miles north of Parks (just off US Highway 34 between Benkelman and Haigler). This SRA is 104 total acres with a dam, located in the recreation area that holds back about 50 acres of trout-supporting water, and was constructed between 1932 and 1933. Fishing, canoeing, and electric motor boating are the primary aquatic activities. Fish species include channel catfish, largemouth bass, rainbow trout, red ear sunfish, and yellow perch.

Rock Creek State Fish Hatchery is located about two miles upstream and was founded in 1924 because of the abundant cold water spring flow of approximately 2,500 gallons per minute. The hatchery annually provides rainbow and brown trout, wipers, bluegill, bluegill green sunfish hybrids, rock bass, red ear sunfish, and grass carp. Camping is allowed but it is considered to be primitive. There are no camper pads or amenities such as electricity or showers.

Red Willow Reservoir Wildlife Management Area is located in southwest Frontier County, 11 miles north of McCook and five (5) miles east of the Hayes County border. The Red Willow Reservoir WMA is a total of 2,962 acres for hunting deer, dove, pheasant, quail, rabbit, turkey, and waterfowl.

Frontier County

Red Willow SRA is a total of 2,986 acres with 1,630 of those acres being the Hugh Butler Lake. All boat types are permitted as well as hunting for deer, dove, pheasant, quail, rabbit, turkey, and waterfowl. Fishing is allowed for channel catfish, common carp, crappie, flathead catfish, largemouth bass, northern pike, smallmouth bass, wiper, walleye, and white bass in Hugh Butler Lake. There are modern camping and recreational facilities, including a designated swimming beach with modern restrooms, at the SRA.

Dancing Leaf Cultural Learning Center (Handicapped Accessible) is located 1 ½ miles north of Highway 18 near Stockville on a gravel road. This Center offers a unique blend of educational and recreational opportunities. An experience in Native American primitive life, complete with earth lodge, natural springs, and, scenic trails, this Cultural Learning Center covers 115 acres of land and it is open year-round.

Medicine Creek SRA is located two (2) miles west and seven (7) miles north of Cambridge. The SRA is home to Harry Strunk Lake which is approximately 1,850 acres. All types of boats are allowed, and fish species include channel and flathead catfish, common carp, crappie, largemouth bass, walleye, white bass, and wiper. Camping is offered in both primitive and modern settings.

Medicine Creek WMA covers more than 5,500 acres of land. Hunting is allowed on the WMA portion of the site, and the list of allowed animal species that can be hunted includes deer, dove, pheasant, quail, rabbit, squirrel, turkey, and waterfowl.

Hitchcock County

Swanson Reservoir SRA is located two miles west of Trenton on US Highway 34. The recreation area is approximately 6,131 acres, comprised of 1,157 acres of land and 4,974 acres of water. There are several cooking grills, as well as picnic shelters available. Camping is allowed and shower facilities are available. The area is wheelchair accessible and fishing is allowed in designated areas. Fish species include blue and channel catfish, common carp, crappie, freshwater drum, walleye, white bass, and wiper. All boats are allowed. There is a park office on site with playground equipment. The wildlife management area is 2,800 acres in size. Hunting of deer, dove, pheasant, quail, rabbit, squirrel, turkey, and waterfowl is allowed.

Swanson Reservoir WMA is about 2,800 acres of land. The Swanson WMA is located to the north and west of the Swanson SRA. This WMA allows hunting for deer, dove, pheasant, quail, rabbit, squirrel, turkey, and waterfowl.

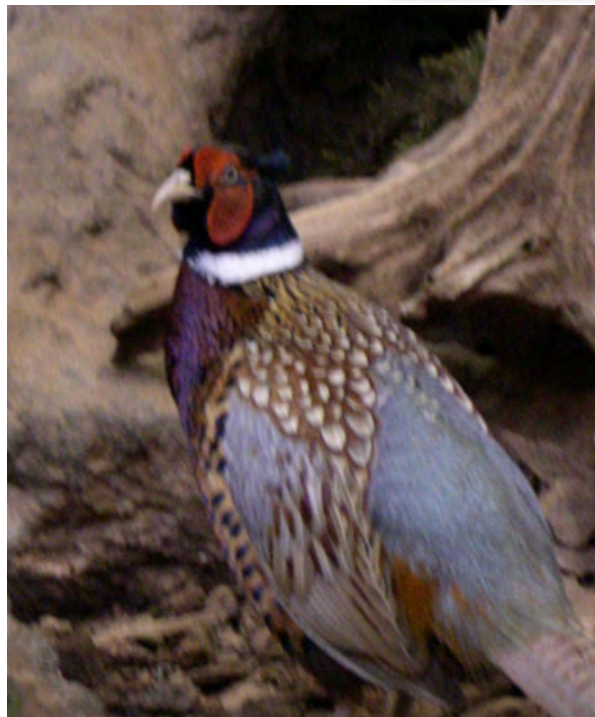
Massacre Canyon Historical Marker & Visitor Center is located three (3) miles east of Trenton on U.S. Highway 34. This monument was erected in 1930 as a memorial to the last major battle fought between Indian tribes in the United States. The battle took place on August 5th, 1873, between the Sioux and the Pawnee in the canyon just west of the monument. The 91-ton monument is made of pink granite and stands 35 feet high. Carved at the top and facing west is the face of John Grass, a noted Sioux Indian. The visitor center was constructed in 1999 and features the history of the battle as well as stories of the history of the early pioneers in the area. The building is handicap accessible, has modern restrooms, and snack machines. There is a pavilion for picnicking and the enjoyment of a panoramic view of the area.

Lincoln County

Sutherland Reservoir State Recreation Area is located in west central Lincoln County, south of Interstate 80. The facility is approximately 3,100 acres in area, including 3,000 acres in water. Amenities include primitive campgrounds, swimming, fishing and a boat launch. Hunting is allowed for dove, pheasant, and waterfowl. Fish species include channel catfish, walleye, white bass, wiper, yellow perch and drum. The facility has a wheelchair accessible fishing pier as well.

Cedar Valley Wildlife Management Area is located in the southern part of Lincoln County south of Wellfleet along U.S. Highway 83. The management area consists of 105 acres of cropland, 695 acres of pasture land, 80 acres of timber, for a total of 880 acres. A variety of hunting is allowed including deer, dove, pheasant, quail, and turkey.

Wellfleet Lake and Wildlife Management Area is located ½ mile southwest of Wellfleet along U.S. Highway 83. This management area includes 62 acres of pasture land and 50 acres of water totaling 112 acres. Hunting allowed at Wellfleet includes deer, dove, pheasant, quail, rabbit, and waterfowl. Fishing includes bluegill, channel catfish, crappie, largemouth bass, and white bass. Boats are limited to electric motors and primitive camping is available.



Local Parks

Kittle Park is located at the southern edge of Hayes Center. Amenities include picnic tables, bar-beque grills, and playground equipment.

Duke Alexis recreation area is located eight (8) miles northeast of Hayes Center. Camp Hayes is located within this recreation area. This area includes 40 acres of land and 100 acres of water. Fishing is popular on this lake, and it is well stocked with various species.

F.C. Krotter Park located in Palisade is approximately three (3) acres in size. The facilities within the park include a public pool, a baseball diamond, shelter for activities, and park equipment.



Golf Courses

Arrowhead Meadows is located in Curtis and is a 3,442-yard 9-hole golf course. Tee times are accepted one week in advance. Green fees are \$12 for nine (9) holes and \$18 for 18 holes. The facilities include: putting green, chipping green, practice bunker, driving range, rental clubs, rental carts, pull carts, snack bar, restaurant, and meeting room. No spikes are allowed on the greens and this facility is a member of the Nebraska Golf Associates.

Benkelman Country Club is located outside of Benkelman on Highway 34 and is a 3,159-yard 9-hole golf course. Tee times are not required and green fees are \$15 for nine (9) holes and \$25 for 18 holes. The facilities include a putting green, chipping green, driving range, cart rental, and concessions. This facility is a member of the Nebraska Golf Associates.

Enders Lake Golf Course is located in Enders on Highway 6, and is a 3,296-yard 9-hole golf course. Tee times are not required. Green fees include \$12 for nine (9) holes, \$18 for 18 holes and the golf course is available for all day use for \$25-\$30. The facilities include a putting green, driving range, rental clubs, motorized cart rentals, pull carts, snack bar, bar, meeting room, tennis, swimming, and a pro-shop. No spikes are allowed on the greens and this facility is a member of the Nebraska Golf Associates.

Hayes Center Golf Course is a 9-hole municipal golf course with sand greens. Yearly memberships are available for users. Restroom facilities are available to golfers; they are located near the fairgrounds.

Heritage Hills is located in McCook and is a 6,715-yard 18-hole golf course. Tee times are accepted up to one week in advance. Green fees are \$21 for nine (9) holes and \$35 for 18 holes. The facilities include: putting greens, driving range, chipping green, practice bunker, lessons, club rentals, cart rentals, pull carts, lockers, showers, snack bar, bar, and meeting room. This facility is a member of the Nebraska Golf Association.

Based upon the availability and quality of recreational facilities, there are recommendations for parks and recreational areas that will help developing these amenities into more popular attractions. High-density recreation areas should be user-orientated in design, and a range of recreational facilities should be available that are appropriate to camping and overnight stay. General outdoor recreations areas should utilize natural resources, and be equipped with man-made facilities. As these areas are used more often, the communities in Hayes County will benefit from dollars spent in their businesses. One way of attracting people to these recreational areas is to be a part of a group or chapter like Pheasants or Quails Forever. Many of the surrounding counties, Chase, Perkins, Lincoln, Frontier, and Red Willow, are all Pheasants Forever members. These types of memberships help lead people to recreational facilities in the area; this then could bring in people that would spend money within Hayes County.

Recreational Recommendations

Many rural Nebraska communities and counties put a high value on maintaining and protecting their local schools from closing and preventing consolidation. The local schools are vital in preserving community pride as well as supporting local residents and businesses. The following section analyzes educational trends within Hayes County as a way to better understand where Hayes County is going in the future. Nebraska state statutes group schools into six different classifications. These classifications are defined by the following law:

Education

2009 Nebraska Code, Chapter 79 SCHOOLS - § 79-102. School districts; classification. School districts in this state are classified as follows:

- (1) Class I includes any school district that maintains only elementary grades under the direction of a single school board;
- (2) Class II includes any school district embracing territory having a population of one thousand inhabitants or less that maintains both elementary and high school grades under the direction of a single school board;
- (3) Class III includes any school district embracing territory having a population of more than one thousand and less than one hundred fifty thousand inhabitants that maintains both elementary and high school grades under the direction of a single school board;
- (4) Class IV includes any school district embracing territory having a population of one hundred thousand or more inhabitants with a city of the primary class within the territory of the district that maintains both elementary and high school grades under the direction of a single school board;
- (5) Class V includes any school district whose employees participate in a retirement system established pursuant to the Class V School Employees Retirement Act and which embraces territory having a city of the metropolitan class within the territory of the district that maintains both elementary grades and high school grades under the direction of a single school board and any school district with territory in a city of the metropolitan class created pursuant to the Learning Community Reorganization Act and designated as a Class V school district in the reorganization plan; and
- (6) Class VI includes any school district in this state that maintains only a high school, or a high school and grades seven and eight or six through eight as provided in section 79-411, under the direction of a single school board.

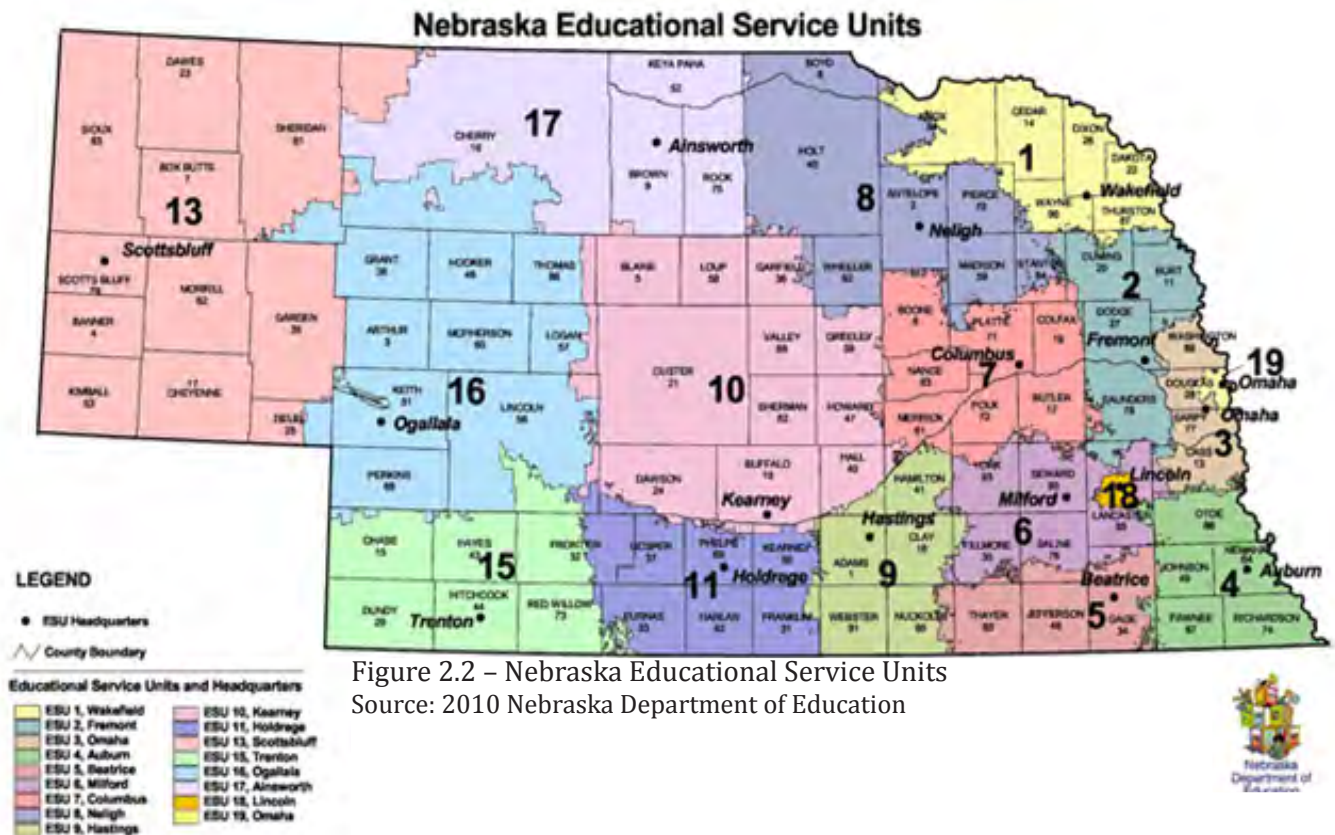


Figure 2.2 – Nebraska Educational Service Units
Source: 2010 Nebraska Department of Education



Hayes Center School, the only school located in Hayes County, is classified as a Class III School. This school contains a single grade school and high school located at 500 Troth Street in Hayes Center. The school contains many student amenities such as a track and football field. In 2007 Hayes Center completed an addition to the school consisting of a new gymnasium. The school has sufficient capacity for the current student enrollment, with facilities that are large enough to handle an increase in student enrollment.

Hayes Center Public School District No. 43-0079, (K-12) encompasses the largest portion of Hayes County. The progressive Hayes Center Public Schools serves approximately 150 students, pre-K through 12th grade. Their mission is the following: to provide individual attention, innovative programs, and equal student learning achievements. Innovative programs include their preschool, and a one (1) to one (1) laptop initiative. High Ability Learner programs are offered at the elementary, junior high, and high school levels. In addition they offer dual-credit college courses to high school juniors and seniors. Their 21 instructors teach the basics and more. They offer and excel in music, speech, drama, athletics, and journalism. Their graduation rate, writing, and reading scores meet or exceed the state average. Since they are a small school district, they can reach that unreachable child and differentiate the curriculum to meet the individual needs of every student.

The second largest school district in Hayes County is Wauneta-Palisade District No. 15-0536. The Wauneta-Palisade School District is a small system with total K-12 enrollment of approximately 200 students. They have Kindergarten through 2nd grade in Wauneta. Grades 3rd through 6th grades go to Palisade. Grades 7-12 all attend the Wauneta site. They have mathematics, science, social studies, and language arts curriculum committees whose tasks it is to align local curriculum to the state standards. Their norm-referenced test is the ITBS. The process of formalizing assessment for the purpose of obtaining district-wide data has been ongoing for the past several years. Several years ago they joined the Southwest Nebraska On-line Assessment Consortium. They contribute assessment items for all the standards to the question banks that had gone through our local process. They also participate in consortium quality criteria activities.

The majority of Hayes County is located in Educational Service Unit number 15 (ESU 15). The ESU 15 main office is located at 334 Main Street, P.O. Box 398, Trenton 69044-0398 and covers the counties of Dundy, Chase, Hayes, Hitchcock, Red Willow, Frontier, Lincoln, and Furnas. A small portion of northwestern Hayes County is in the ESU 16 district, located out of Ogallala. ESU 15 is one of 39 sites in the Southwest Nebraska Distance Education Network, which is a two-way interactive fiber optic teaching and learning network that covers over 20,000 square miles in rural western Nebraska. It allows students in the rural areas a chance to interact and view learning from a new experience.

During the years ranging from 2000 to 2010, Hayes Center School reached a ten (10) year high of 191 total enrollment in 2004 (see previous Table 1.6, Hayes Center School Enrollment 2000-2010). This was in part to redistricting of surrounding school districts in the years of 2003-2004. However, between the years 2005 to 2010, the enrollment has steadily declined by 26 percent to 141 total students in the year 2010. In two years the largest existing class will graduate. At the current rate of decline, it is projected the total students enrolled will reduce by eight (8) percent.

Researchers have found that gains in achievement generally occur when class size is reduced to less than 20 students. Some states have approved a class-size reduction amendment that requires classes to have no more than 18 students in pre-kindergarten through third-grade classes, no more than 22 in fourth- to eighth-grade classes and no more than 25 in high school classes. In these states, this required reduction will be phased in and must be in place by 2010.

Source: www.greatschools.org, "How Important is Class Size?" 2011

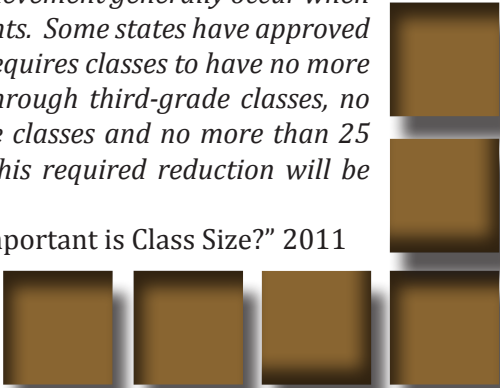


Table 2.2.1 (1.3.6) School Enrollment, Hayes Center, 2000-2011

	K	1	2	3	4	5	6	7	8	9	10	11	12	Total Enrollment
2000 to 2001	5	13	9	12	16	17	11	14	10	13	15	19	15	169
2001 to 2002	12	7	16	10	11	19	20	13	16	10	14	15	22	185
2002 to 2003	11	10	5	16	10	9	19	18	14	17	10	12	13	164
2003 to 2004	9	12	8	6	18	10	9	22	21	18	21	13	13	180
2004 to 2005	7	9	11	8	7	19	10	10	21	29	18	26	16	191
2005 to 2006	7	7	9	12	8	6	19	10	10	21	30	19	25	183
2006 to 2007	2	8	5	9	11	9	7	19	11	10	20	27	18	156
2007 to 2008	9	3	9	5	8	13	10	8	21	11	10	17	26	150
2008 to 2009	12	11	3	9	8	10	15	11	10	21	12	11	17	150
2009 to 2010	7	13	12	3	9	8	9	16	8	9	23	12	11	140
2010 to 2011	11	9	11	11	3	11	7	10	17	8	11	21	11	141

Source: Nebraska Department of Education, 2011

The low ratio of students per teacher has some positive benefits. Some of those benefits include the individual attention (one-on-one) that a smaller class can offer. Currently, there are federal funding incentives for classes that are at or under 18 students per teacher.

The downside of a one (1)-unit per grade school, with an average of 11 students as compared to a class size around 20 students per teacher, is that there can be a higher cost per student. Typically, the same amount of infrastructure, utilities, building requirements, benefits, teachers, administration, and support staff are required with the larger classes as compared to smaller class numbers.

In 2010, Hayes Center Public School district had an evaluation of \$98,790,488. The following is the summary of an excerpt from Hayes Center 2010-2011 school budget to demonstrate the current fiscal status of the school:

The Hayes Center Public Schools (43-0079) 2010-2011 school year Budgeted Disbursements and Transfer was \$3,929,739.58, with \$976,440.36 in cash reserve.

Source: Hayes Center Public Schools (43-0079)



The following table depicts the total students for 2011-2012, adjusted general fund operation expenditures, number of students, and expenditures per student. The table highlights the school districts in Hayes County and the adjacent and regional school districts. In using 135 students, the total expenditure cost per student is approximately \$13,614 for the 2011-2012 school years. Although the cost per student is not the highest regionally as compared to neighboring counties and school districts, it is significantly more than most larger and multiple unit school districts schools such as North Platte and McCook.

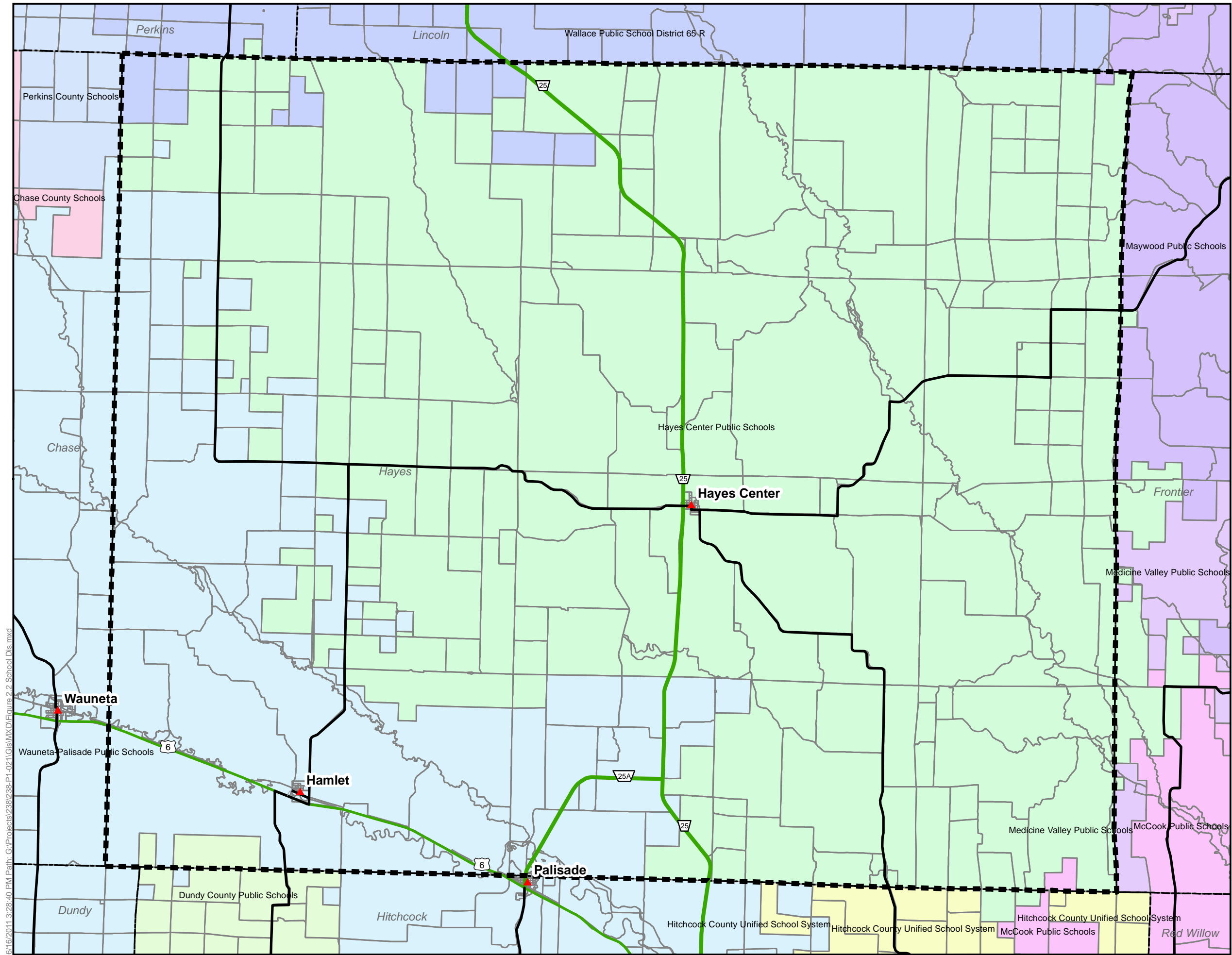
NEBRASKA DEPARTMENT OF EDUCATION					
SCHOOL FINANCE AND ORGANIZATION SERVICES					
2011/12 TEEOSA, FORMULA STUDENTS, MODEL B235					
County	County / District Number	District / System Name	Formula Students	Adjusted General Fund Operation Expenditures	Adjusted General Fund Operating Expenditures per Formula Student
LINCOLN	56-0001-000	NORTH PLATTE PUBLIC SCHOOLS	4,014.83	\$27,988,836.14	\$6,971.36
RED WILLOW	73-0017-000	MC COOK PUBLIC SCHOOLS	1,376.89	\$9,866,863.85	\$7,166.05
LINCOLN	56-0006-000	BRADY PUBLIC SCHOOLS	202.96	\$1,704,433.61	\$8,397.96
HITCHCOCK	44-0070-000	HITCHCOCK CO SCH SYSTEM	261.9	\$2,259,766.15	\$8,628.37
LINCOLN	56-0037-000	HERSHEY PUBLIC SCHOOLS	499.73	\$4,520,970.72	\$9,046.79
CHASE	15-0010-000	CHASE COUNTY SCHOOLS	555.7	\$5,087,632.85	\$9,155.36
LINCOLN	56-0055-000	SUTHERLAND PUBLIC SCHOOLS	355.87	\$3,386,034.43	\$9,514.71
LINCOLN	56-0007-000	MAXWELL PUBLIC SCHOOLS	272.14	\$2,721,451.29	\$10,000.16
FRONTIER	32-0125-000	MEDICINE VALLEY PUBLIC SCHOOLS	211.44	\$2,169,068.91	\$10,258.72
DUNDY	29-0117-000	DUNDY CO STRATTON PUBLIC SCHS	367.88	\$3,826,668.53	\$10,402.07
FRONTIER	32-0046-000	MAYWOOD PUBLIC SCHOOLS	148.81	\$1,572,732.23	\$10,568.42
FRONTIER	32-0095-000	EUSTIS-FARNAM PUBLIC SCHOOLS	206.06	\$2,241,705.86	\$10,878.85
LINCOLN	56-0565-000	WALLACE PUBLIC SCH DIST 65 R	182.37	\$2,164,545.40	\$11,868.83
LINCOLN	56-0565-000	WALLACE PUBLIC SCH DIST 65 R	182.37	\$2,164,545.40	\$11,868.83
PERKINS	68-0020-000	PERKINS COUNTY SCHOOLS	367.87	\$4,866,494.65	\$13,228.93
HAYES	43-0079-000	HAYES 43-0079-000 HAYES CENTER PUBLIC SCHOOLS 1E	135.39	\$1,843,286.23	\$13,614.40
CHASE	15-0536-000	WAUNETA-PALISADE PUBLIC SCHS	185.9	\$2,571,209.20	\$13,831.17
GRANT	38-0011-000	HYANNIS AREA SCHOOLS	128.37	\$1,898,680.25	\$14,790.27

Table 2.2.2 - Source: Nebraska Department of Education 2011

Figure 2.2 depicts the school district boundaries within Hayes County. There are other school districts not within Hayes County that students are enrolled in. The following table is a list of those school districts:

- Dundy County Public Schools (29-0117)
- Maywood Public Schools (32-0046)
- McCook Public Schools (73-0017)
- Wallace Public Schools (56-0565)
- Wauneta – Palisade Public Schools (15-0565)

Additionally, Hayes County School District serves students from other counties. The Hayes Center Public School (43-0079) serves portions of Frontier County, Hitchcock County, and Lincoln County.



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- Legend**
- Nebraska
 - School Districts**
 - Chase County Schools
 - Dundy County Public Schools
 - Hayes Center Public Schools
 - Hitchcock County Unified School System
 - Lincoln Public Schools
 - Maywood Public Schools
 - McCook Public Schools
 - Medicine Valley Public Schools
 - Perkins County Schools
 - Wallace Public School District 65 R
 - Wauneta-Palisade Public Schools

Source:
US Census Bureau,
Geography Division - 2009

Figure 2.2
School District
Boundaries
Hayes County, Nebraska



Post Secondary School

Hayes County does not comprise of any post-secondary schools. However, the following two-year colleges are located up to a maximum distance of approximately 120 miles or 2-1/2 hours from Hayes Center.

- Mid-Plains Community College – McCook, NE---1 hour
- Mid-Plains Community College – North Platte, NE---1-1/2 hours
- Nebraska College of Technical Agriculture – Curtis, NE---1-1/2 hours
- Colby Community College – Colby, KS---2 hours
- Northwest Kansas Technical School – Goodland, KS---2-1/2 hours

The University of Nebraska-Lincoln Institute of Agriculture and Natural Resources has online remote and independent study courses that accompany curriculum at Mid-Plains Community College. Many of these online and distance education courses are related to agriculture, livestock management, business, communication and a variety of general studies. These resources available to southwestern Nebraska, allows residents to participate in a host of post-secondary education courses without moving out of Hayes County. Mid-Plains Community College also has extended campuses that are even closer to Hayes Center. There are four total: Broken Bow, Imperial, Ogallala, and Valentine. The Imperial campus is only one (1) hour from Hayes Center.

In September of 2009 Hayes County completed a Multi-Jurisdictional Hazard Mitigation Plan. This plan covered hazardous risk areas such as thunderstorm / tornadoes, severe winter storm, drought/extreme heat, flooding, and wildfire. The purpose of this plan is reducing the vulnerability and affects of disasters to residents, businesses and property owners, and operators of critical infrastructure. The planning process identified hazards that most affect Hayes County and developed a prioritized mitigation plan to reduce potential damages to life, property, and infrastructure should disasters occur.

Emergency Management

The local participation for this plan created a planning team in the summer of 2008. The process included participants from the Village of Hamlet, Village of Hayes Center, and Hayes County. This comprehensive disaster plan has referred the details and procedures for hazardous mitigation throughout Hayes County to the 2009 Multi-Jurisdictional Hazard Mitigation Plan and its planning group members. Additionally, some key emergency components of the Hayes County Comprehensive Plan include Police and Law Enforcement, Fire/Emergency Services, and Flood Management.

Police & Law Enforcement

The Hayes County Sheriff's office is located at 505 Troth Street, Hayes Center, Nebraska 69032. The Hayes County Police Department has one (1) Sheriff, Thomas Dow, and one (1) Deputy. There are Nebraska State Troopers that also have jurisdiction in Hayes County, but there are only the two (2) county officers that serve the 713 sq. miles. There are also two (2) Games & Parks officers with vehicles and radios, but their primary job is to maintain security at the parks in Hayes County. The County Sheriff's is responsible for prisoners; based on information from the Local Emergency Operations Plan, prisoners in Hayes County are transported to Trenton, NE. These prisoners are confined in Trenton because the jail in Hayes County does not meet the standards set by Nebraska Commission on Law Enforcement and Criminal Justice.



Fire & Emergency Services

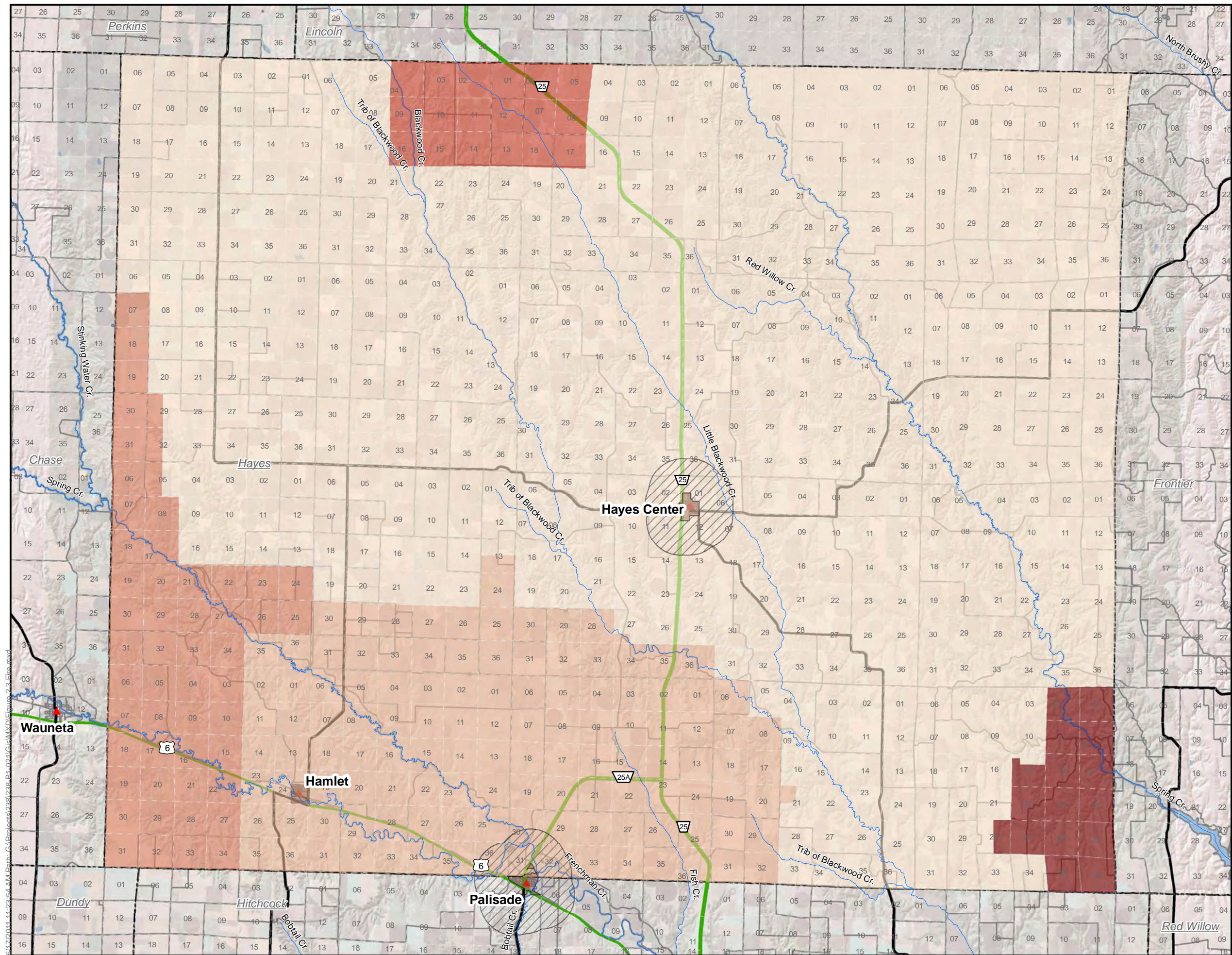
The Hayes County Volunteer Fire Department is located at 500 Tate Street, Hayes Center, Nebraska 69032. Jeffrey Unger is the current Fire Chief. As seen in Figure 2.3 the Hayes County Fire Department is responsible for 333,000 acres, or about 515 square miles. The major concerns are the many acres of open range, farmland, rural residential fires, and hazardous materials storage. There are approximately ten (10) volunteer firefighters for Hayes County. Historically, Hayes County fire department and the volunteers have met the expectations of county residents during times of need.



Hayes County Fire Department has two (2) pumpers, one (1) tanker, one (1) pumper/tanker truck, two (2) rescue units, and four (4) grass/weed trucks. Within Hayes County there are five (5) separate fire districts. The Hayes Center district covers about 75 percent of the county. Wauneta, Palisade, Culbertson, and Wallace also have some area of jurisdiction within Hayes County.

Flood Management

Hayes County participates in the Federal Emergency Management Agency (FEMA) program and the maps were last revised with an effective date of February 6, 2008. Floodplains can create challenges for future growth, development, and infrastructure. The primary development areas for growth in Hayes County are around the communities Hayes Center and Hamlet. Hayes Center does not have any 'Zone A', 1% chance of flooding or historically referred to as a 100-year floodplain, within the corporate limits, see Figure 2.4. Hamlet does contain some 'Zone A' designations within corporate limits which are south of the NKCR Railroad to U.S. Highway No. 6. The majority of development within Hamlet is north of the NKCR Railroad, primarily out of the 'Zone A' designation, see Figure 2.4. Throughout Hayes County and due to its rural character, floodplains are primarily located in low lying regions in agricultural areas, void of buildings, structures, and other development. Another issue when analyzing floods, are dams. Figure 2.5 shows a map of the current dams in Hayes County.



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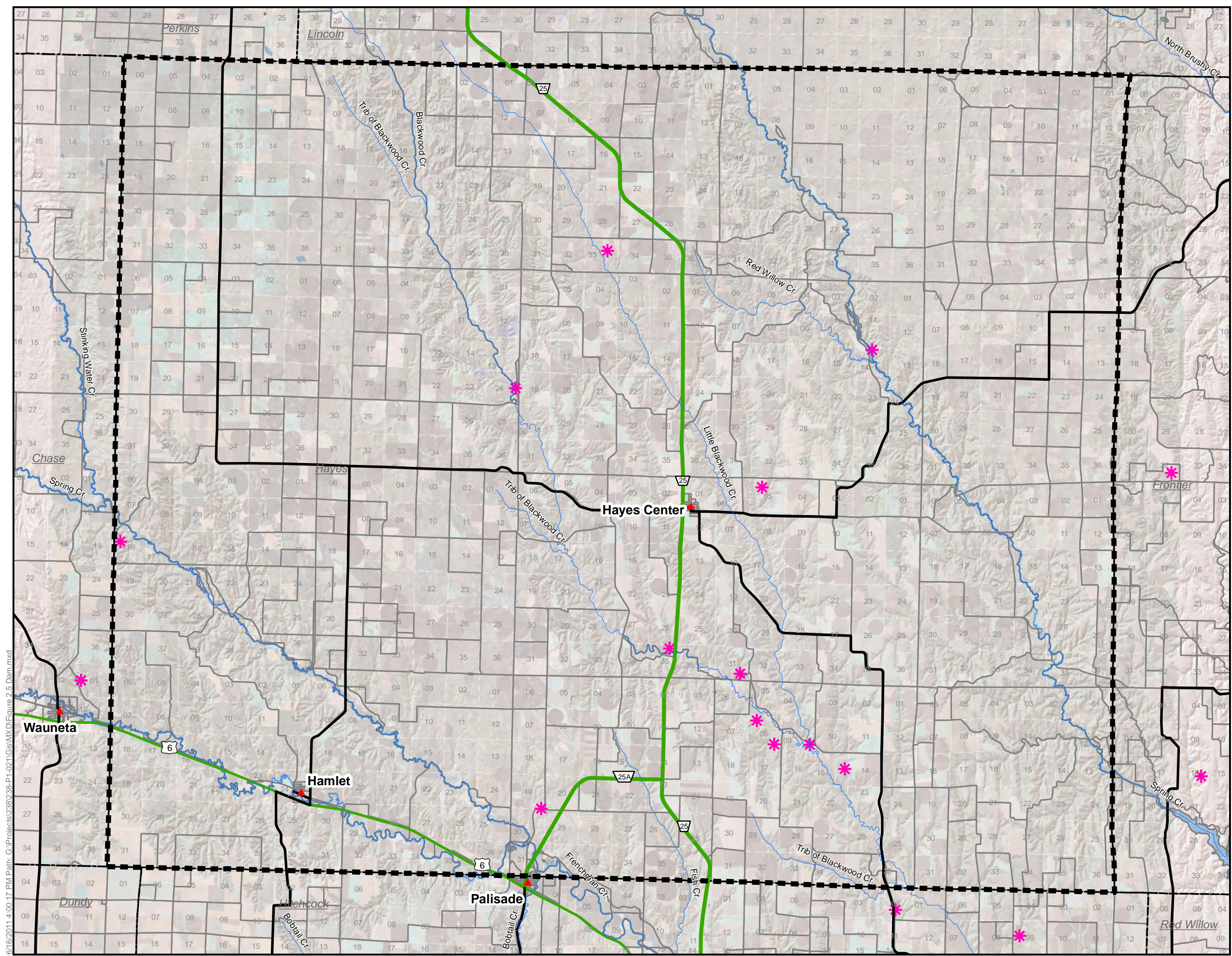
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- Extraterritorial Jurisdiction
- Corporate Limits

Fire District

- Hayes Center
- Palisade
- Wauneta
- Wallace
- Culbertson

Figure 2.3
Fire District Map
Hayes County, Nebraska



6/16/2011 4:00:17 PM Path: G:\Projects\238\238-P1-021\GIS\MXD\Figure 2.5 Dam.mxd

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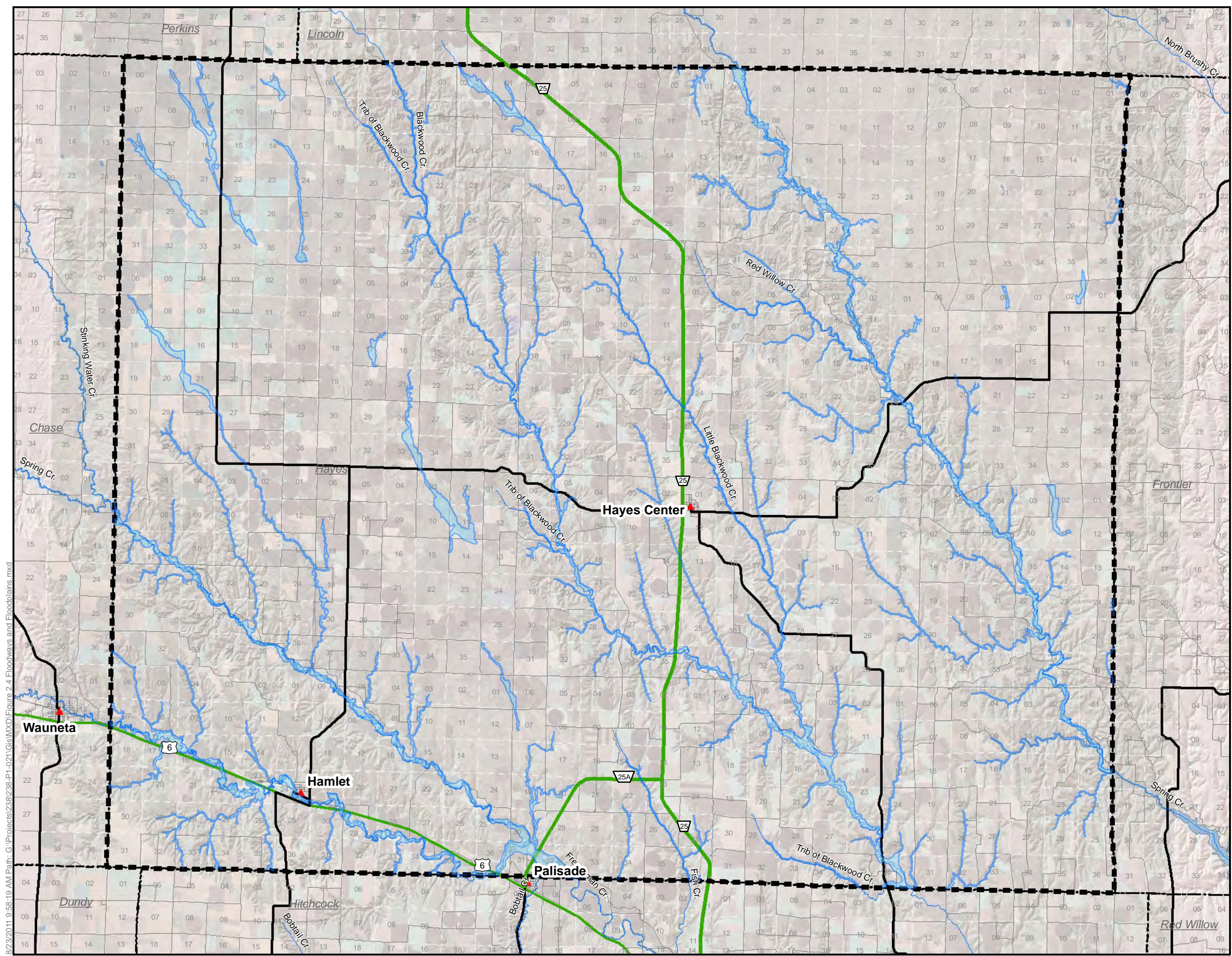


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* Dam

Source:
Conservation & Survey Division,
University of Nebraska -
Lincoln (CSD) - 1996

Figure 2.5
Dam Overlay
Hayes County, Nebraska



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Legend
1% Annual Exceedance Probability

Source:
Fema-02/06/2008

Figure 2.4
Floodways &
Floodplains
Hayes County, Nebraska

8/23/2011 9:58:19 AM Path: G:\Projects\238\238-P1-021\GIS\MXD\Figure 2.4 Floodways and Floodplains.mxd

Transportation systems are important in any community or county because this system controls interactions, or lack of interactions, between places. These links help people get to work, school, the store, and back home again. In order for other aspects of the community to be successful, there needs to be roads, sidewalks, and bridges to connect all of these areas with each other. There are two (2) major highways that run through Hayes County: Highway 25 running north to south and Highway 6 running east to west. These are maintained by the State of Nebraska. Primarily these are the two (2) most used roads to get in and out of the county. Continually maintaining and improving these highways, as well as connecting roadways, will be one of the most beneficial ways in expanding positive assets of the county. Focusing on these areas will help to determine a pattern for future land use development within Hayes County.

Transportation

Existing Conditions

Hayes County completed its 1 & 6 Year Road Plan in January 2011. This plan is in place to help guide achievable transportation development for the first year, and development goals for the other six (6) years. Figure 2.6 shows Hayes County's 1 & 6 Year Road Plan. Any type of improvement for the county roads will be beneficial to Hayes County residents. There is also a 1 & 6 Year Road Plan that the State of Nebraska must complete every year. This plan is specifically for the state's highways, and again should be considered as a guide for future development and improvements. The current 1 & 6 Year Plan runs from 2011 – 2016 in the state and will be revisited every year. Currently there are not projects within Hayes County that will be completed in 2011. As seen in Figure 2.7, the six (6) year planned projects include two (2) within the county. The whole stretch of Highway 6 that runs through Hamlet in Hayes County is one of the planned projects. Then the portion of Highway 25 that runs south from Hayes Center to the connector at Highway 25A is the second planned phase for Nebraska's six (6) year plan. The Nebraska Department of Roads is comprised of eight (8) separate districts. Hayes County lies within district number seven (7). Within this district there is no interstate system. The counties within district seven (7) include: Hayes, Perkins, Chase, Frontier, Gosper, Phelps, Kearney, Dundy, Hitchcock, Red Willow, Furnas, Harlan, and Franklin Counties. When the State of Nebraska completes their 1 & 6 Year Road Plan they look at each of the eight (8) districts when considering improvements for the state.

Continually improving existing transportation infrastructure will be important to the growth and success of Hayes County. Currently Hayes County has a total of 608 miles of county road with 332.5 miles of gravel. There are 43 miles of State of Nebraska Highway that run through the county. There are also a total of 36 bridges in the county. Continually analyzing the conditions of these roads and bridges are important to the safety of Hayes County residents. It is also important when considering where new development should take place, and when taking into account ease of access throughout the county. New development should take place in areas that already have an ease of access, and in places where roadways and bridges are in good condition.

LEGEND

1 YEAR PLAN
6 YEAR PLAN

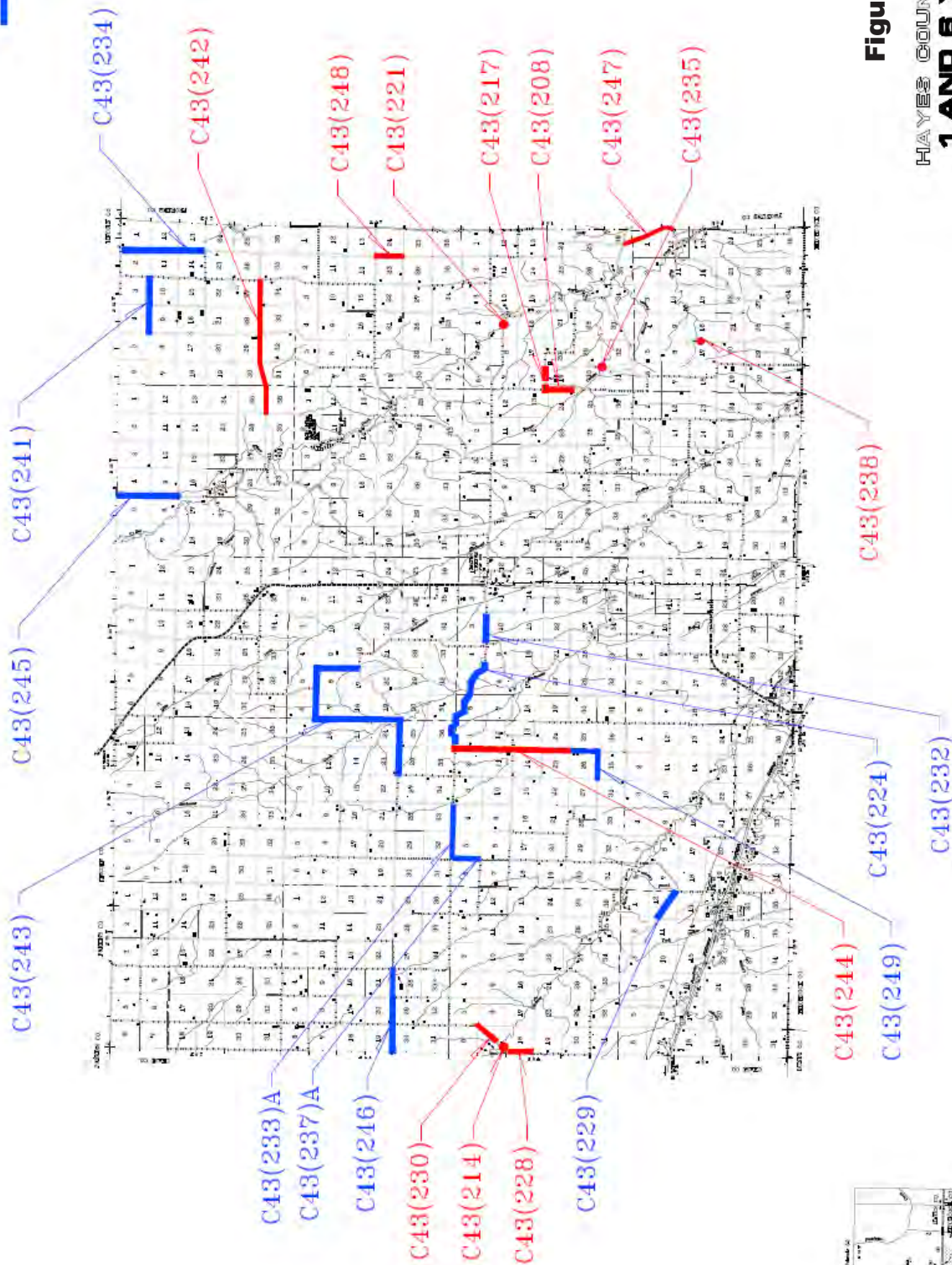


Figure 2.6

HAYES COUNTY, NEBRASKA
1 AND 6 YEAR PLAN
BEGINNING JANUARY 1, 2011

District Seven



Figure 2.7

Future Improvement Plan

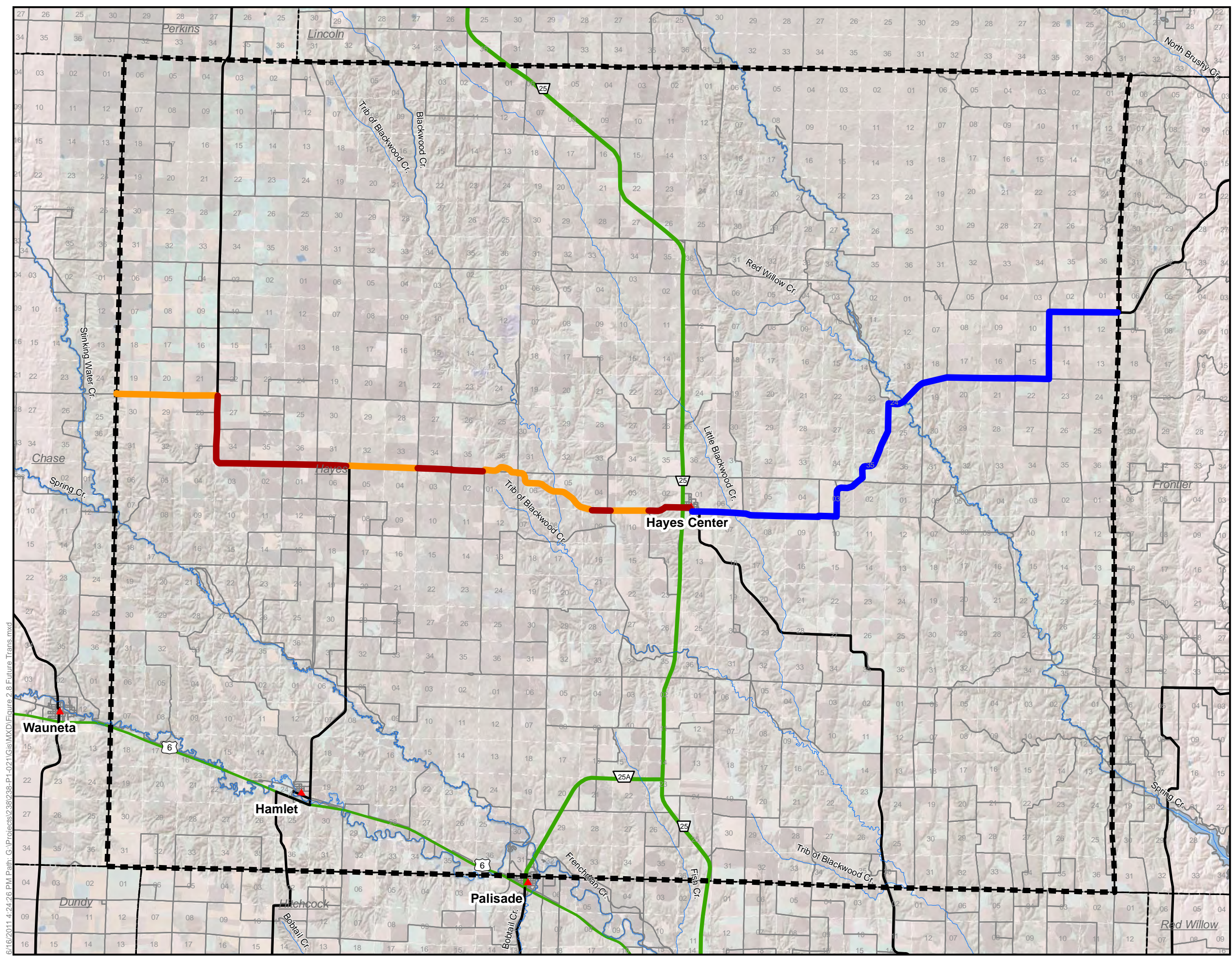
The county's 1 & 6 Year Road Plan has many projects, and comparing that with the transportation plan from the previous Comprehensive Plan, there are some similarities. One of the things residents discussed was a lack of roadways, especially east to west. The 1 & 6 Year Road Plan does have some planned improvements to the west of Hayes Center. Most of those planned projects are in the six (6) year plan. After analyzing the two (2) previous plans, 1 & 6 Year Road Plan and the previous Transportation Plan from the Comprehensive Plan, there are some areas of focus. Figure 2.8 shows the proposed Future Transportation Improvement Plan for Hayes County.

First is Hayes Center West, as seen in Figure 2.8, which would correlate with a few planned projects in the six (6) year plan as well as from community input and the previous Transportation Plan. In order to make improvements more cost effective, we have strayed from the previous Transportation Plan by staying within the county road's right of way. The six (6) year plan proposes nine (9) miles of improvement while Hayes Center West proposed improvements is a total of 19 miles. These are not interconnected, but they are all on a gravel road heading west from Hayes Center into the western side of Chase County. The plan we propose, Hayes Center West, is to continue with the six (6) year plan's goals, and to continue to improve other areas of that road that are not on the plan. Most of these improvements would include maintenance, widening of the roads, and improved drainage through ditches. This road running west from Hayes Center seems to be of high importance for residents. This could potentially connect drivers to the communities of Imperial, Wauneta, or Grant. This will also help add to the ease of access within Hayes County. Completing the sections of the six (6) year plan for Hayes Center West would cost 90,000-120,000 dollars for the nine (9) miles, or approximately 10,000 dollars per mile. The approximate cost for major road improvements would be 550,000-725,000 dollars per mile with a break-down of 350,000-375,000 for asphaltic pavement surfacing per mile, with an addition of 200,000-350,000 dollars per mile for vertical alignment, right-of-way acquisition, and utility relocation.

The second area of focus is Hayes Center East; this road plan correlates with the previous Transportation Plan as well. In order to make improvements more cost effective we have strayed from the previous Transportation Plan by staying within the county road's right of way. There are no scheduled improvements for this roadway in the 1 & 6 Year Road Plan, but connections east and west through the county was important to residents during steering group meetings. It also must have been important when the previous Comprehensive Plan was written because this project area and the one before were Phases one (1) & two (2) in the previous Transportation Plan, showing importance over other areas. This plan again would be to do general maintenance on pot holes, ruts, and ridges as well as to widen the roads and improve drainage. This proposed roadway would help connect drivers to Curtis and to Interstate-80. The Hayes Center East road is approximately 17 miles of improvements that would cost approximately 10,000 dollars a mile.

Railroad

There is one (1) railroad in Hayes County. The railway line is called the Nebraska Kansas Colorado Railway (NKCR). This railroad follows Highway 6 from Palisade through Hamlet, Wauneta and then to Imperial in Chase County. This railway's northern edge ends in Imperial, but the southern end connects to a different railroad in Culbertson and then connects to a NKCR interchange station in McCook. The NKCR is a shortline partner with Burlington Northern Santa Fe (BNSF). The BNSF operates in 28 states and has seven (7) short line partners, including the NKCR. The NKCR operates approximately 559 miles of track through the three (3) states carrying wheat, corn, coal, and fertilizer.



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- Hayes Center East
- Hayes Center West
- 2011 One and Six Year Road Plan

Figure 2.8
Future Transportation
Improvement Plan
Hayes County, Nebraska

8/16/2011 4:24:26 PM Path: G:\Projects\238\238_P1-021\GIS\MXD\Figure 2.8 Future Trans.mxd

This section is an inventory of the current utilities and utility companies that are present within Hayes County. Reviewing this section may help to inform decision-makers in areas that are lacking service.

Utilities

Electrical

There are three (3) electrical companies that service Hayes County including Southwest Public Power District, McCook Public Power District, and Midwest Electric Cooperative Corporation. They serve 431, 17, and 25 residential homes, respectively.

Water

There is no county water system. The county is sitting on top of the Ogallala aquifer which supplies drinking and agricultural water to Hayes County through wells. Hayes Center has a public water system, but the rest of the county uses private wells.

Gas

There are no natural gas providers within Hayes County. Residents in Hayes County have personal propane tanks that they use for gas, instead of having a utility company.

Sewer

There is no county sewer system; most residents use private septic tanks.

Fiber

Fiber to the home (FTTH/FTTP) is a new technology that could be an asset to Hayes County residents. This technology is a fiber optic cable connection right to individual homes. These cable connections deliver a multitude of digital information including telephone, video, internet, data, etc. FTTH provides faster connection speeds and carrying capacity than traditional cables, and it requires a single fiber pair cable instead of individual cables for each TV, phone, and computer. Experts call FTTH “future-safe” because of the virtually unlimited bandwidth and the long reach of the technology. This could be great resource for residents that want to open a business, or want to work from home.

Healthcare

Hospitals

Chase County Community Hospital is located at 600 W. 12th St. in Imperial. It is a 25-bed critical access hospital. There is an emergency room at the facility, as well as operating rooms and an outpatient facility. This hospital has six (6) full-time physicians, and 16 visiting specialty doctors. The building was constructed in 1975.

Community Hospital is located at 1301 East “H” Street in McCook. This is a not-for-profit hospital that was constructed in 1974. The building was then remodeled in 1989, constructed an addition in 1996, and started a two (2) phase addition in late 2009. This hospital is JCAHO accredited. Community Hospital is a regional hospital equipped to care for more than 40,000 people. There are over 50 medical staff members, and nearly 30 of those are visiting specialists ranging from cardiology to vascular/thoracic.

Dundy County Hospital is located at 1313 N. Cheyenne in Benkelman. The building was constructed in 1968, with an addition added later. The building is still in good condition. This hospital has 13 physicians that represent a variety of medical specialties as well as two (2) Doctors of Osteopathy (D.O.) and three (3) Physician Assistants (PA-C). The hospital offers a variety of services ranging from a patient financial counselor to orthopedics.

Medical Clinics

Chase County Clinic has two (2) locations. One is in Imperial and the second is in Wauneta. They are both serviced by Chase County Community Hospital.

Curtis Medical Center is located at 302 East 6th St. in Curtis. This facility is also a satellite clinic of the Community Hospital in McCook, and has been since 1999. The clinic is open Monday through Friday. Curtis Medical Center has one (1) full time Physician Assistant (PA-C) and three (3) rotating Medical Doctors (M.D.).

Dundy County Quality Healthcare Medical Clinic is located at 1313 N. Cheyenne in Benkelman. This clinic is serviced by and shares the same building with Dundy County Hospital.

McCook Clinic is located at 1301 East “H” St. in McCook. It is serviced by and shares the same building with Community Hospital.

Trenton Medical Clinic is located at 406 East 1st St. in Trenton. This facility is a satellite clinic of the Community Hospital in McCook. The building was constructed in 1995, and Community Hospital began managing the clinic early in 1999. The office is open Mondays, Wednesdays, Thursdays, and Fridays. They are a rural health clinic that provides routine healthcare services for the whole family. There is one (1) full-time Physician Assistant (PA-C), and three (3) rotating Medical Doctors (M.D.).



Hitch & Hay Public Transit

There are no healthcare facilities within Hayes County’s boundaries. One resource that many people are utilizing is called the “Hitch & Hay Public Transit” (HHPT). This program runs five (5) days a week and will come pick residents up in Hitchcock and Hayes Counties as well as people from McCook, Benkelman, and Imperial. Reservations should be made in order for the drivers to create the most direct route. The van will pick people up at their door if they live in town, or a designated place will be determined for rural passengers. The van will then take users to a healthcare facility. Fares are charged for each way, and a half-fare is charged if you need an escort for disability assistance. The HHPT is available to everyone, regardless of age. This is a great resource for Hayes County residents, especially for groups of people that have a hard time getting around. The HHPT will take riders anywhere they need to go from the grocery store, to healthcare facilities.

Nursing Home Facilities

Centennial Park Retirement Village is located at 510 Centennial Circle in North Platte. This facility has a range of living choices including independent living, assisted living, and skilled nursing home care. They are located next to great amenities.

El Dorado Manor is located at JCT HWY 25 & 34 in Trenton. This nursing home facility has amenities and is Medicaid certified.

Grandview Retirement Center/Hitchcock County Senior Center is located in Stratton. They are apartment style living for senior citizens.

Heritage of Wauneta is located at 427 Legion St. in Wauneta. This nursing home facility has many amenities including regular physician visits, transportation, therapies of all sorts, and emotional support.

Hidden Pines Assisted Living Community is located in McCook and has ten (10) total apartments. They are a part of Hillcrest Nursing Home.

Hillcrest Nursing Home is located at 309 W. 7th St. in McCook. This facility opened in 1963 with a mixture of 23 private and semi-private rooms. Through the years they have gone through renovations and additions including assisted living apartments, a special care unit for Alzheimer's residents, a heavy care unit, and a childcare center licensed for 45 children. Now the nursing home has 120 beds with 150 employees.

Imperial Manor Nursing Home is located at 933 Grant St. in Imperial. This facility has 53 certified beds with many services provided onsite.

Linden Court is located at 4000 W. Philip Avenue in North Platte. This facility has several living options like a special Alzheimer's and Dementia environment, short term/rehabilitation care, or skilled nursing/long term care. This facility is part of Vetter Health Services.

Linden Estates is located at 3700 W. Philip Avenue in North Platte. This facility has both independent and assisted living. This facility is part of Vetter Health Services.

Sunset Haven is located at 901 Howard Avenue in Curtis. This facility participates with Medicare and Medicaid.

Public Buildings/Facilities

This section should be used as an inventory for county buildings, facilities, and services for Hayes County. After looking at this list, decision-makers should determine whether more public services are needed at this time or in the near future. If so, then decision-makers need to start planning for new infrastructure or improvements within the county.

County Court House:

The Hayes County Court House is located at 505 Troth St. in Hayes Center. There is a Magistrate as well as a County Attorney.

County Extension Office:

The Hayes County Extension Office has four (4) workers affiliated with it. There are three (3) Extension Educators and one (1) Extension Office Manager. They are associated with University of Nebraska-Lincoln. The extension office is located at 505 Troth St. in Hayes Center, which is inside the County Court House.

Farmer's Co-op:

The Hayes County Farmer's Non-stock Co-op is located at 610 Tate Avenue in Hayes Center. It has some farm supplies like fuel, fertilizer, and petroleum.

Hayes County Fairgrounds:

Hayes County Fairgrounds are located in Hayes Center, and the fair is held from a Thursday to a Sunday in July 2011.

Library:

The Hayes Center Public Library is located at 402 Troth St. in Hayes Center.



County Services

Emergency Management:

Hayes County has an Emergency Manager as well as an Emergency Notification System, CodeRed.

Farm Service Agency (FSA):

Hayes County has an FSA located in Hayes Center that services Hayes and Hitchcock counties. They are responsible for farm commodity programs, ag-loans, crop insurance, and conservation programs.

Natural Resource Conservation Service (USDA NRCS):

Hayes County has a USDA NRCS field office located in Hayes Center. The office is there for technical assistance for implementation of practice for conservation of natural resources such as residue management, ponds, terraces, tree and grass plantings, and nutrient and irrigation water management.

Newspaper:

Hayes County has a newspaper called the Times Republican. It is located in Hayes Center. The paper is published once a week, on Thursdays, and 867 copies are circulated.

Treasurer:

Hayes County Treasurer is responsible for collecting taxes and revenues, issuing motor vehicle, boat, and snowmobile registrations, and issuing driver's licenses, permits, I.D. cards, and school permits. In the Treasurer's office, which is located in the County Court House, there are informational materials available such as C.D.L. books, Nebraska Boating Guide, Provisional operator permits, etc.

Veterans Service Officer:

Hayes County has a Veterans Service Office that is open Wednesday mornings, or by appointment. The Officer is available to assist eligible Veterans file forms for Healthcare, claims development, and other entitlements.

Weed Superintendent:

Hayes County has a Weed Superintendent whose job description includes assisting taxpayers on weed control issues, plant identification, enforcement of State Weed Laws, preparing all required annuals reports to Nebraska Department of Agriculture, and overseeing enforcement of spraying operations.

Section 3: Natural Resources

During the process of formulating a truly “comprehensive” plan for Hayes County, we had to analyze the county’s natural resources. Looking at land, soil, and water specifications will assist decision-makers when planning for future infrastructure. In order for any type of built environment, there must be an understanding of the natural resources available in the area. This section analyzes each natural resource component for Hayes County. Throughout the section there are many maps helping to visually explain Hayes County and its natural resources. This Natural Resources section has the following components:

- Land
- Soils
- Water

Land

Based on the Conservation and Survey Division at the University of Nebraska-Lincoln, there are three (3) different types of topographic regions in Hayes County. They are dissected plains, sand hills, and plains. Dissected plains can be categorized as hilly land with moderate to steep slopes, sharp ridge crests and remnants of old, nearly level plain. These are old plains that have been eroded by water and wind. The sand hills can be categorized as hilly land composed of low to high dunes of sand stabilized by a grass cover. The sand dunes mantle stream-deposited silt, sand and gravel, and sandstone. Sand hills are a region of mixed-grass prairie on grass-stabilized sand dunes. The plains are flat-lying land that lies above the valleys. The materials are sandstone or stream-deposited silt, clay, sand and gravel overlain by wind-deposited silt, which is called loess.

Understanding the topography of Hayes County is important to understanding the county's economy. The success of the beef cattle industry is due to the types of topography and the prairie grass that covers the landscape. Cattle turn grass from the pasture land into protein, and many other products for human consumption. This unique landscape is why Hayes County has a total of 52,000 cattle in 2011, and 17,300 head of beef cattle based on the National Agriculture Statistics Service. The topography of Hayes County also plays into farming practices, and why development occurs in certain places.

Soils

Hayes County is predominately agriculturally-based, so when looking at the county's natural resources we wanted to focus on properties that will assist growing the agriculture industry. There are several different types of soils present in Hayes County; these can all be broken down into many classifications based on slope, percentage of soil type, major and minor types of soil, and degree of drainage. In order to make land use recommendations, decision-makers need to understand how different soil types and slopes can affect future land use, the environment, current residents, crops, and livestock. This section includes the following maps:

- General Soils Map (Figure 3.1)
- Slope by Soil Association Map (Figure 3.5)
- Soil Suitability for Septic Tanks (Figure 3.6)
- Soil Suitability for Sewage Lagoons (Figure 3.7)
- Dryland Capability Classification (Figure 3.8)
- Soil Suitability for Prime Farmland (Figure 3.9).

In Hayes County soils are formed in loess, eolian sand, and alluvium which are all Tertiary-Period materials of the Ogallala Formation. The loess, eolian sand, and alluvium were deposited on a relatively uneven bedrock surface, which consists of Caliche of the Ogallala Formation throughout most of Hayes County, and a small area of Pierre Shale of the Cretaceous Period, in the south-central part of the county. In this small area, which is within the Frenchman Creek and Stinking Water Creek valleys, shale underlies the alluvium for a few miles upstream from the town of Palisade. Well records indicate, however, that most of the Pierre Shale is about 40 feet below ground. The Caliche bedrock is near the surface in northwestern Hayes County. It crops out on the northern valley side of Stinking Water Creek, on the valley sides of Red Willow Creek in the southeastern part of the county; and on the valley sides of Frenchman Creek. The loess is slightly clayey silt and varying amounts of very fine sand. It contains very little or no fine, medium, and coarse sand. The Keith, Colby, Ulysses, Duroc, Kuma, and Scott soils formed on the loess-covered uplands. The very sandy Valent soils and the less sandy Sarben and Jayem soils formed in eolian sand materials. The Bridget soils, on foot slopes and stream terraces, and the McCook soils, on the bottom lands, are examples of soils that formed in silty alluvium washed down from loess-covered uplands. The Gibbon soils, on bottom lands, formed in silty alluvium that is somewhat poorly drained. The soils just mentioned are further analyzed below.

General Soils Map

The first map is the General Soils Map, Figure 3.1. Soils in Hayes County consist of five (5) different soil associations. A soil association is a landscape that has distinctive proportional patterns of soil and typically consists of one or more major soils and at least one minor soil. The associations are named for the major soil(s) that are present. This map was created by the U.S. Department of Agriculture in 1981. The General Soils Map shows these soil-type associations:

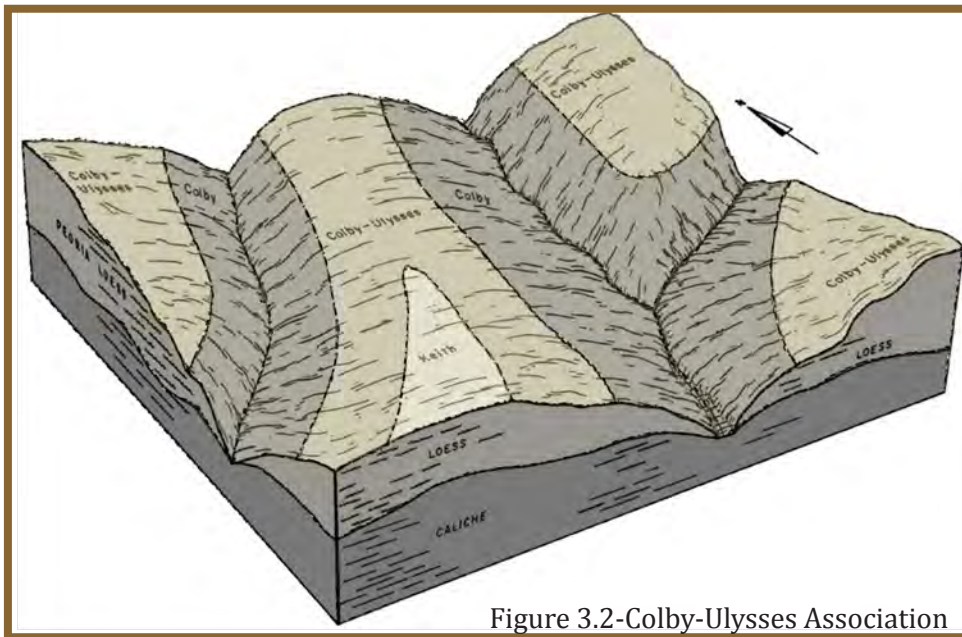


Figure 3.2-Colby-Ulysses Association

1. Colby-Ulysses Association is characterized by upland breaks and canyons as shown in Figure 3.2. Slopes range from 3-60 percent. This association occupies approximately 170,000 acres, or 37 percent of the county. It is 81 percent Colby soils, 17 percent Ulysses soils and two (2) percent soils of minor extent. This soil association, as seen in Figure 3.1, is located in the northeastern, north-central, central, southeastern, and southwestern portions of Hayes County. Colby soils are on side slopes of the upland canyons and on breaks. These soils are strongly sloping to very steep and well drained to excessively drained. Ulysses soils are in plane or concave areas of side slopes on uplands. These soils are gently sloping to moderately steep and are well drained.

Minor soils in this association are Canyon, Keith and Kuma series, and rock outcrops. Canyon soils are shallow to bedrock and are usually on the lower part of side slopes. Keith and Kuma soils are located above the Colby and Ulysses soils on the less sloping divides. Rocky outcrops are usually on the lower part of side slopes.

Farms and ranches in this association are diversified because of the gently sloping and strongly sloping soils for cultivating crops. The moderately steep to very steep soils are used as rangeland. Water erosion and drought are the major hazards to the soils of this association. Continued overgrazing by livestock causes deterioration of the plant community and severe water erosion. As the more palatable plants decrease, shrubs, herbs, and woody plants invade. Therefore, range management that includes proper grazing use, timely deferment of grazing, and a system that alternates grazing with rest each year maintains or improves the range condition.

2. Sarben-McCash-Jayem Association is characterized by nearly level to rolling uplands as shown in Figure 3.3. A few areas are hilly and the slope ranges from 0-20 percent. This association occupies about 130,000 acres, or 29 percent of Hayes County. It is 58 percent Sarben soils, 19 percent McCash soils, 17 percent Jayem soils and six (6) percent soils of minor extent. This soil association, as seen in Figure 3.1, is located in the northeastern, northwestern, and south-east central parts of the county.

Sarben soils are on side slopes and tops of ridges, knolls, and hills. They are gently sloping to steep and are well drained. McCash soils are typically in long, narrow swales of uplands and are also well drained. Jayem soils are nearly level to undulating uplands and are well drained. Minor soils in this association are mainly from the Valent series. Valent soils are rolling and hilly and contain more sand throughout.

Farms in this association are diversified and they are mainly a combination of cash grain and livestock enterprises. Winter wheat, corn, and alfalfa are the main crops grown. Over half of this association is under cultivation. The remainder is in pasture or rangeland. In the northwestern portion of Hayes County, this association has many sprinkler irrigation systems where deep, high producing wells have been drilled. The remainder of the association seems to lack a supply of good groundwater for irrigation. Livestock and domestic wells, however, can be developed through the association.

The major hazards for this association are soil blowing and drought. Keeping adequate amounts of residue on the surface in cultivated areas is needed. Summer fallow is used to build moisture in the subsoil. In addition, maintaining soil fertility is a concern in overall soil management within this association.

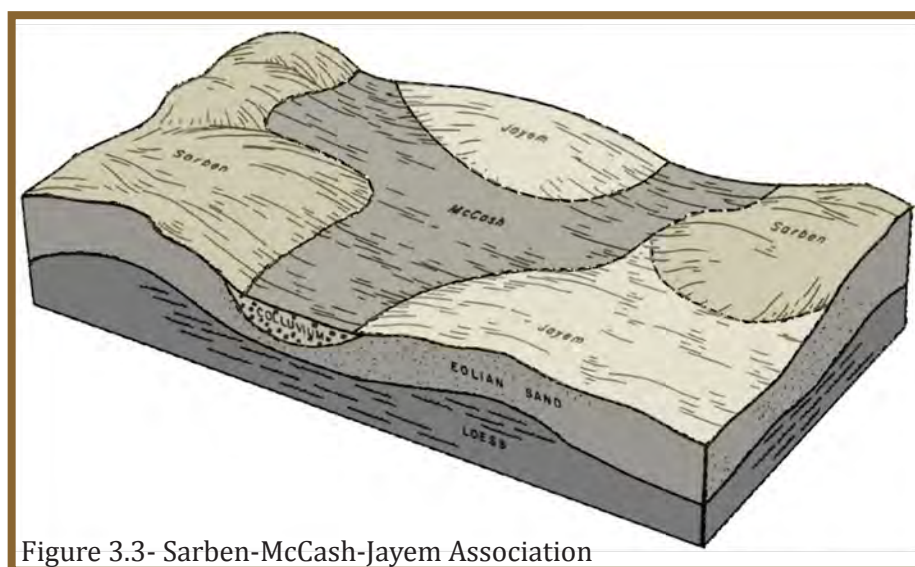


Figure 3.3- Sarben-McCash-Jayem Association

3. Kuma-Keith Association is characterized by long, smooth slopes of upland divides. Slopes in this association range from zero to six (0-6) percent. This association occupies approximately 108,000 acres, or 24 percent of the county. It is 78 percent Kuma soils, 17 percent Keith soils, and five (5) percent are soils of minor extent. Soils of this association, as seen in Figure 3.1, are located in spotted areas through the central, south-central, southeastern, western, and southwestern portions of the county.

Both the Kuma and Keith soils are located on the upland areas within the county. The minor soils in this association are in the Colby, Scott Variant, and Ulysses series. Colby soils are located on strongly sloping to steep areas within this association. The Scott Variant is poorly drained and is located in the depression areas. Ulysses soils have gently sloping to steep slopes and contain less clay in the subsoil than the Kuma and Keith soils.

Farms in this association are mainly a combination of cash grain and livestock production. Winter wheat, corn, and alfalfa are the main crops. Most of this association is farmed. Over half is under dry cultivation. However, the method of irrigation is mostly by gravity systems. High producing wells are common throughout this association.

These soils are susceptible to water erosion and soil blowing hazards. Conservation tillage systems and terracing are needed to reduce water erosion. Leaving crop residue standing over winter reduces soil blowing and is commonly practiced in the area. Summer fallow is used to help build up moisture in the subsoil on dry farmed fields.

4. Valent Association is characterized by hummocks, dunes, and choppy areas in the sandhills. Slopes in this association range from 3-60 percent. This association occupies approximately 29,000 acres, or six (6) percent of the entire county. It is 97 percent Valent soils and three (3) percent minor extent soils. This soils association, as seen in Figure 3.1, is located in select areas in the northeastern, north-central, and west-central portions of the county.

Valent soils are typically comprised of loose fine sand about seven (7) inches thick. Minor soils in this association are mainly of the Jayem and Sarben series. Jayem soils contain more clay in the subsoil than the Valent soils and they are located in nearly level to gently sloping areas. Sarben soils contain more clay throughout and are on the gently sloping to steep side slopes.

Ranches in this association are mainly cattle-calf operations. Some small areas are cultivated and irrigated by center pivot irrigation systems. The main hazards in this association are related to soil erosion from wind and prolonged periods of drought. The main concerns of range management are maintaining or improving desirable kinds of grass by proper grazing or a system that alternates grazing with rest each year, establishing adequate and proper placements of water facilities and salt resources, and reseeding areas that have been cultivated in past years.

5. Bridget-McCook-Gibbon Association is characterized by long, narrow areas on foot slopes, stream terraces, and bottom lands as is shown in Figure 3.4. Slopes in this range are from 0-6 percent. This association occupies approximately 18,000 acres, or four (4) percent of the county. It is approximately 48 percent Bridget soils, 31 percent McCook soils, nine (9) percent Gibbon soils, and 12 percent of minor extent soils. As seen in Figure 3.1, this soils association is located in linear areas along the local streams and waterways in Hayes County.

Bridget soils are on foot slopes and high stream terraces. These soils are nearly level to gently sloping and well drained. McCook soils are in narrow areas along streams and rivers. They are on bottom lands and stream terraces and these soils are nearly level and well drained. Gibbon soils are on bottom lands along streams and rivers. They are nearly level and are somewhat poorly drained. They have a season high water table that is 1.5 to 3.5 feet from the surface. Minor soils in this association are in the Bankard, Duroc, Gannett series and silty Fluvaquents. Bankard soils are on the bottom lands and are somewhat excessively drained and sandy throughout. Duroc soils contain more clay in the subsoil than the major soils and are in lower areas of the high stream terraces. Silty Fluvaquents are in the lowest areas of the bottom lands and are very poorly drained. They are usually covered by shallow water. Gannett soils are in depressions on bottom lands and are very poorly drained. The seasonal high water table ranges from one half (.5) foot above the surface to one (1) foot below the surface.

Farms in this association are diversified and are mainly a combination of cash grain and livestock production. Corn, winter wheat, and alfalfa are the main crops. Some areas are in pasture, both dry farmed and irrigated. Over half of the Bridget soils are irrigated by a gravity system, and the remainder is dry farmed. Most of the bottom lands are used for alfalfa, hay, or pasture. Irrigation wells have been drilled throughout this association. Water erosion and soil blowing hazards occur throughout the Bridget soils. Rare to occasional flooding is a hazard on the McCook and Gibbon soils. Maintaining soil fertility is a concern of managing the cultivated areas within this association.

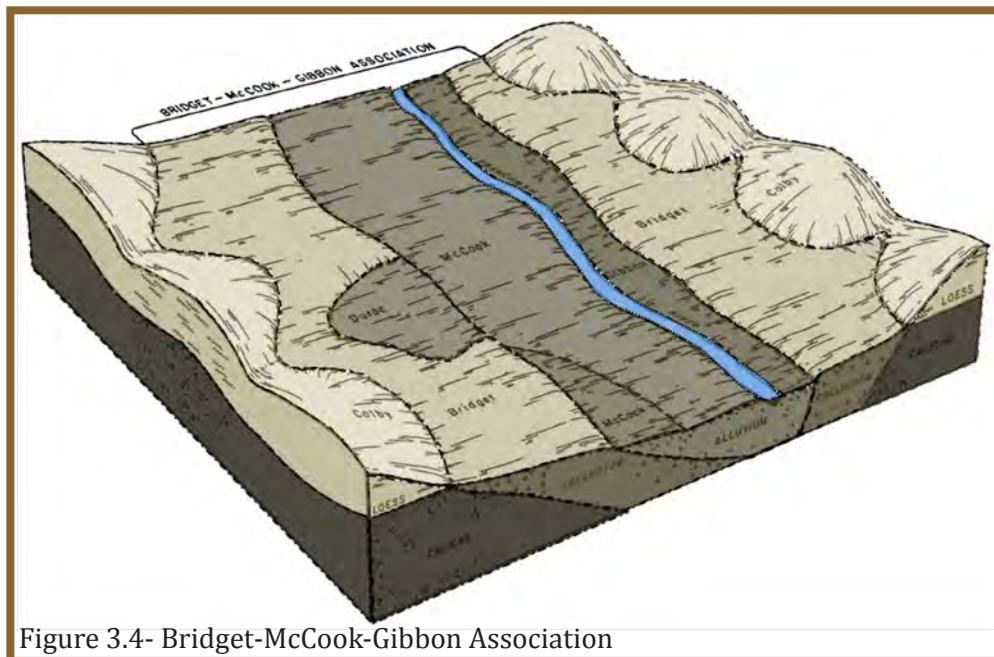


Figure 3.4- Bridget-McCook-Gibbon Association

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

GENERAL SOIL MAP **HAYES COUNTY, NEBRASKA** FIGURE 6

Scale 1:190,080
1 0 1 2 3 4 Miles
1 0 1 2 3 4 5 6 Kilometers

SOIL LEGEND*

- 1 Colby-Ulysses association: Deep, gently sloping to very steep, well drained to excessively drained, silty soils formed in loess; on uplands
- 2 Sarben-McCash-Jayem association: Deep, nearly level to steep, well drained, sandy and loamy soils formed in eolian and colluvial materials; on uplands
- 3 Kuma-Keith association: Deep, nearly level to gently sloping, well drained, silty soils formed in loess; on uplands
- 4 Valent association: Deep, gently sloping to hilly, excessively drained, sandy soils formed in eolian sands; on uplands
- 5 Bridget-McCook-Gibbon association: Deep, nearly level to gently sloping, well drained to somewhat poorly drained, silty soils formed in colluvium and alluvium; on foot slopes, stream terraces, fans, and bottom lands

*The texture given in the descriptive headings refers to the surface layer of the major soils in each association.

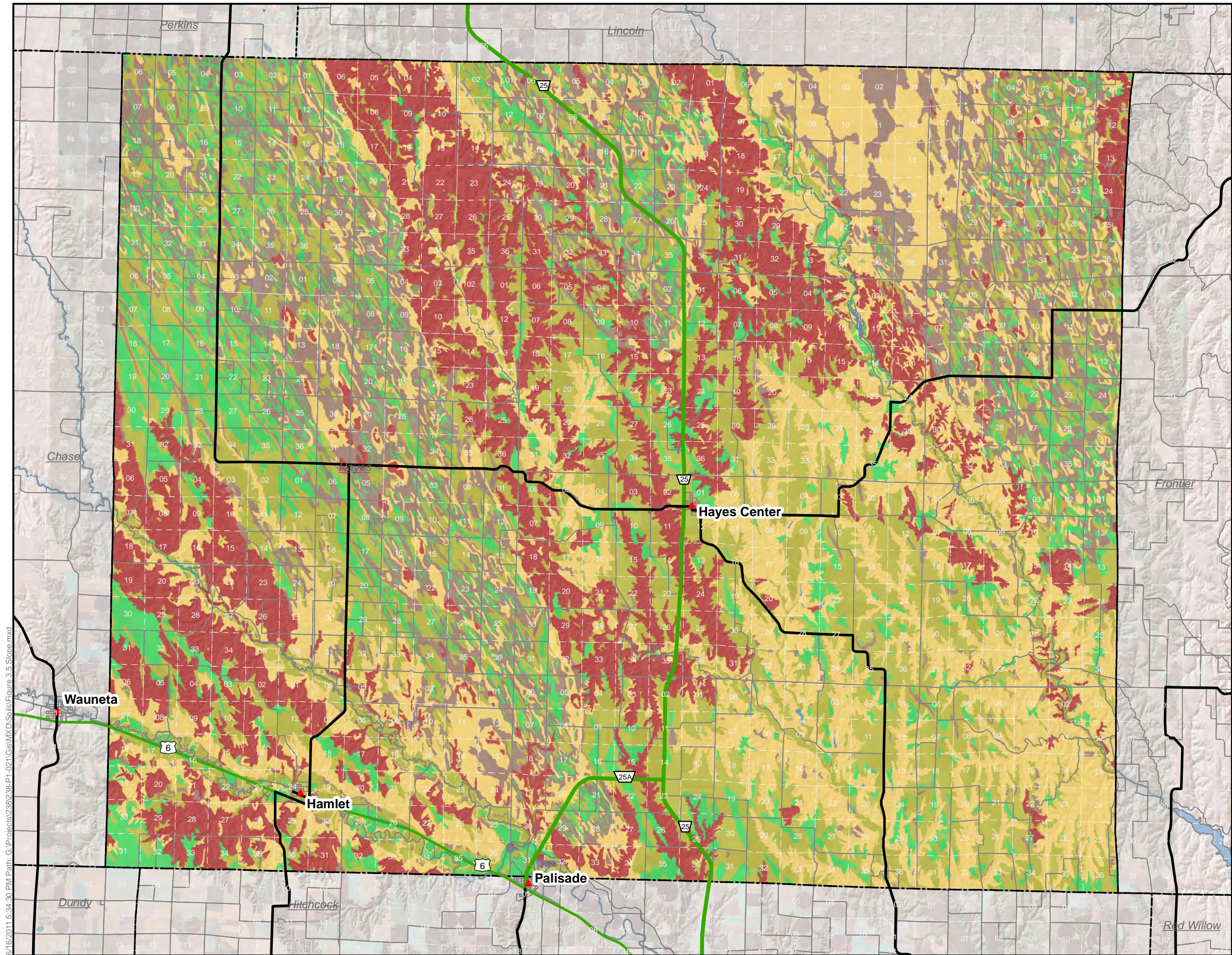
Compiled 1981

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

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

Slope Map

The slope of the soils is an important aspect to the land when it is in relationship with agricultural or development uses. When compiling data to find relationships in slope, we had to analyze all 48 types of soil within Hayes County. We then found relationships between degrees of slope for different soil types; therefore, we grouped soil types together into soil associations based on degree of slope. As seen in the map (Figure 3.5), there are five (5) different levels of slope. The ranges are as follows: 0-1 percent is nearly sloping; 1-3 percent is gently sloping; 3-6 percent is moderately sloping; 6-60 percent is strongly sloping; and 20-60 percent is very steep. There are different soil types in each sloping range, but the main focus was to understand the degree of slope in different parts of the county. Understanding the slope in a specific region is beneficial for deciding how the land should be used.



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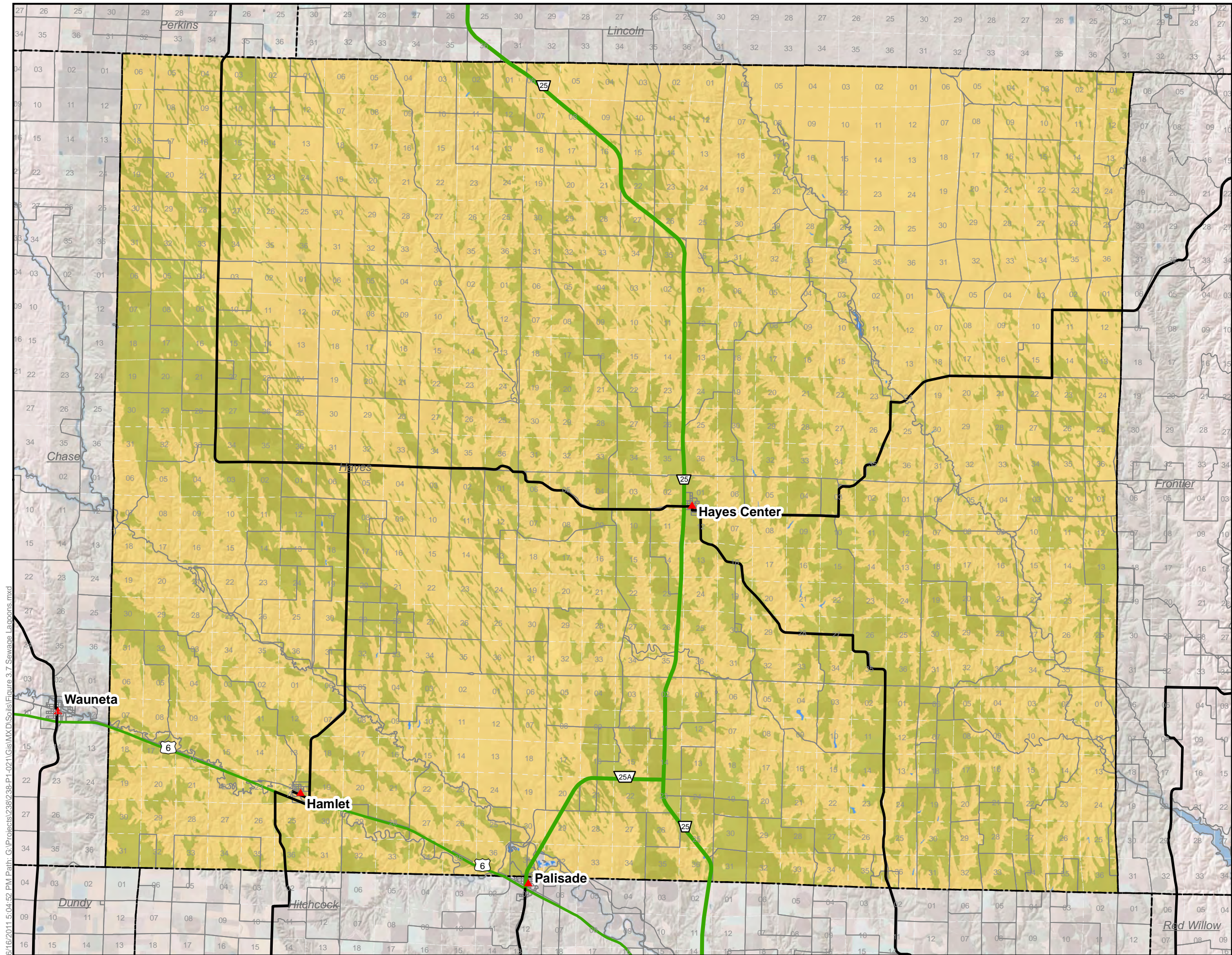
- Legend**
- Level to Nearly Level (0-2-Percent)
 - Gently Sloping (1-3-Percent)
 - Moderately Sloping (3-6-Percent)
 - Strongly Sloping (6-60-Percent)
 - Very Steep (20-60-Percent)
 - Water

Source:
Data Provided By: The U.S. Department of
Agriculture, Natural Resources Conservation
Service 10-30-2009, M&A

Figure 3.5
Slope By
Soil Association
Hayes County, Nebraska

Soil Suitability for Septic Tanks & Sewage Lagoons Map

The next set of maps includes soil association limitations when associated with septic tanks and sewage lagoons. The same process was used for both of these maps. There are specific attributes set to a soil type which are based on rate of water movement, slope, seepage, likelihood to flood, and filtering capacity. A value from .01 to 1 is assigned to each soil type based on those attributes. In order to arrange these values based on limitation associations, we added the number values for each soil type and divided by three (3) to find three (3) different levels of limitations. The first map, Figure 3.6, is analyzing the soil's capacity of accepting septic tanks. The levels of limitations for septic tanks are not limited, moderate limitations, and severe limitations. Areas that are shaded yellow or not limited, have no limitations for placing septic tanks within those soil types. The brown sections or moderate limitations have some issues to consider before putting in septic tanks. The orange shaded region has severe limitations that need to be looked at before considering putting in a septic tank. These limitations could be, but are not limited to, issues of flooding, slope, or seepage. The second map, Figure 3.7, is looking at the same types of attributes when considering sewage lagoons. The two (2) main limitations that were considered for this data were flooding and seepage. The levels for the limitations were slight limitations, moderate limitations, and severe limitations. The process was the same for this map as it was for the septic tank map. Most of the land in Hayes County has moderate to severe limitations that must be further analyzed before a sewage lagoon is considered.



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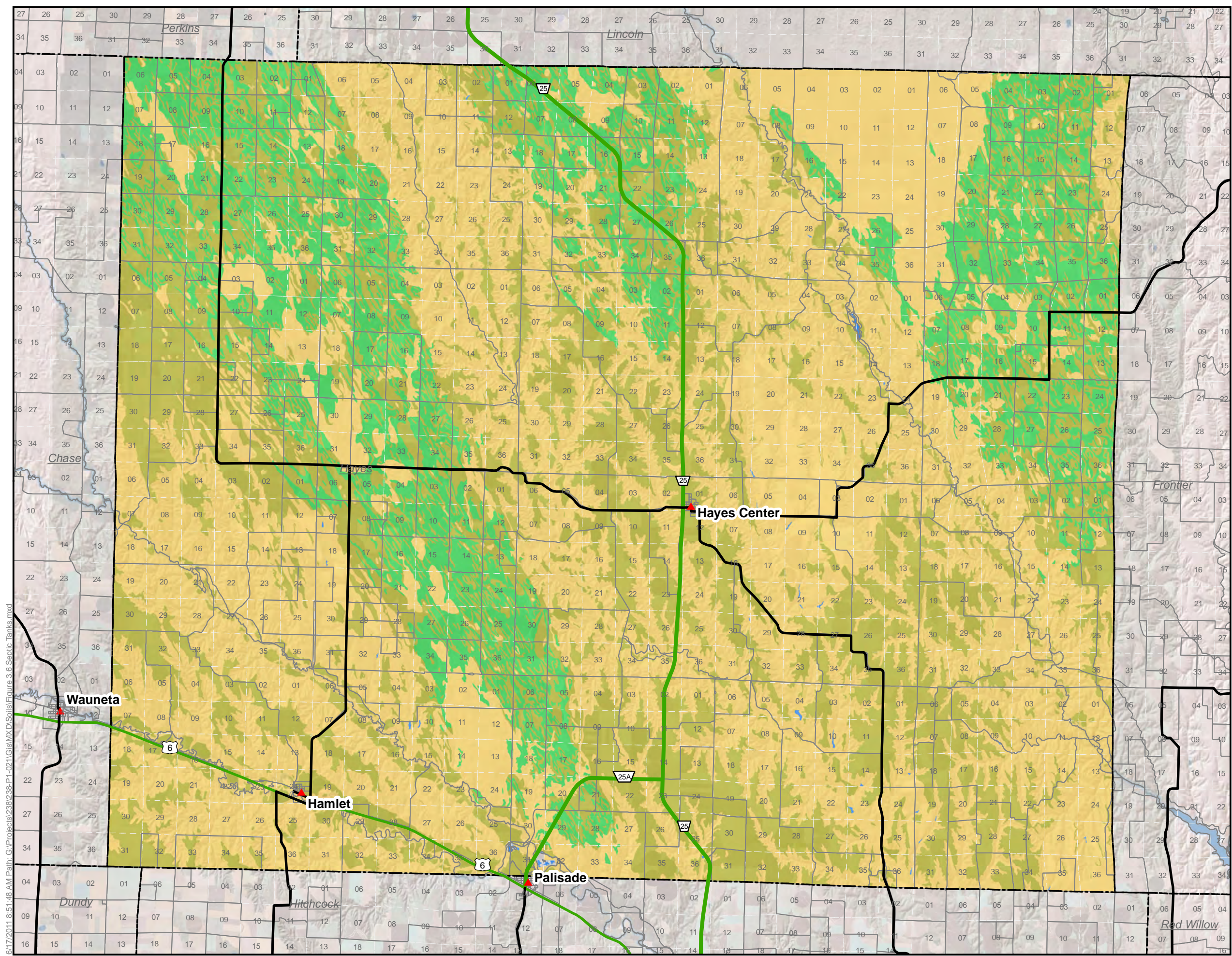
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Legend

- Slight Limitations
- Moderate Limitations
- Severe Limitations
- Water

Source:
Data Provided By: The U.S. Department of
Agriculture, Natural Resources Conservation
Service 10-30-2009, M&A

Figure 3.7
Soil Suitability For
Sewage Lagoons By
Soil Association
Hayes County, Nebraska



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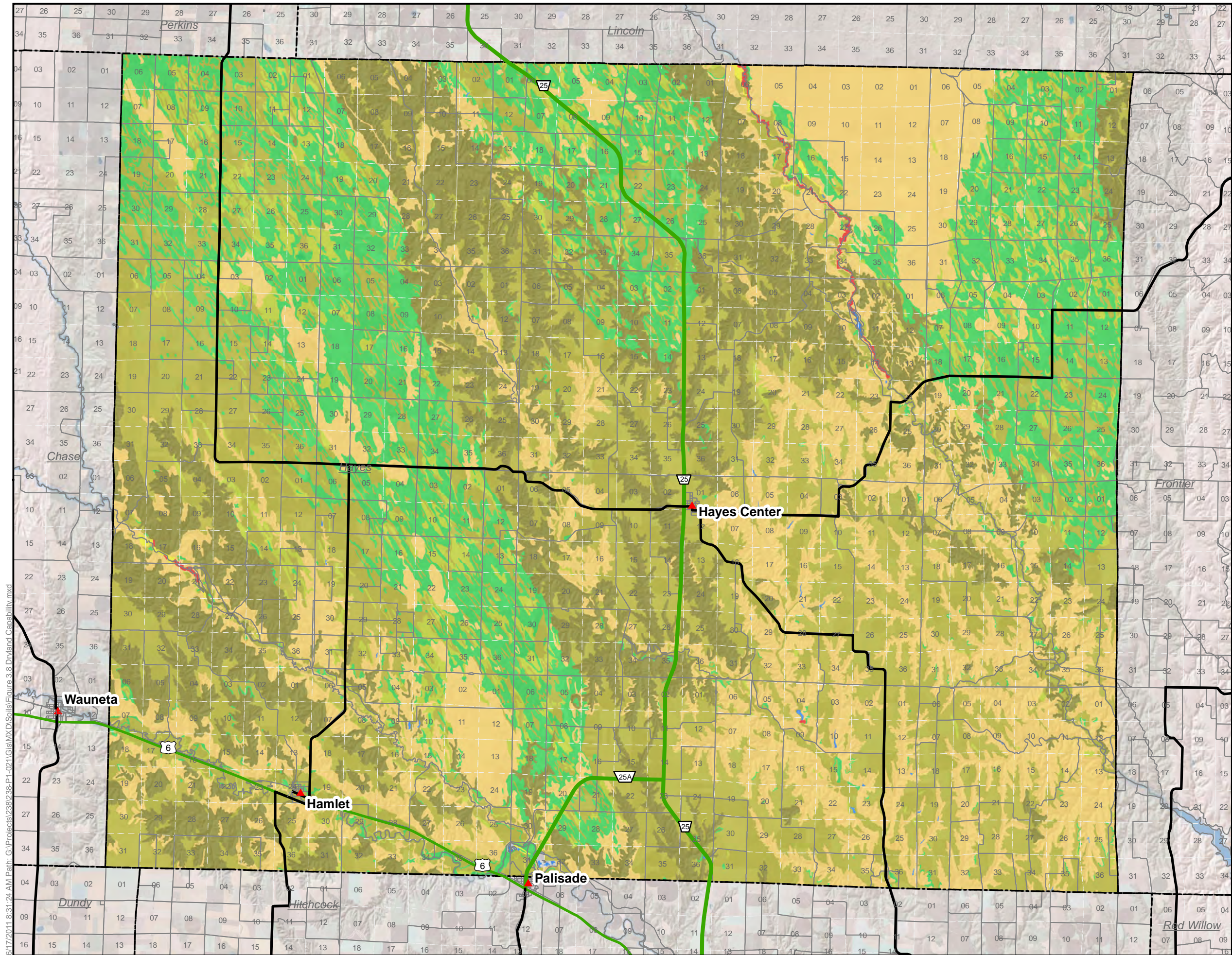
- Legend**
- Not Limited
 - Moderate Limitations
 - Severe Limitations
 - Water

Source:
Data Provided By: The U.S. Department of
Agriculture, Natural Resources Conservation
Service 10-30-2009, M&A

Figure 3.6
Soil Suitability For
Septic Tanks By
Soil Association
Hayes County, Nebraska

Dryland Capability Map

This next map, Figure 3.8, classifies soil types by limitations and restrictions for agricultural purposes. This map shows dryland capability which is broken down into eight (8) classes which are explained on map. Again, there are 48 different soil types within Hayes County, so in order to find trends within the soils we had to group them based on the same types of limitations; these groups of soils types are called associations. There are eight (8) different classes for this map. Each class has a description on the map and these classes range from few limitations to limitations that exclude these areas from their use for commercial plant production. These classes are based on the U.S. Department of Agriculture (USDA). The USDA gives a specific number ranking to each soil type; these numbers range from one (1) to eight (8). Class number one (1) is the fewest amount of limitations and class number eight (8) has the most amount of limitations or restrictions. Classes one (1) through three (3) have only slight limitations while classes four (4) through eight (8) have severe to restricted limitations. These numbers attributed to each soil type are based on soil suitability for alfalfa hay, corn, wheat, and winter wheat. These numbers are specific to the soil types, not to Hayes County specifically. This map is beneficial to see trends for soils in specific areas within the county. It easily depicts where there are limitations based on decisions of plant types, but it will not show which crop is best planted in which area. Decision-makers within Hayes County can use this information to ensure areas of prime farmland classifications, and should not allow for non-agricultural development on those areas. Using information from this dryland capability map, and the following map, Figure 3.9, will be the most effective way to ensure there is no loss in acres of prime farmland within Hayes County.



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0 0.5 1 2
Miles

Class Description	
Class 1	Soils have few limitations that restrict their use.
Class 2	Soils have some limitations that reduce the choice of plants or require moderate conservation practices.
Class 3	Soils have some limitations that reduce the choice of plants or require moderate conservation practices or both.
Class 4	Soils have very severe limitations that restrict the choice of plants, require very careful management, or both.
Class 5	Soils have little or no erosion hazard, but have other limitations impractical to remove that limit their use.
Class 6	Soils have very severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, etc.
Class 7	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use to grazing, etc.
Class 8	Soils/landforms have limitations that preclude their use for commercial plant production and restrict their use.

Legend

- Class 1
- Class 2
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7
- Class 8
- Water

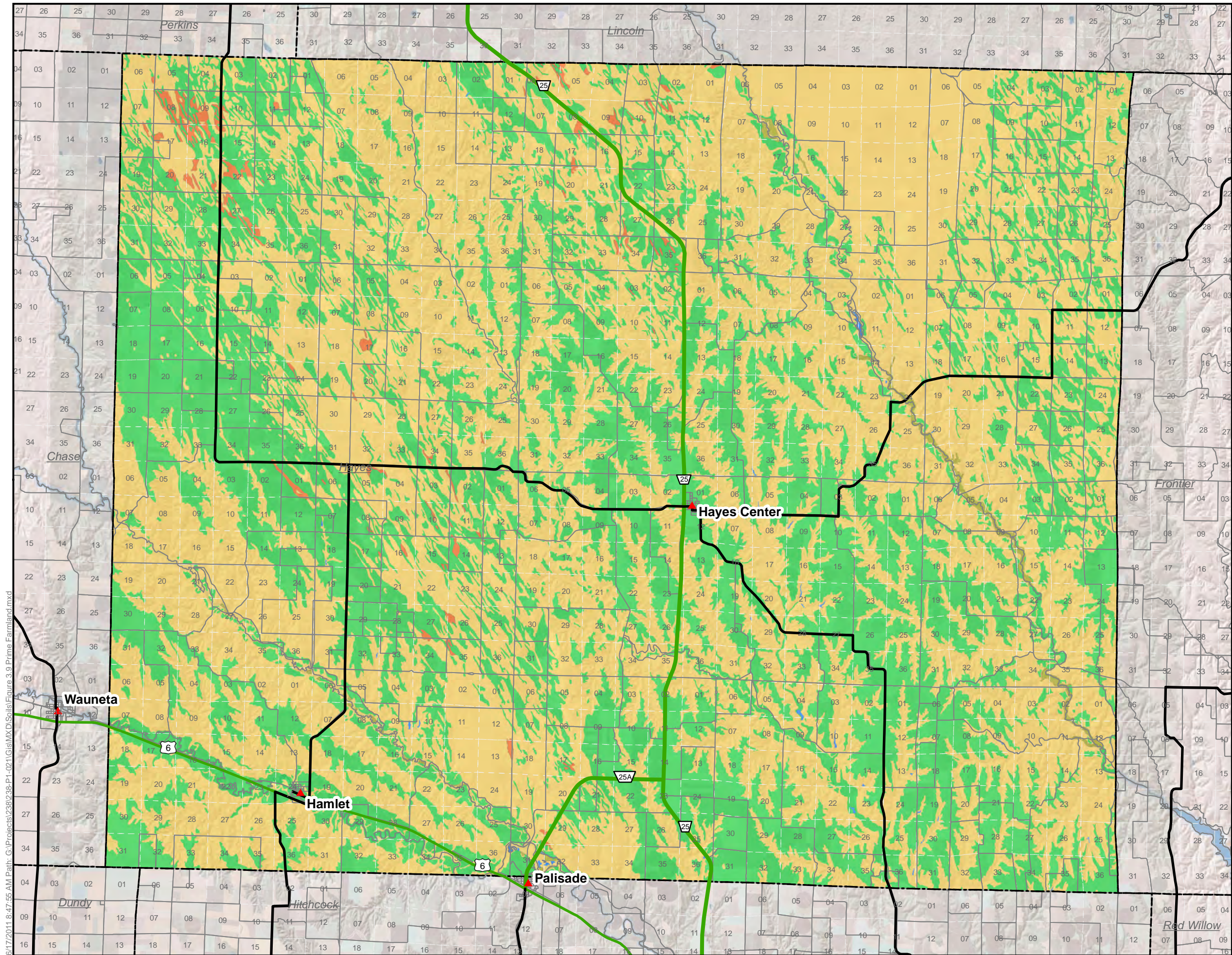
Source:
Data Provided By: The U.S. Department of Agriculture, Natural Resources Conservation Service 10-30-2009, M&A

Figure 3.8
Dryland Capability
Classification By
Soil Association
Hayes County, Nebraska

Prime Farmland Map

Again, this next map is based on information from the USDA. The map, Figure 3.9, shows areas of prime farmland based on the USDA's definition. Prime farmland, according to the USDA's definition, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner according to acceptable farming methods. Prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, and few or no rocks. The soils must be permeable to water and air and they cannot be excessively eroded or saturated with water. Prime farmland may be in crops, pasture, woodland, or other land, but it cannot be in urban or "built" land or water areas. It must either be used for producing food or fiber, or it has to be available for these uses.

Soil suitability is important in Hayes County because of the large agricultural industry. In order to complete this map, we had to analyze soil types based on the USDA's recommendations for prime farmland. The different classifications for this map include farmland of statewide importance, prime farmland if drained, prime farmland if irrigated, and not prime farmland. The USDA has given each soil type a correlation to the best agricultural practice for that soil. The practices for this map are limited to prime, not prime, irrigated, and drained farmland. This information does not mean one cannot grow crops within the orange, not prime farmland, areas; these are suggestions based solely on soil types, but it is helpful to see the breakdown for each type of agricultural practice.



- Legend**
- Farmland of Statewide Importance
 - Prime Farmland if Drained
 - Prime Farmland if Irrigated
 - Not Prime Farmland
 - Water

Source:
Data Provided By: The U.S. Department of
Agriculture, Natural Resources Conservation
Service 10-30-2009, M&A

Figure 3.9
Soil Suitability For
Prime Farmland
By Soil Association
Hayes County, Nebraska

Table 3.2.1 Irrigated Acres by Soil Type, 2010

Soil Name	Assoc. #	# of Fields	Total Acres
Bankard	1118	4	42.5
Bridget	1355	31	999
Bridget	1356	53	1391.5
Bridget	1357	43	239
Sulco	1531	52	279
Sulco	1534	34	312
Blackwood	1586	21	402.5
Blackwood	1588	104	5052.5
Blackwood	1589	79	12408.5
Haigler & Sanborn	1593	2	33
Keith	1619	16	392
Keith	1620	49	3255.5
Keith	1629	37	533
McCash	1695	418	8814.5
McCash	1696	134	4750
Sulco-Ulysses	1833	51	844
Ulysses	1859	8	100
Ulysses	1861	10	46.5
Valent	1886	18	1427
Valent	1889	28	600.5
Valent	1890	14	37
Valent	1899	1	563
McCook	2109	4	41
McCook	2177	14	731
McCook	2347	9	125
Scott	3916	83	312
Gannett	4262	2	2.5
Canyon-Sulco-Rock	5161	1	6.5
Duroc	5945	20	376
Duroc	5946	17	277.5
Jayem	5970	2	103.5
Jayem	5976	217	4588.5
Jayem	5979	51	818
Sarben	6102	47	924
Sarben	6103	3	12
Sarben	6104	287	14227
Sarben	6106	357	4216
Sarben	6107	32	326.5
Gibbon	8470	6	115
Fluvaquents	9906	2	5
Gravel Pit	9983	1	0.1
Water	9999	4	5
Total		2366	69734.5

Information from USDA & Soils Survey

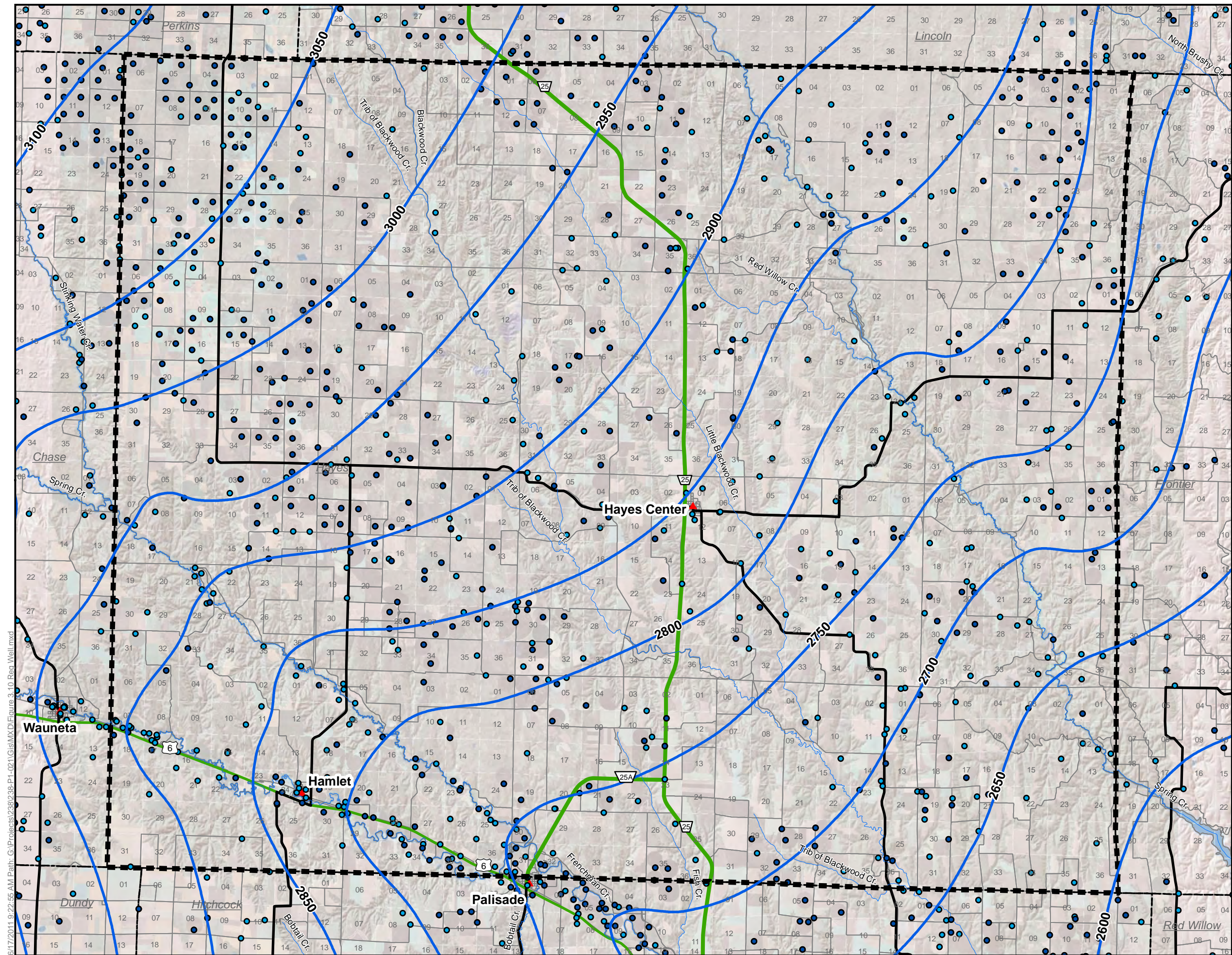
Irrigated Acres

After analyzing all of the soil type classifications, we wanted to see where residents in Hayes County were farming. We plotted all of the irrigation areas too. We have looked at all of the soil types within Hayes County, then compared that data with acres of irrigated farmland, center and flooded, to see what types of soils were being used for farming within Hayes County. See Table 3.2.1 to see the soil types that are irrigated within the county. To find out more detailed information for each soil type, see the Soils Report in the Appendix. The most irrigated soil type within Hayes County is Sarben with 190,705.5 approximate acres irrigated. There are 726 fields with Sarben soil types irrigated in the county. Sarben soils are deep, well-drained soils. They vary on slope, but are typically located on the uplands. For other, more specific information on each soil type please see the Soils Report in the Appendix.

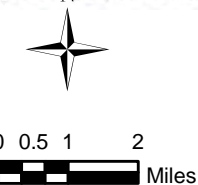
Water

Hayes County has two (2) main bodies of water flowing through it. The Red Willow Creek runs through the northeastern corner and the Frenchman Creek runs through the southwestern corner. Hayes County is a part of the Middle Republican Natural Resources District (MR-NRD). Based on the State of Nebraska's legislature, there are 12 responsibilities that NRDs must follow relating to the conservation and preservation of natural resources.

Besides the two (2) main creeks that run through Hayes County there are also beds of porous rocks called aquifers. These aquifers store quality groundwater that is readily accessible. Figure 3.10 shows a map of the wells dug in order to access the aquifers. Many irrigation systems and registered wells use these aquifers to supply water to residents, to crop and pasturelands, as well as to livestock. The State of Nebraska receives about 80 percent of its public drinking water and nearly 100 percent of its private water supply from ground water sources. Hayes County's agricultural process is also dependent on this source of water, which is why contamination is a major concern. Due to the dependence on ground water supply, the cost of contamination runs high, and with many feedlots and septic tanks in Hayes County, there is a chance for contamination. The State of Nebraska understands the vital importance of the groundwater supply, which is one of the reasons for the Natural Resources District. The MR-NRD plays an important role in protecting this natural resource for Hayes County and the surrounding areas. It is also part of Hayes County's responsibility to protect the quality and amount of drinking water available in the area.



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- Legend**
- 1995 Ground Water Contour
 - Registered Irrigated Well
 - All Registered Wells

Source:

1. Registered well information provided by the Nebraska Department of Natural Resources - June, 2010.
2. Registered well locations are positioned from well registration forms. Some errors may exist due to data input and inaccuracies within well registration records.
3. 1995 groundwater contours were digitized by the Conservation and Survey Division, University of Nebraska-Lincoln, from Maps developed by the U.S. Geological Survey.

Figure 3.10
Registered Wells
Hayes County, Nebraska

Section 4: Energy



One important update for this Comprehensive Plan was to include an Energy section. This was a Legislative Bill (LB 997) signed into law by Governor Heineman in April 2010. This bill requires all Nebraska cities and counties to include an energy element in their new comprehensive plan or a full update to the existing comprehensive plan by January 1, 2015. The energy element must assess energy infrastructure and energy use by sector, including residential, commercial, and industrial sectors, evaluate utilization of renewable energy sources, and promote energy conservation measures that benefit the community or county. In order to make decisions for the future, we must be informed and understand where the county is standing today. This Energy section has the following components:

- Current Consumption
- Oil
- Water
- Solar
- Wind

Current Consumption



Current energy consumption for each of the following sectors: residential, commercial, industrial, and agricultural for Hayes County is shown in Table 4.1.1 below. Each power company that has customers in Hayes County is represented within the table. Tracking information like current power consumption, would be useful for future decision-makers. Monitoring power usage in the future, in order to find trends, will be even more beneficial. This information would also be useful when considering renewable energy systems within the county. Looking at current power usage versus what is available will help decision-makers find the options that are best suited for Hayes County.

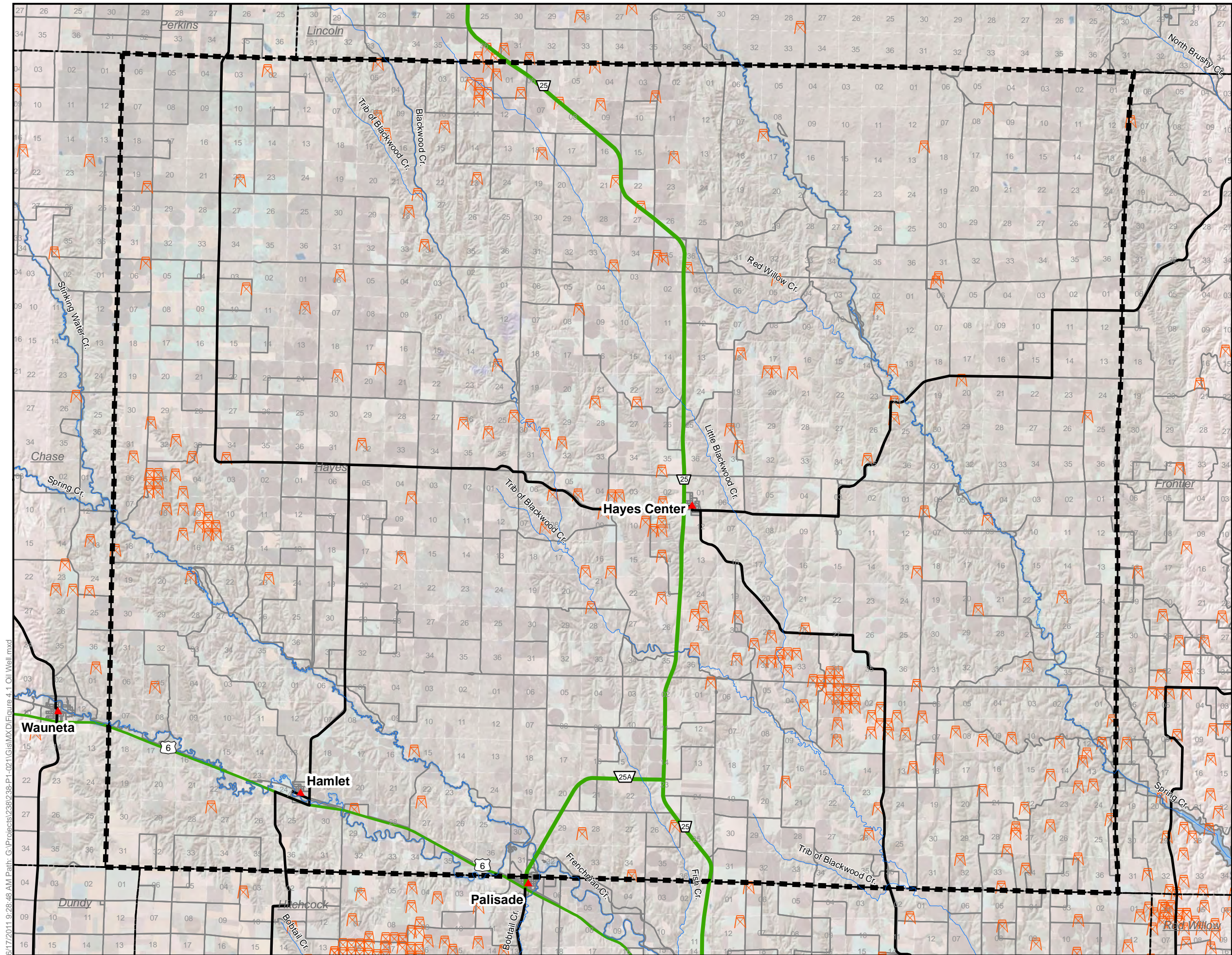
Table 4.1.1 Current Electrical Power Consumption, 2010					
Company	Residential	Commercial	Industrial	Irrigation	Stock wells/Grain bins
Southwest Public Power District	9,189,401 KWh	1,875,413 KWh	1,943,899 KWh	12,142,700 KWh	594,936 KWh
McCook Public Power District	196,322 KWh	428 KWh	N/A	775,483 KWh	73,451 KWh
Midwest Electric Cooperative Corporation	336,238 KWh	37,922 KWh	N/A	2,542,440 KWh	496,629 KWh

Information came from the companies listed above.

Oil



Oil production has always been discussed in Nebraska because of advantages it offers to small-midsize oil companies, especially the western half. The Nebraska Oil Activity Summary, written in 2010, stated that Hayes County produced 36,904 barrels of oil. As of December 31, 2010, there were 11 wells on production in Hayes County and 16 were shut-in. Figure 4.1 shows how many registered oil wells there are in Hayes County. Once a well is dug it will always stay as a registered well, even if it was a test dig. This is why there appears to be more wells than the figures give above.



6/17/2011 9:28:48 AM Path: G:\Projects\238\238-P1-021\GIS\MXD\Figure 4.1 Oil Well.mxd


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0 0.5 1 2
Miles

Legend

 Oil-Gas Wells

Source:
Conservation & Survey Division,
University of Nebraska -
Lincoln (CSD) - 1996

Figure 4.1
Oil Well Overlay
Hayes County, Nebraska

Water



As discussed earlier, Nebraska and Hayes County have an abundance of groundwater supply. Residents within Hayes County get their drinking and agricultural water from wells. It is a great natural resource for the county, but conservation and contamination need to be considered. Water also has the capability to be used as a renewable energy source, hydroelectric power. The State of Nebraska does produce some hydroelectric power, but in order to accomplish that, Hayes County would have to have waterfalls or rivers. Hydroelectric power is formed from the generation of energy in water as it moves or falls. A hydroelectric power plant consists of a high dam that is built across a large river to create a reservoir, and a station where the process of energy conversion to electricity takes place. Hayes County does not have the natural resource, a large river, to create this type of renewable energy.

Solar



Solar energy is a renewable energy source that involves harnessing the light from the sun and converting it into heat and electricity. Sunlight is captured using either concentrating photovoltaic (PV) collectors or flat plate PV collectors. Nebraska has useful resources all over the state for flat plate collectors, and the western half of the state has good resources for concentrated collectors. Hayes County sits about in the middle for potential of sunlight for solar energy. Currently there are no solar energy systems within Hayes County.

Wind



Wind power is a renewable energy source. The wind is used to generate mechanical power or electricity. Wind turbines convert the kinetic energy, or wind power, into mechanical power, or electricity. In general, a wind turbine is the opposite of a fan; instead of using electricity to make wind, it uses wind to make electricity. There are many different types of wind turbines based on turbine size and power ratings. Currently Hayes County does have a small wind turbine, located in Hayes Center, and a larger wind turbine located south of Hayes Center. Nebraska has reasonably cheap electricity rates, combining that with the high costs of installation and maintenance of wind turbines, makes this renewable energy option not as attractive as it could be in other states.

But, those costs do not negate the fact that based on the 50 meter Wind Power Map, Figure 4.2, Hayes County has a large area that is considered good or excellent for 50 meter wind turbines. The rest of the county sits in fair condition. There are not many good or excellent areas within all of Nebraska, making Hayes County a great region for this type of wind turbine. Wind energy facilities are compatible with agricultural and livestock grazing land uses, because of the little significant impact to agricultural land uses. In fact, wind projects can provide an important supplemental form of income to farmers. Wind energy as a renewable energy source seems to be the most efficient one for Hayes County. When looking to the future, decision-makers need to make this an option for energy.

Recalling the History section within this Comprehensive Plan, Hayes Center was once called the “Windmill City.” Almost every house got their water because of windmills. The only way this would have worked so well is because Hayes Center is a region that receives a lot of wind. This would still be true today because there has not been a lot of built development that would be tall enough to block out the wind. This history proves that wind turbines would be a great option as a renewable energy source in Hayes County because of how effective it would be. But there needs to be regulations in place within zoning in order to support and encourage wind energy development. Also it is important to have regulations in place to ensure safety and the correct placement and construction of wind turbines.

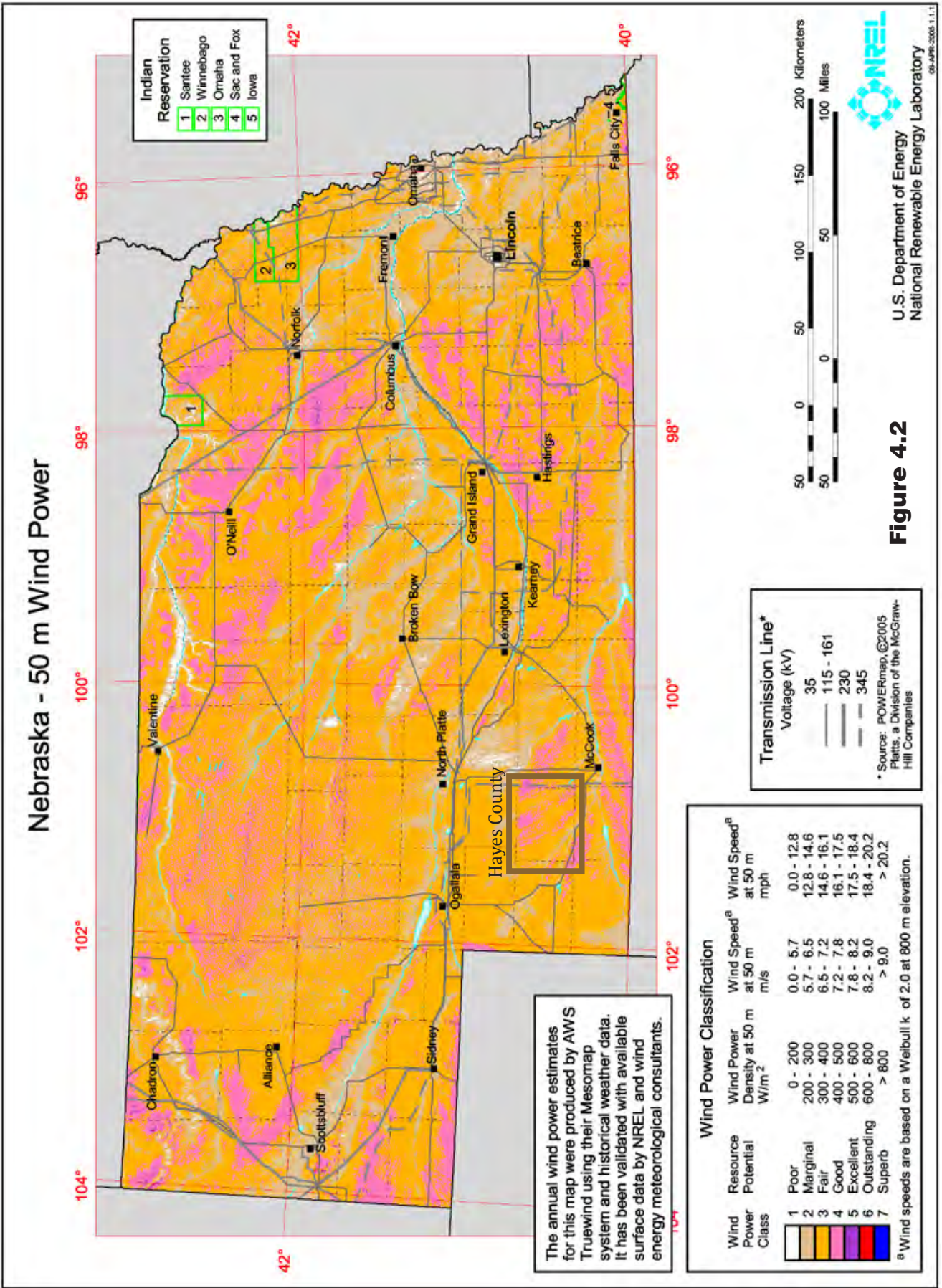


Figure 4.2

Section 5: Land Use

The Land Use section analyzes current land uses within Hayes County and then looks at possibilities and options for future land uses. This section will tie in with section six (6) and they will both help with moving forward from this point. This Land Use section has the following two (2) components:

- Existing Land Use
- Future Land Use

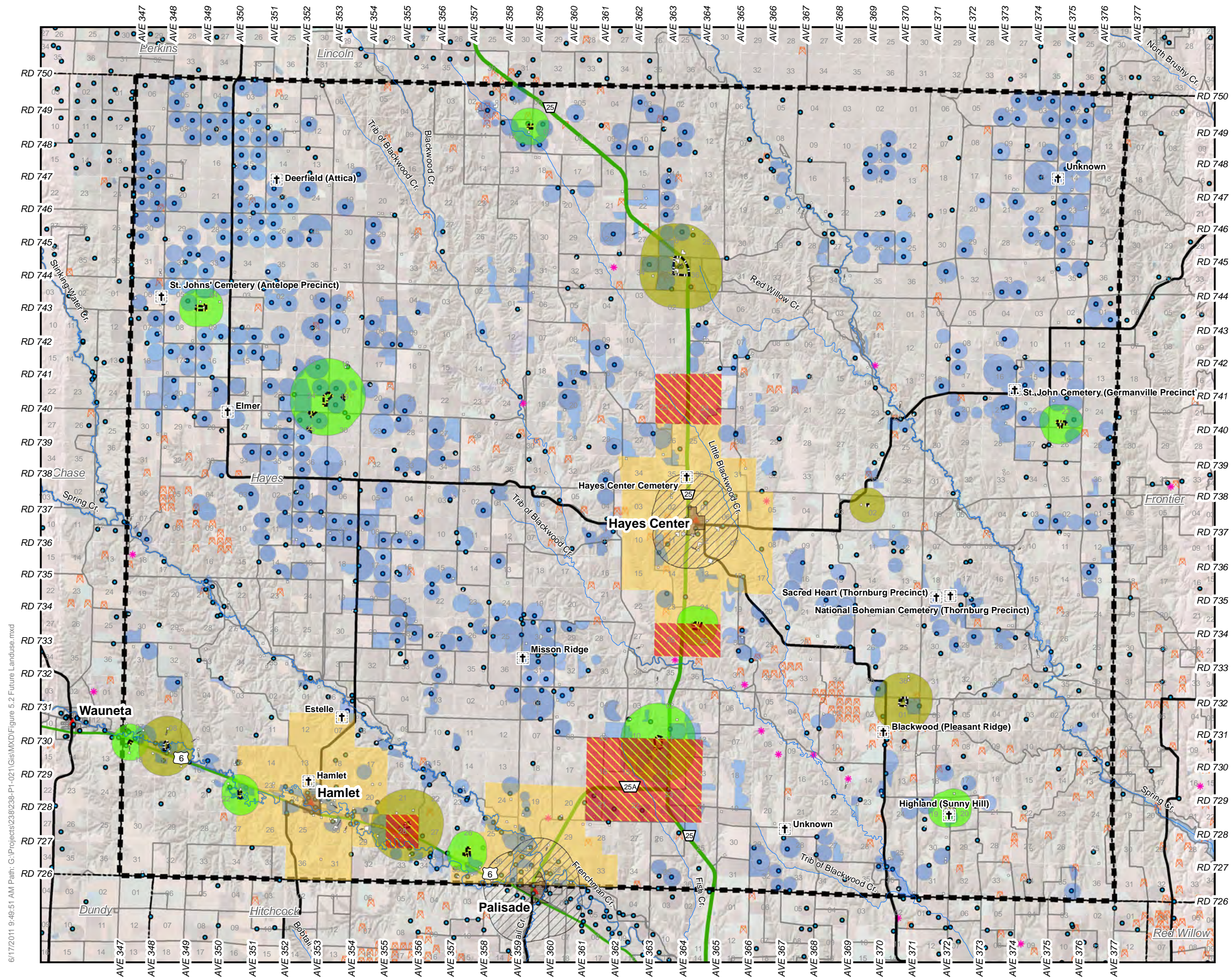
Existing Land Use

An evaluation of land use currently existing in Hayes County is again critical to understanding the county itself, and where it is headed. Examining the location and use of each type of land use will help to provide information about areas that will then provide resources equivalent to those uses. This will also help to point out areas that are lacking different types of land uses. Currently there are only two (2) zones within Hayes County, General Agricultural District (AG-G) and Transitional Agricultural District (AG-T). These two (2) zones vary slightly in conditional uses. Figure 5.1 shows the existing land uses within Hayes County, but it is not the Zoning Map.

The current zoning map reflects both of these zones within the county, as well as the Corporate Limits of Hamlet, Hayes Center, and Palisade. There are also extraterritorial jurisdictions (ETJs) around Hayes Center, and recently, the addition of Palisade. When communities choose to use their right to enact their extraterritorial jurisdiction, they may do so with accordance to Nebraska State statute. Communities can use their ETJs like extending their corporate limits; they can apply zoning ordinances and regulations as long as it will not interfere with existing farming. In the case of Palisade, where the corporate limits mainly lie in Hitchcock County, its ETJ does fall into Hayes County. Palisade retains its power to enforce planning-related ordinances within its extraterritorial boundary in both counties, Hayes and Hitchcock. Therefore, extraterritorial boundaries can, and should be included in a municipality's comprehensive plan to ensure that there will be no conflicting future land uses.

The physical characteristics of Hayes County include approximately 713 square miles of land, in a rectangular shape. The county is 30 miles running east to west, and 24 miles running north to south. There are about 455,040 acres² of land in Hayes County. The average elevation in Hayes County is 3,000 feet above sea level, and the general slope is southeastward. Development has been limited in nature within Hayes County. A vast majority of the land in the county serves agricultural purposes. Approximately 96 percent of the land in Hayes County is used or could be used for agricultural purposes. The other four (4) percent are roads, waterways, corporate limits, and extraterritorial jurisdictions. Currently 15 percent of the land is irrigated, center or flooded, within the county. Just over one (1) percent of the county is non-agricultural development; Hamlet, part of Palisade, and Hayes Center are included.

Since 2000, there have been 27 new residential constructions in Hayes County, showing some development. Typically, and respectively so, most of the development in Hayes County is or deals with the agricultural industry, including development of farmsteads. From the 2007 Census of Agriculture, Hayes County had 275 farms, which was an increase of 15 percent from 2002-2007; it is also an increase from 257 farms in 1997, showing that they have continually been increasing for the past couple of decades. Hayes County saw a five (5) percent increase in farms less than 49 acres and saw a 75 percent increase in 2,000 or more acre farms. The average acres of a farm in Hayes County was 1,650. This total is almost 700 acres more than the average state total of 953 average acres per farm in 2007. Since 2000, there has been an increase in two vital sectors of Hayes County, residential and agricultural.



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Miles

Legend

- Livestock/Bulk Grain Storage Overlay
- AG-TA
- Corporate Limits
- Extraterritorial Jurisdiction
- Livestock Boundary**
 - Commercial
 - Non Commercial
- Cattle Buffer**
 - Non Commercial
 - Commercial
 - Irrigation
 - Irrigated Wells
 - Cemetery
 - Dam
 - Oil-Gas Wells
 - Structure

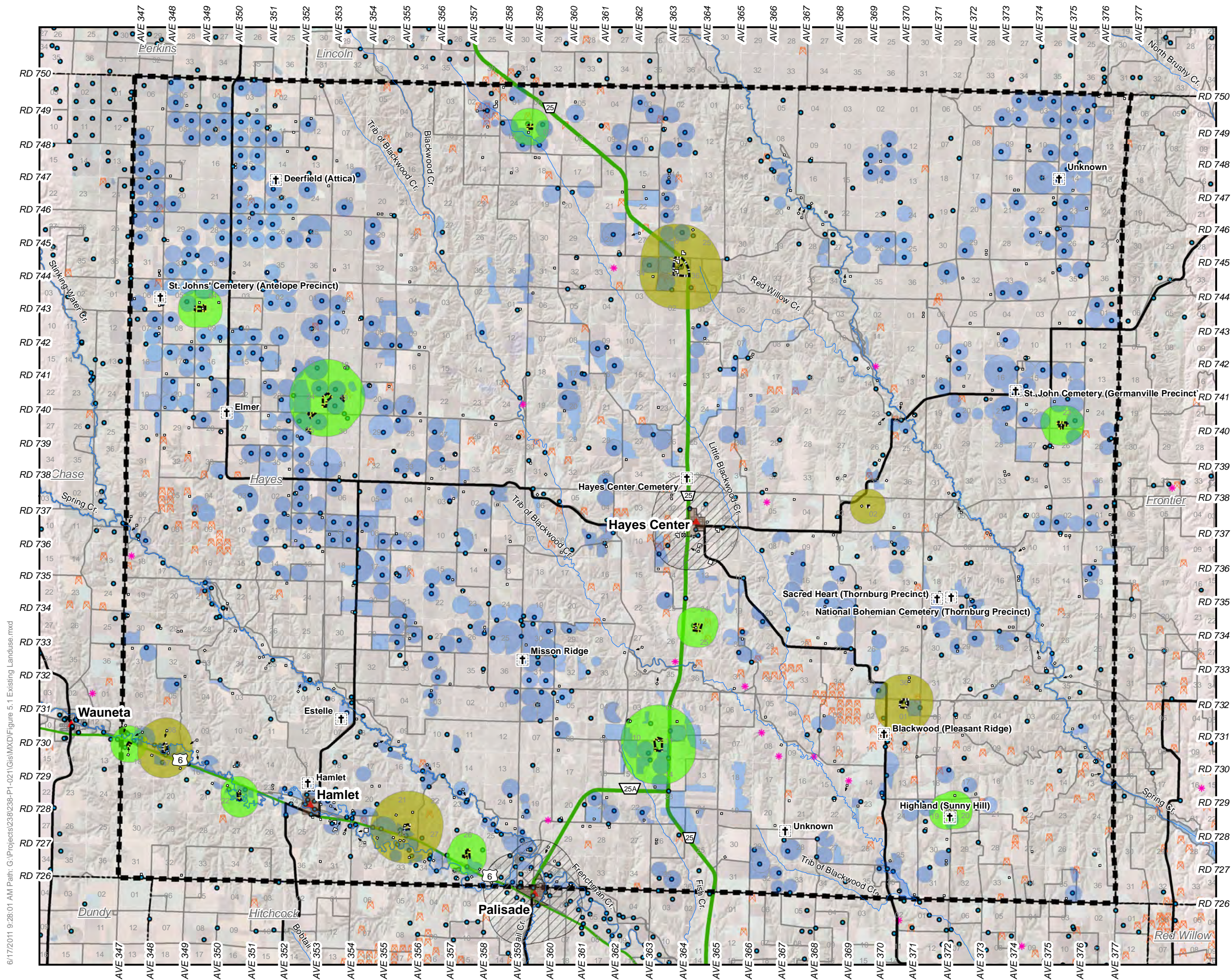
Figure 5.2
Future Land Use
Hayes County, Nebraska

Future Land Use

Planning and preparing for future land use options is a vital part of the comprehensive plan. Whether the county is growing or shrinking, there will still be changes in land use patterns; therefore, the purpose of this section is to provide a general guide for changes in land use. The idea is to avoid or minimize conflicts between land uses and the environment or current residents. The future land use plan must reflect existing land uses and options for changing land use needs. This plan should be flexible in nature in order to be able to change as the county changes. Also, this plan should be molded to fit the needs, desires, and limitations of Hayes County and its residents. Part of the preparation for the Comprehensive Plan Update was to hold steering group meetings. The input from these meetings is a vital asset when planning for future land use. Having an understanding of what residents want and need within the county is important for gaining support and assistance in bettering Hayes County. A summary of the input from the steering group meetings can be found in the following section, but for the future land use plan we will use information received from those meetings. A future land use plan should be a vision of what you want the county to look like; a vision of different goals with different land uses than what is currently in the county. This vision should be an outlook and a guide for the next ten (10) years.

In order to prepare and plan for the future of Hayes County, decision-makers need to have ambitions and goals. Realistically, what is the future of Hayes County going to look like, or what do you want it to look like? The main focus should be on keeping the strong agricultural base while diversifying amenities in order to provide for residents. The types of land uses should vary within the county, homes and housing developments, commercial amenities, and agricultural uses. The homes should vary based on location, size, and price in order to attract a variety of residents. Having compatible housing is important when trying to appeal to new faces in the county. Analyzing housing stock versus income ranges is an important way to find what types of housing stock should be available to best suit the needs and desires of residents. Improving the commercial sector should involve diversifying agricultural practices as well as providing basic necessities like a grocery store, mechanic shop, and parts store for residents. Both of these types of commercial ventures would be important in the county and should be developed depending on available resources.

Protecting important/prime farmland is vital in continuing the successful agricultural sector in Hayes County. Making sure to shield prime land from non-agricultural development in order to use the land in the most effective way should be a high priority for decision-makers. Envisioning goals as realities is important for the success of Hayes County. Ideas need to become actions in order to make the visions happen. Figure 5.2 shows an idea of what the future of Hayes County could look like. Agricultural development will still be the main focus of residents in the county. In order to take advantage of that fact, we looked at areas that would best suit agricultural development. The areas with orange and yellow stripes called Livestock/Bulk Grain Storage Overlay are the areas best suited for this type of development. We looked at areas that were close to either of the three (3) villages, located within two (2) miles on each side of major access roads in the county, and limitations based on soil associations.



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Legend

- Corporate Limits
- Extraterritorial Jurisdiction
- Livestock Boundary**
 - Commercial
 - Non Commercial
- Cattle Buffer**
 - Non Commercial
 - Commercial
 - Irrigation
- Irrigated Wells
- Cemetery
- Dam
- Oil-Gas Wells
- Structure

Figure 5.1
Existing Land Use
Hayes County, Nebraska

Section 6: Strategic Planning

The Strategic Planning section of the Comprehensive Plan is the action section. It is here to help plan goals, guidelines, regulations, and future practices. The goal of this Strategic Planning section is to help decision-makers implement the visions and actions presented by the plan through a realistic process that is in step with the resources of the community. This Strategic Planning section has the following components:

- Public Input
- Visioning

Public Input

These questions were asked during a steering group meeting during the planning stages of the Comprehensive Plan Update. Residents and steering group members had the chance to openly discuss some of their responses.

What do you see as strengths of Hayes County?

- People, families, and friendly neighbors
- Quality way of life
- Open space-not congested
- Good water source
- Good water quality
- Outdoor recreational facilities
- Affordable power
- Good education system

What do you see as some potential weaknesses of Hayes County?

- Limited number of roads
- Lack of paved roads- no east to west road through county
- Long travel times because of open space
- Lack of job diversity/opportunities (only agriculture-related)
- Limited internet and communication infrastructure
- Non-existent medical services
- No assisted living or nursing home facilities for elderly or disabled

What changes would you like to see in Hayes County?

- Parts store/mechanic shop
- Residential housing, rural subdivision, new housing development
- Cattle feed yards
- Fertilizer storage
- Vineyards and wine business
- ATM/24-hour public, cash service



Visioning

The Visioning section is in place to give ideas, summaries, and guidelines for development and growth for Hayes County to work towards in the next ten (10) years.

Agricultural Domination

Agriculture is the strongest sector for Hayes County, and it should continue to stay that way. Creating any new developments should not come in the way of prime farmland, which would negatively affect the county in the long-run. New development should take place solely in areas that will not conflict with the dominant agricultural uses. Increasing and improving on agricultural uses will also be beneficial to the industry and to the county. The continuing support of agriculture will always be positive for Hayes County, and looking for new forms of agriculture that will suit the county is equally as important. This could include increasing the scale of farms and attracting or researching new types of agricultural uses. The designated areas within the Future Land Use Map for Livestock/Bulk Grain Storage are important areas to Hayes County. These areas show regions for growth because of the good location, slope, and soil type. They are designated areas for prime agricultural growth, and should be supported for growth in the agricultural sector.

Provide Basic Necessities

Hayes County's residents discussed several options for new businesses they would like to see in the county. Some of the business suggestions were as simple as an ATM with 24-hour public banking access, while others were longer term ideas like a healthcare facility, grocery store, or a winery. Nevertheless, in order to keep residents in the county, in order to attract new residents to the county, and in order to get people to spend their money in the county, there need to be places where they can spend their money. Analyzing the true needs of residents is important when considering which basic necessities are most important to them.

Job Diversity

One way to support a variety of residents is to have a variety of jobs available to them. Many of the suggestions for future land use will also increase the supply of jobs within the county. This will in turn attract new residents, including some students who had left to go to college but could return back to a job in their home town. Increasing the number of jobs will lead to an increase in population; this correlation will always be a positive one for the county.

Attract All Ages

There is a major lack of healthcare facilities within Hayes County; this includes a family physician to nursing homes. The Hitch & Hay Public Transit system is extremely important to have present in Hayes County, and this system should continually be supported in order to support Hayes County's residents. But Hayes County has an aging population, and there are no places for these people to call home, whether it is an assisted living home, a few small apartments, or a nursing home. In order to keep as many residents in town as possible, there needs to be a way to attract different age groups. The other age group that needs to be supported is the younger generation. Hayes County has a good school system that continually has high scores with a good student to teacher ratio. Continually improving and supporting the school will be a way to keep families within the county.

Diversify the Economy

One of the goals for decision-makers should be to diversify the economy within the county. Attracting small businesses like a parts store, grocery store, or mechanics shop does not have to be the extent of diversifying. Another option could be to add more agricultural uses like fertilizer storage, a grain bin, or attracting more livestock feedlots. Any way to incentivize and attract new options that will help to boost, grow, and diversify the economy in Hayes County will be beneficial.

Improve Housing Stock

Within Housing, Section 1.4, there is a housing-income analysis, this shows how the level of household income for residents is or is not matching the type of housing available in the county. After completing that analysis, it was clear, that the types of housing are not matching the level of income of people living in Hayes County. This lack of affordable, quality housing stock could be one reason why new residents are not moving into the county. If they cannot find a house suitable for them, which typically would coincide with their income level, they may go find a house elsewhere. The general range for lack of housing was \$61,000-\$200,000 for the cost of a house. This would mean that the income range for people looking for these homes is \$25,000-\$99,000 per household. There was a shortfall of 90 homes within that cost range. In order to attract and keep residents in the county they must have quality housing that would be suitable for them.

Keep Costs Down

In order to keep the costs of new development to a minimum, these areas of development should be along the highway or within Hamlet or Hayes Center. This will minimize the costs of having to provide additional public facilities instead of having new development in areas that new roads, bridges, or utilities would have to be constructed. Improve infrastructure as the time passes; this will help to avoid large improvement costs all at once. One way of doing this is being aware of grants that are available to counties for infrastructure improvements. This will help minimize the cost to the public.

In Summary

There are many things that Hayes County can do to improve, grow, and become self-sustained. The idea is to be realistic with goals, and to work in phases. These ideas need to be supported by Hayes County residents from the beginning to the end, and one way of doing that is to have public input and help through all of the planning phases. Diversifying the land uses in the future will help to support current and hopefully new residents of Hayes County. Staying flexible and open minded is important when trying to plan for the future. One of the most important things is to plan from every angle, trying to minimize conflicts while protecting residents, industries, resources, and the environment. All of these suggestions will also help generate new jobs which will create a long-term attraction to the county. In order to ensure proper development based on guidelines set forth through the Comprehensive Plan, leaders and decision-makers need to continually refer to and update this Plan. This should be done as many times as needed, but we recommend a formal overview one (1) year from the time this Plan is adopted, five (5) years from the adoption of the plan, and then at the ten (10) year mark a new update should be in process.