

Gage County, Nebraska



**COMPREHENSIVE PLAN
2018 – 2028.**



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GAGE COUNTY, NEBRASKA COMPREHENSIVE PLAN – UPDATE 2018 – 2028.

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Gage County Planning Process.



**COMPREHENSIVE PLAN
2018 – 2028.**



SECTION 1

SECTION 1 THE GAGE COUNTY PLANNING PROCESS.

THE COMPREHENSIVE PLAN.

This **Comprehensive Plan – Update** was prepared as a guide to direct future growth and development opportunities throughout the County, during the 10-year planning period 2018 to 2028. The current **Plan - Update** was completed in 2010. The primary Plan components of this **Plan** are planning goals and policies, population, income & economic trends & projections and future land use. Components identified in the original **2000–2010 Comprehensive Plan**, associated with the natural environment, public facilities and transportation in the County have not changed to any great extent and, basically, remain the same.

The County has an ongoing One- and Six-Year Road Plan that outlines street and road maintenance programs. The County is also impacted by the State of Nebraska One- and Five-Year Road Plan, regarding the improvement of any State highway. In regard to public facilities, the primary facilities and services exist in the each of the Gage County Communities.

The focus of this **Comprehensive Plan - Update** concentrates on the potential for growth and development of the rural areas of Gage County in terms of ***“Goals and Policies,” “Population, Economic & Housing Profile,” “Land Use Profile & Plan,” “Public Facilities & Transportation,” and “Energy Element.”*** The intent of this **Comprehensive Plan – Update** is also to guide revisions to the Zoning and Subdivision Regulations, as needed, to achieve the specific Goals established by this **Plan**.

This **Comprehensive Plan – Update** is intended to provide policy guidance to enable the residents and elected officials of the County to make decisions, based upon the consensus of the Planning Commission, about the future of Gage County as a whole. Implementation methods include incentives to stimulate private action consistent with the **Plan** and the use of Local, State and Federal programs for County-wide economic development activities.

The **Comprehensive Plan – Update** was prepared under the direction of the **Gage County Planning Commission** and Planning Consultants, Hanna:Keelan Associates, P.C., of Lincoln, Nebraska.

THE GAGE COUNTY PLANNING PROCESS.

PLANNING PERIOD.

The planning time-period for achieving the goals, programs and economic development activities identified in this **Comprehensive Plan – Update** for Gage County, Nebraska, is 10 years (2018-2028).

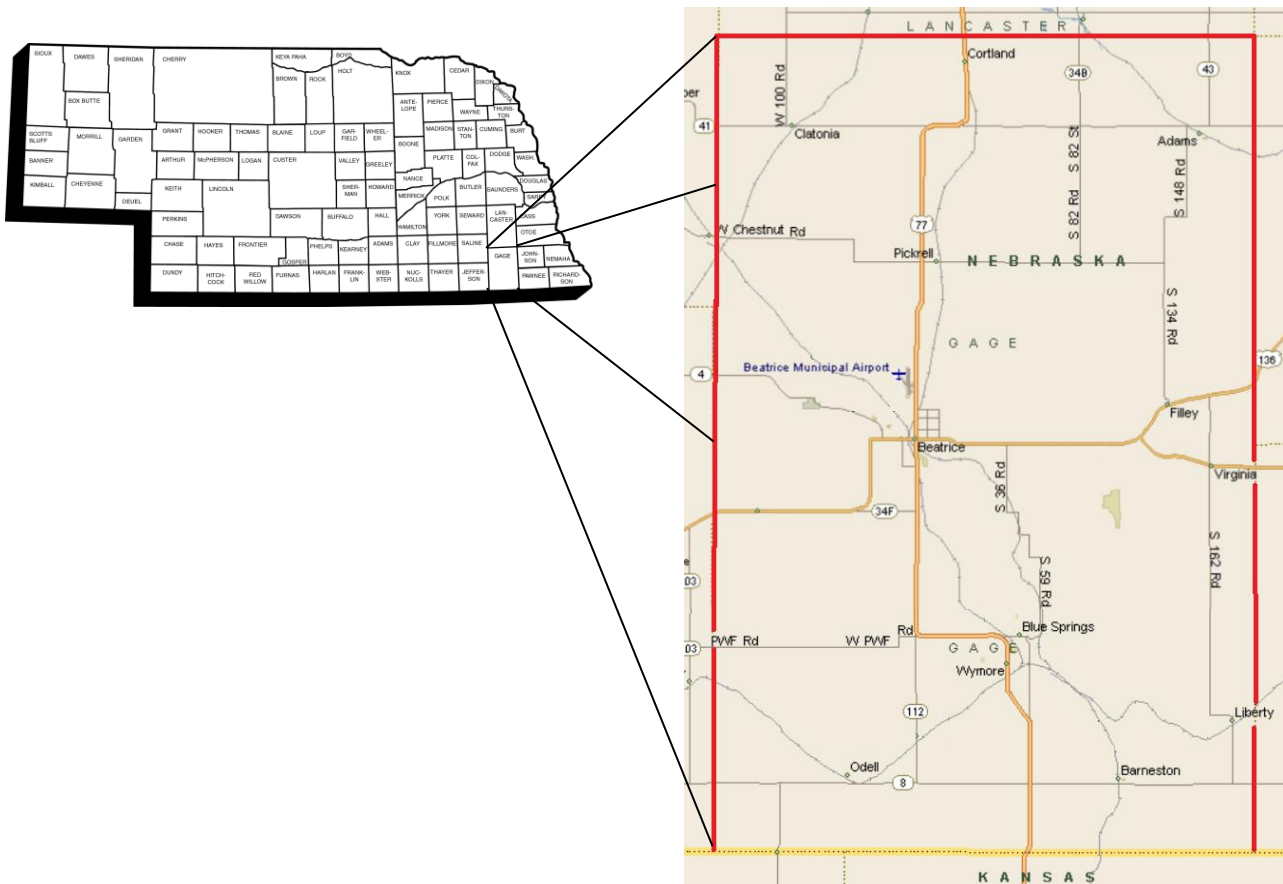
AUTHORITY TO PLAN.

This **Comprehensive Plan - Update** for Gage County is prepared under the Authority of Section 19-924-929, Nebraska State Statutes 1943, as Amended.

AMENDMENT.

The **Comprehensive Plan – Update** may be amended or updated as the need arises as provided in the Nebraska State Statutes.

**ILLUSTRATION 1.1
LOCATION MAP
GAGE COUNTY, NEBRASKA**



ORGANIZATION OF THE PLAN.

The creation of this **Gage County Comprehensive Plan – Update** included the implementation of both **qualitative** and **quantitative research activities**, in an effort to gather pertinent planning information and data. The **qualitative approach** included meetings with the **Gage County Planning Commission** and County Staff.

The **quantitative approach** utilized numerous statistical databases provided by the 2000 and 2010 Censuses, the 2011-2015 American Community Survey and information from other pertinent Gage County, State and Federal Agencies.

The **quantitative approach** also included on-site field research activities to determine the present condition and profiles of local land use, housing, public infrastructure and facilities, transportation and environmental issues.

Combining the results of these two important research approaches produced this Comprehensive Plan – Update. This **Plan** includes the following Sections:

- ❖ The Gage County Planning Process.
- ❖ Goals & Policies.
- ❖ Population, Economic & Housing Profile.
- ❖ Land Use Profile & Plan.
- ❖ Public Facilities & Transportation.
- ❖ Energy Element.

The system embodied in this County planning framework is a process that relies upon continuous feedback, as goals change and policies become more clearly defined. Planning is an ongoing process that requires constant monitoring and revision throughout the 10-year planning period.

This **Comprehensive Plan** is organized into three elements.

ELEMENT 1.

The **first** element of this **Comprehensive Plan - Update** is the **Goals and Policies**. The **Goals and Policies** represent the foundation for which planning components are designed and eventually implemented. The **Goals and Policies** identified in this **Comprehensive Plan** address each component of the **Plan** itself.

ELEMENT 2.

The **second** element is the **Background Analysis**, which presents the necessary quantitative and qualitative research for the development of the **Plan's Goals and Policies**. This research included the investigation of demographic, economic, land use, public facilities and transportation, and energy in rural Gage County. The careful research of past and present data allowed for the projection of future population and development needs.

ELEMENT 3.

The **third** and final element of the **Comprehensive Plan – Update** are the **Planning Components**, which presents general recommendations and plans for land use, public facilities, infrastructure, transportation and energy consumption.

GAGE COUNTY PLANNING COMMISSION.

The **Gage County Planning Commission** provided valuable information on what activities need to take place to create a vibrant, sustainable quality of life for County residents.

The Planning Commission highlighted the following “key issues” related to existing land use and County Development:

- Sustaining agricultural lands for production of crops and livestock while also providing for development of non-farm rural residential dwellings and/or rural subdivisions. where appropriate,
- Ensuring that the **Future Land Use Plan** is effectively working to preserve agricultural production lands and to promote the co-existence of transitional agricultural and rural residential uses adjacent Highway 77 Expressway and to the north of Highway 41.
- Creating new housing opportunities for both existing and new residents of Gage County.

Goals & Policies.



COMPREHENSIVE PLAN 2018 – 2028.



SECTION 2

SECTION 2 GOALS & POLICIES.

INTRODUCTION.

A **Comprehensive Plan** is an **essential tool** to properly guide the development of a county and its communities. An important aspect of this planning process is the development of appropriate and specific planning **Goals** and **Policies** to provide local leaders direction in the administration and overall implementation of the **Plan**. In essence, **Goals** and **Policies** are the most fundamental elements of the **Plan**; the premises upon which all other elements of the Plan must relate. The following **Goals** and **Policies** are to be in effect for the period of this **Comprehensive Plan – Update**, pending annual review.

GOALS.

Goals are broad statements, identifying the state or condition the citizenry wishes the primary components of the planning area to be or evolve into within a given length of time. Primary components of the Gage County goals include **land use, housing, economic development, public facilities & transportation, and plan maintenance and implementation**. Goals are long-term in nature and, in the case of those identified for this **Comprehensive Plan**, will be active throughout the 10-year planning period.

POLICIES.

Policies help to further define the meaning of goals. In essence, Policies are recommendations for means by which goals can be accomplished. **Policies**, often referred to as objectives, are sub-parts of a Goal and are accomplished in a much shorter time space.

The following **Goals** and **Policies** are the result of both qualitative and quantitative research conducted in association with this **Comprehensive Plan – Update**.

GENERAL COUNTY GOALS.

The first step in developing **Goals** and **Policies** for this **Plan** was the creation of **general County goals**. These general community goals were developed to "highlight" **important** elements of this comprehensive planning process, as determined via the identification of "key issues" with the public.

The following represents the general goals associated with the rural, unincorporated areas of Gage County.

- ◆ Plan for a population increase during the next 10 years in rural Gage County by an estimated 92 persons, representing a 0.2 percent annual increase between 2018 and 2028. The rural Gage County population is projected to increase from 5,554 persons as of 2018 to 5,646 by 2028.
- ◆ Actively market the development potential of Gage County to support an increasing total population, by broadening the economic base and expanding employment opportunities. Support the efforts of Gage Area Growth Enterprise (NGage) to promote agricultural production and housing and economic residential development, in harmony with one another. Aim to provide opportunity for everyone, including businesses, residents, agriculture and community/county growth.
- ◆ The future image of Gage County will greatly depend on the willingness of residents to accept changes in the population and economic structure and to be a part of the ongoing planning and implementation process of the County.
- ◆ Promote the **preservation and continued growth of the agricultural industry**, including the diversification of crops and livestock facilities. Historically, agriculture has been the primary income producing activity for rural Gage County. This is anticipated to remain as such through the 10-year planning period, 2018 to 2028. **Gage County is also recognized as a "Livestock Friendly" county by the State of Nebraska.**
- ◆ Protect the natural resources and living environs of Gage County by controlling and prohibiting livestock confinement facilities in areas deemed inappropriate for such activities.
- ◆ Programs of citizen participation should be fostered in rural Gage County to maintain and improve the economic and social quality of life of each community and the County as a whole.

- ◆ **Preserve and protect land for agricultural use** and encourage future development of non-farm residential dwellings, commercial and industrial uses near Gage County communities or at appropriate locations along hard surfaced transportation corridors.
- ◆ Continue to maintain and implement zoning and subdivision regulations, as well as appropriate planning and zoning administration procedures to ensure the proper implementation of the **Gage County Land Use Plan**.
- ◆ Maintain and strengthen relationships between the County and each Community to produce planning practices supportive of proper land usage, economic growth, housing, public facilities and services, transportation and recreation opportunities.
- ◆ Encourage rural agricultural cropland and livestock producers to work with non-farm rural residents in support of agricultural preservation and development. Promote the use of waivers and/or agreements, when needed, to allow agriculture and residential development to co-exist throughout rural Gage County.

LAND USE.

Goal 1 - Provide opportunities for development in an orderly, efficient and environmentally sound manner.

Policies:

- 1.1 Ensure that all areas for future development in rural Gage County are equipped with adequate, modern utility systems.
- 1.2 Avoid developments that could result in the contamination of soils and ground water resources.
- 1.3 Limit future developments to locations which are relatively free of environmental constraints relating to soils, slope, flood plain, drainage, ground water, endangered species or other natural resources.
- 1.4 Continue to implement zoning regulations that allow for livestock confinement facilities in appropriate areas of rural Gage County, via the provisions of the Gage County Zoning Regulations.

- 1.5 Continue to utilize alternative energy systems to supplement individual residential, commercial and industrial electric consumption in accordance with Nebraska State Statute 70-1012, August, 2009, as amended. The use of one or combinations of the following alternative energy sources including Solar, Methane, Wind, Biomass, Hydropower and Geothermal Energy systems on individual properties to supplement or sell excess energy produced to the local utility district, a process called “**Net Metering.**”
- 1.6 Consider the development of Commercial Wind and Solar Farm Energy Conversion Systems in appropriate areas of rural Gage County, via the requirements outlined in the special use permit process of the County Zoning Regulations.

Goal 2 - Maintain land use development patterns and densities in rural Gage County that conform to uniform planning standards.

Polices:

- 2.1 Continue to implement the Land Use Plan for the County, which is based upon present conditions and the sound forecast of future needs.
- 2.2 The Land Use Plan advocates limiting the development of new livestock confinement facilities and operations from areas with sensitive soils conditions. Land along the Big Blue and Big Nemaha Rivers contain the highest concentration of sensitive soils conditions and designated flood plains.
- 2.3 Preserve and protect the highest concentration of irrigated crop production areas generally located west of the Highway 77 Corridor, between Highways 4 and 41. Groundwater protection and preservation of agricultural land uses should be emphasized.
- 2.4 Ensure that adequate open and recreational space is maintained in the County. Emphasize recreational opportunities associated with the Big Blue River corridor, as well as the existing state recreation and wildlife areas.
- 2.5 Continue the process of maintaining lands for traditional agricultural uses by utilizing the Gage County Future Land Use Plan and Zoning Regulations.

- 2.6 The expansion of existing and the development of new livestock facilities should be allowable when in conformance with the provisions of the Gage County Zoning Regulations.

Goal 3 - *Encourage compatible adjacent land uses throughout the County through regulations suited to the unique characteristics and location of each use.*

Policies:

- 3.1 Establish an annual review and modification process of zoning districts and regulations to encourage both development and redevelopment activities.
- 3.2 Facilitate the orderly development of residential uses that are environmentally sound, regarding topography and soils capacity.
- 3.3 Support the planned development of non-farm residential structures in rural areas within the planning jurisdictions of Adams, Beatrice, Cortland, Pickrell, Blue Springs and Wymore. Remaining Villages, without municipal planning and zoning documents, are also promoted as appropriate locations of non-farm rural residential uses adjacent their Corporate Limits.
- 3.4 Encourage industrial and commercial development within and/or adjacent to the communities of Gage County or in areas allowing for compatible land uses and adequate access to transportation systems and utilities.

Goal 4 - *Work cooperatively with federal, state, and adjoining county governments to develop compatible flood control measures.*

Policies:

- 4.1 Develop and enforce state and local regulations protecting the environment from contamination or pollutants.
- 4.2 Require all developments to be consistent with requirements set forth for flood prone areas.
- 4.3 Review and identify measures which limit or reduce flood hazards, control water run-off and enhance the quality of surface and ground water.

Goal 5 - *Provide opportunities and incentives for development that will encourage economic stability and strengthen the overall tax base in the County.*

Policies:

- 5.1 Encourage the development of local businesses, when appropriate, at strategic locations along County highway corridors within close proximity to Gage County communities.
- 5.2 Identify land uses to promote and complement the existing state recreation and state wildlife management areas.

HOUSING.

Goal 1 - *Provide access to a variety of safe, decent and affordable housing types in rural Gage County, especially for persons and agricultural families of low-to moderate income.*

Policies:

- 1.1 Strengthen existing and develop new organizational relationships utilizing the Gage County & Communities, Nebraska, County-Wide Housing Study to improve housing conditions throughout Gage County.
- 1.2 Develop housing programs, for rehabilitation and/or removal and of dilapidated, unsafe, housing.

Goal 2 - *Protect and preserve existing rental and owner occupied residential units.*

Policies:

- 2.1 Promote an ongoing county-wide housing rehabilitation program, to include both owner and renter housing units by 2028, for an estimated 224 units needing moderately deteriorated units and 105 units needing for substantial rehabilitation. Partner with Southeast Nebraska Development District (SENDD) Gage Area Growth Enterprise (NGage) to utilize the Gage County & Community Housing Study to establish the housing rehabilitation program.

- 2.2 Promote a program to demolish an estimated five units per year of substantially deteriorated dwellings within rural Gage County during the next 10 years, with emphasis on areas within close proximity to Gage County communities.
- 2.3 Identify and rehabilitate historically significant residences and other types of structures in rural Gage County. Access the technical expertise and financial incentives available through the Nebraska State Historic Preservation Office of the Nebraska State Historical Society.

Goal 3 - Encourage future residential developments, which are compatible with and complement existing residential areas.

Policies:

- 3.1 Increase education and awareness for housing development throughout the County in areas not detrimental to agricultural activities.
- 3.2 Prohibit development of residential units in environmentally sensitive areas.
- 3.3 Future rural subdivisions should be developed within the planning jurisdiction of zoned communities, within one mile of communities without local zoning, or in areas identified as transitional agriculture throughout the county jurisdiction.

ECONOMIC DEVELOPMENT.

Goal 1 - Continue to coordinate economic development efforts with NGage to foster cooperation and partnerships between Gage County and its area communities.

Policies:

- 1.1 Encourage community/county development activities that create permanent employment opportunities with competitive wages, especially for low- to moderate income persons and families.
- 1.2 Support the efforts of Gage County Tourism and the Beatrice Area Chamber of Commerce to develop and implement a “Gage County Tourism Plan,” to promote historical, recreational and educational uses throughout the County.

- 1.3 Develop a self-guided tour of historic buildings in Gage County, utilizing the Nebraska Historic Buildings Survey of Gage County. Partner with the State Historical Society to utilize their resources and technical expertise.

Goal 2 - Housing and public facility improvements coupled with economic development opportunities should be the foundation of community development programming and implementation in Gage County.

Policies:

- 2.1 Direct community and economic development activities to address county-wide and regional residential and commercial needs.
- 2.2 Ensure job creation is a recognizable issue of any economic development activities implemented in Gage County and its communities, with emphasis on low- to moderate income persons and families.

Goal 3 - Maximize economic opportunity for all residents, with emphasis on low- to moderate income persons and families.

Policies:

- 3.1 Support the expansion of the agricultural business industry in Gage County.
- 3.2 Ensure that all economic development activities be consistent with this **Comprehensive Plan**.
- 3.3 Target new businesses and industries capable of producing competitive incomes for the residents of Gage County.
- 3.4 Promote cooperative economic development activities between the communities and rural areas of the County. Coordinate efforts through NGage and the Beatrice Area Chamber of Commerce.
- 3.5 Work with NGage to expand and develop the hospitality, tourism and recreational industries in Gage County.

- 3.6 Support the efforts of Gage County Emergency Management shelters in place, which includes disaster prevention, recovery mitigation planning utilizing the Gage County Local Emergency Operations Plan and the Hazardous Mitigation Plan.
- 3.7 Support the efforts of 911 Emergency Addressing to assure emergency services are readily available to all portions of rural Gage County.
- 3.8 Encourage Gage County and all of the Communities to support the efforts of NGage to assist existing and recruitment new businesses to the County, as well as its efforts to expand affordable housing, especially to its growing workforce.

NGage states: “We believe the guidelines presented in this Comprehensive Plan are fair and equitable in achieving growth. It will be by these guidelines that decisions will be determined and growth in subdivisions, communities, agriculture, and resident population will be achieved.”

PUBLIC FACILITIES & TRANSPORTATION.

Goal 1 - *Plan, program and implement the most effective, safe and cost-efficient infrastructure and public facilities systems throughout the rural county areas.*

Policies:

- 1.1 Prepare and adopt an annual Capital Improvement Program or Plan (One- and Six-Year Road Plan), which is consistent with the goals and policies of the **Comprehensive Plan**.
- 1.2 Recognize the need for and improve on intergovernmental and regional cooperation to reduce duplication of services.
- 1.3 Maintain modern design standards and policies for public infrastructure improvements throughout the rural areas of Gage County.

Goal 2 - *Provide a transportation system throughout the County that enhances the safe and efficient movement of people, goods and services.*

Policies:

- 2.1 Coordinate transportation systems with the planning and development of other elements of the County, including other transportation means and public utilities and facilities.
- 2.2 Continue to develop County road systems in accordance with the standard State of Nebraska “Functional Street Classifications.”

Goal 3 - *Provide adequate, efficient and appropriate public utilities and services to both existing and future agricultural and residential areas.*

Policies:

- 3.1 Maintain and improve existing public utilities and services on an as needed basis.
- 3.2 Encourage the development of facilities and services in rural Gage County necessary to prevent degradation of the environment, including modern sewage treatment, refuse collection and disposal and similar environmental control processes as necessary. This includes the proper disposal of animal waste.
- 3.3 Ensure the rules and regulations governing safe drinking water and sewage treatment are adhered to.
- 3.4 Support efforts of the Communities of Gage County to supply drinking water to the Gage County Rural Water District.

Goal 4 - *Provide for the equitable distribution of public facilities to meet the cultural, educational, social, recreational, safety and health needs of the County.*

Policies:

- 4.1 Provide adequate public health, safety and crime prevention systems throughout the County.

- 4.2 Promote a social and cultural environment that provides an opportunity for all residents to experience, develop and share their values, abilities, ambitions and heritage.
- 4.3 Foster a public educational system capable of raising the County's overall educational level.
- 4.4 Develop and promote programs to educate the residents of Gage County and visitors regarding the rich heritage and history of the region. Utilize current and future public and cultural facilities such as community libraries, museums and natural wildlife areas associated with The Big Blue and Big Nemaha Rivers.
- 4.5 Ensure the rules and regulations of the Americans with Disabilities Act are met at all public facilities.
- 4.6 Encourage the availability of all necessary services to youth and older adults in Gage County.

PLAN MAINTENANCE & IMPLEMENTATION.

Goal 1 - Maintain and utilize the Comprehensive Plan as the primary tool for making County decisions regarding the physical development of the area.

Policies:

- 1.1 Establish a review process for the **Comprehensive Plan** and associated Regulations, including Zoning and Subdivision Regulations.
- 1.2 Coordinate local groups and organizations to carry-out the Goals and Policies of this **Comprehensive Plan**.
- 1.3 Coordinate development and land use changes with local, County and State officials.

*Population, Income, Economic,
& Housing Profile.*



**COMPREHENSIVE PLAN
2018 – 2028.**



SECTION 3

SECTION 3

POPULATION, INCOME, ECONOMIC & HOUSING PROFILE.

INTRODUCTION.

Population, income and economic trends in Gage County serve as valuable indicators of future development needs and patterns for the County and provide a basis for the realistic projection of the future population. The quantity and location of social and economic features play an important role in shaping the details of various development plans to meet the County's needs.

The population trends & projections for the years 2000 through 2028 were studied and forecasted, utilizing a process of both trend analysis, U.S. Census population estimates and popular consent. **Gage County is projected to increase in population, by 107 persons, during the next 10 years.** The County should continue to promote the development of a variety of businesses and housing types during the 10-year planning period in Gage County.

GENERAL POPULATION TRENDS & PROJECTIONS.

The analysis and projection of population are at the center of all planning decisions. This process assists in understanding important changes which have and will occur throughout the planning period.

Estimating population size is critical to a planning process. Further, projecting a County's population is extremely complex. Because projections are based on various assumptions about the future, projections must be carefully analyzed and continually re-evaluated due to an area's economic and social structure.

POPULATION.

- ❖ **Table 3.1, Page 3.2,** identifies **population trends and projections** for Gage County and each Community, from 2000 through 2028. The trend of a declining population for Gage County, between the 2000 and 2010 Decennial Censuses have continued through 2018, but continue remain stable.

Currently (2018), Gage County total population and the Balance of County, or the rural portion of the County, have estimated populations of 21,816 and 5,554, respectively. The 2028 population of Gage County is projected at an estimated 21,923, or an increase of 107 persons. An estimated population increase of 92 persons in the Balance of County is also projected, for a Balance of County population at 5,646 by 2028.

Throughout the next 10 years, the Cities of Beatrice, Adams and Cortland are also projected to increase in population. The City of Beatrice, the County Seat and largest Community in the County, is anticipated to grow by 81 persons (0.6 percent) from 12,379 in 2018 to 12,460 by 2028.

**TABLE 3.1
POPULATION TRENDS AND PROJECTIONS
GAGE COUNTY & COMMUNITIES, NEBRASKA
2000-2028**

	<u>2000</u>	<u>2010</u>	<u>2018</u>	<u>2028</u>	<u>% Change 2018-2028</u>
Gage County:	22,993	22,311	21,816	21,923	+0.5%
Beatrice:	12,496	12,459	12,379	12,460	+0.6%
Adams:	489	573	609	630	+3.4%
Barneston:	122	116	113	102	-9.7%
Blue Springs:	383	331	317	304	-4.1%
Clatonia:	275	231	223	206	-7.6%
Cortland:	488	482	470	480	+2.1%
Filley:	174	132	129	119	-7.7%
Liberty:	86	76	74	69	-6.7%
Odell:	345	307	297	291	-2.0%
Pickrell:	182	199	193	180	-6.7%
Virginia	67	60	59	54	-8.4%
Wymore	1,656	1,457	1,399	1,382	-1.2%
Balance of County:	6,230	5,888	5,554	5,646	+1.6%

2017 U.S. Census Population Estimates:
Gage Co. – 21,799; **Beatrice** – 12,362; **Adams** – 607; **Barneston** – 114; **Blue Springs** – 319;
Clatonia – 226; **Cortland** – 472; **Filley** – 129; **Liberty** – 75; **Odell** – 300; **Pickrell** – 195;
Virginia – 59; **Wymore** – 1,401; **Balance of County** – 5,540.

Source: 2000, 2010 Census.
 Hanna:Keelan Associates, P.C., 2018.

AGE DISTRIBUTION.

- ❖ For planning purposes, the various cohorts of population are important indicators of the special needs of a County. The cohorts of age, sex and family structure can assist in determining potential labor force and the need for housing, public facilities and other important local services.

An analysis of age characteristics can be used to identify the potential needs for public school, recreational areas and short- and long-term health care facilities.

- ❖ **Table 3.2, Page 3.4**, provides **age distribution trends and projections** for Gage County and each Community, from 2000 to 2028. Overall, the County is projected to experience a net increase in population during the next 10 years of approximately 107 persons. The 55+ population is projected to experience a population increase by 2028. However, the “35 to 54” and younger categories are project to decline, but remain stable during the next 10 years.

The “55 to 64” age group is projected to experience the largest population increase during the next 10 years, in Gage County, from 3,244 persons in 2018 to 3,907 as of 2028, or an estimated increase of 663 persons. The 65+ age categories are projected to increase by a combined 95 persons.

The **Balance of County** population, by comparison, is projected to increase by 92 people, with the “55 to 64” age group increasing by 250 and the 65+ categories increasing by a combined 173 persons. Declines in each of the three youngest categories, “19 and Under,” “20 to 34” and “35 to 54” are projected to total 331 persons, through 2028.

In 2018, median age in Gage County is an estimated 44.3 years, while the Balance of County median age is projected to be 43.5 years. The median age for the County as a whole is projected to increase to 46.9 years, or by 2.6 years, but the Balance of County median age is anticipated to increase by two years, or to 45.5 years between 2018 and 2028.

**TABLE 3.2
POPULATION AGE DISTRIBUTION
TRENDS & PROJECTIONS
GAGE COUNTY, NEBRASKA
2000-2028**

Gage County		2000-2010				
age group	2000	2010	Change	2018	2028	Change
19 and Under	6,162	5,584	-578	5,217	5,025	-192
20-34	3,649	3,397	-252	3,208	3,056	-152
35-54	6,594	6,059	-535	5,806	5,499	-307
55-64	2,174	2,945	+771	3,244	3,907	+663
65-74	2,036	2,003	-33	2,013	2,046	+33
75-84	1,650	1,544	-106	1,526	1,550	+24
85+	728	779	+51	802	840	+38
TOTALS	22,993	22,311	-682	21,816	21,923	+107
Median Age	39.9	43.7	+3.8	44.3	46.9	+2.6
Balance of County		2000-2010				
age group	2000	2010	Change	2018	2028	Change
19 and Under	1,764	1,522	-242	1,376	1,207	-169
20-34	862	644	-218	520	469	-51
35-54	2,162	1,892	-270	1,684	1,573	-111
55-64	659	926	+267	1,020	1,270	+250
65-74	506	498	-8	496	533	+37
75-84	231	318	+87	350	446	+96
85+	46	88	+42	108	148	+40
TOTALS	6,230	5,888	-342	5,554	5,646	+92
Median Age	39.2	42.8	+3.6	43.5	45.5	+2.0

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2018.

HOUSEHOLD CHARACTERISTICS.

❖ **Table 3.3** identifies **specific household characteristics** of Gage County, from 2000 to 2028. The total number of households is projected to increase by an estimated 85 dwellings throughout the County and by 87 households in the Balance of County. During the next 10 years, “persons per household” in Gage County is projected to decline slightly, from 2.26 to 2.25.

Group quarters consist of living quarters that are not considered a household, such as dormitories, nursing care centers and correctional facilities. Currently, a total of 583 persons reside in group quarters in Gage County. Persons residing in group quarters is also projected to increase to 593, or by 1.7 percent through 2028.

The Gold Crest Retirement Center campus is located adjacent, but beyond the Corporate Limits of Adams, Nebraska. This retirement campus is contributes to the Balance of County group quarters number of 168, as of 2018.

**TABLE 3.3
SPECIFIC HOUSEHOLD CHARACTERISTICS
GAGE COUNTY, NEBRASKA
2000-2028**

	<u>Year</u>	<u>Population</u>	<u>Group Quarters</u>	<u>Persons in Households</u>	<u>Households</u>	<u>Persons Per Household</u>
Gage County:	2000	22,993	1,036	21,957	9,316	2.35
	2010	22,311	523	21,988	9,422	2.33
	2018	21,816	583	21,233	9,395	2.26
	2028	21,923	593	21,330	9,480	2.25
Balance of County:	2000	6,230	505	5,725	2,130	2.68
	2010	5,888	179	5,709	2,245	2.54
	2018	5,554	168	5,386	2,260	2.38
	2028	5,646	152	5,494	2,347	2.34

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2018.

HOUSEHOLD TENURE.

❖ **Table 3.4 identifies tenure by household** for Gage County, from 2000 to 2028. The County is currently (2018) comprised of an estimated 9,395 households, consisting of 6,670 owner and 2,725 renter households. By 2028, owner households will account for an estimated 70.7 percent of the total households in Gage County, resulting in 6,702 owner households and 2,778 renter households.

Between 2018 and 2028, the number of owner and renter households in Gage County is projected to increase throughout the County. The Balance of County, in contrast, is anticipated to have the number of renter households decline by 28, while rural owner households are projected to increase by an estimated 115 households.

**TABLE 3.4
TENURE BY HOUSEHOLD
GAGE COUNTY, NEBRASKA
2000-2028**

	<u>Year</u>	<u>Households</u>	<u>Owner</u>		<u>Renter</u>	
			<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Gage County:	2000	9,316	6,631	71.2%	2,685	28.8%
	2010	9,422	6,700	71.1%	2,722	28.9%
	2018	9,395	6,670	71.0%	2,725	29.0%
	2028	9,480	6,702	70.7%	2,778	28.9%
Balance of County:	2000	2,130	1,689	79.2%	441	20.8%
	2010	2,245	1,897	84.5%	328	15.5%
	2018	2,260	1,952	86.4%	308	13.6%
	2028	2,347	2,067	88.1%	280	12.3%

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2018.

INCOME TRENDS & PROJECTIONS.

MEDIAN HOUSEHOLD INCOME.

❖ **Table 3.5** identifies **median household income** for Gage County, Nebraska, from 2000 to 2028. Currently, median income in Gage County is projected at \$49,951. Median income in the County is projected to increase by an estimated 21.6 percent to \$60,780, by 2028. By comparison the Households with persons 65+ years of age are projected to increase by 26.5 percent reaching a 2028 median income of \$41,910, during the same period.

**TABLE 3.5
HOUSEHOLD INCOME BY AGE GROUP - TRENDS AND PROJECTIONS
GAGE COUNTY, NEBRASKA
2000-2028**

<u>Income Group</u>	<u>2000*</u>	<u>2015*</u>	<u>2018</u>	<u>2028</u>	<u>% Change 2018-2028</u>
All Households:					
Less than \$10,000	877	531	496	379	-23.5%
\$10,000-\$19,999	1,429	1,251	1,239	1,206	-2.7%
\$20,000-\$34,999	2,368	1,636	1,601	1,527	-4.6%
\$35,000-\$49,999	1,836	1,309	1,288	1,276	-0.9%
<u>\$50,000 or More</u>	<u>2,812</u>	<u>4,406</u>	<u>4,771</u>	<u>5,092</u>	<u>+6.7%</u>
TOTALS	9,322	9,133	9,395	9,480	+0.9%
Median Income	\$34,908	\$47,654	\$49,951	\$60,780	+21.6%
Households 65+ Yrs.					
Less than \$10,000	425	203	183	120	-34.4%
\$10,000-\$19,999	804	606	571	528	-7.5%
\$20,000-\$34,999	705	713	716	724	+1.1%
\$35,000-\$49,999	426	387	392	404	+3.0%
<u>\$50,000 or More</u>	<u>448</u>	<u>826</u>	<u>928</u>	<u>1,095</u>	<u>+18.0%</u>
TOTALS	2,808	2,735	2,790	2,871	+2.9%
Median Income	\$25,723	\$32,748	\$33,141	\$41,910	+26.5%

* Specified 2000 & 2015 Data Used. 2015 Estimate subject to margin of error.
Source: 2000 Census, 2011-2015 American Community Survey.
Hanna:Keelan Associates, P.C., 2018.

PER CAPITA INCOME.

❖ **Table 3.6** identifies **per capita income** for Gage County and the State of Nebraska, from 2000 to 2028. Per capita income is equal to the gross income of an area (State, County, City, Village) divided equally between the residents of the area. In 2018, per capita income in Gage County is an estimated \$51,356. By 2028, per capita income will increase in the County by an estimated 18.5 percent, to \$60,884.

Per capita income in Gage County has fluctuated lower and higher than the State-Wide Per Capita income. As of 2028, Gage County has is projected to be higher than the State-wide per capita income at \$60,884 compared to the Nebraska per capita income of \$58,564, or 4.0 percent (\$2,320) higher.

**TABLE 3.6
PER CAPITA PERSONAL INCOME
GAGE COUNTY, NEBRASKA / STATE OF NEBRASKA
2002-2027**

<u>Year</u>	<u>Gage County</u>		<u>State of Nebraska</u>	
	<u>Per Capita Income</u>	<u>Percent Change</u>	<u>Per Capita Income</u>	<u>Percent Change</u>
2002	\$28,231	--	\$30,696	--
2003	\$30,379	+7.6%	\$32,611	+6.2%
2004	\$32,265	+6.2%	\$33,768	+3.5%
2005	\$32,200	-0.2%	\$34,772	+3.0%
2006	\$33,851	+5.1%	\$35,982	+3.5%
2007	\$36,172	+6.8%	\$38,484	+7.0%
2008	\$40,162	+11.0%	\$40,626	+5.6%
2009	\$39,964	-0.5%	\$39,226	-3.4%
2010	\$39,096	-2.2%	\$40,023	+2.0%
2011	\$44,481	+13.8%	\$43,820	+9.5%
2012	\$44,551	+0.2%	\$45,578	+4.0%
2015	\$49,186	+10.4%	\$46,254	+1.5%
2014	\$47,942	-2.5%	\$47,757	+3.2%
2018	\$51,356	+7.1%	\$50,014	+4.7%
2002-2018	\$28,231-\$51,356	+81.9%	\$30,696-\$50,014	+62.9
2018-2028	\$51,356-\$60,884	+18.5%	\$50,014-\$58,564	+17.0%

Source: Nebraska Department of Economic Development, 2017
Hanna:Keelan Associates, P.C., 2018.

EMPLOYMENT & ECONOMIC TRENDS.

The most recent and comprehensive employment data available for Gage County was obtained from the Nebraska Department of Labor. A review and analysis of Gage County labor force statistics provides a general understanding of the economic activity occurring in and around the County.

EMPLOYMENT DATA.

- ❖ **Table 3.7 identifies employment data trends and projections for Gage County, Nebraska, from 2004 through 2028.** In 2017, Gage County is estimated to have 10,674 employed persons with an estimated unemployment rate of 3.4 percent. By 2028, employed persons in the County are estimated to increase by 264 persons, or by 2.5 percent. The 2028 unemployment rate is projected at approximately 3.1 percent.

**TABLE 3.7
EMPLOYMENT DATA TRENDS AND PROJECTIONS
GAGE COUNTY, NEBRASKA
2004-2028**

<u>Year</u>	<u>Number of Employed Persons</u>	<u>Change</u>	<u>Percent Unemployed</u>
2004	12,404	--	4.5%
2005	12,259	-145	4.5%
2006	12,222	-37	3.7%
2007	12,099	-123	3.5%
2008	11,998	-101	4.7%
2009	11,186	-812	6.3%
2010	11,256	+70	5.6%
2011	11,340	+84	4.8%
2012	11,486	+146	4.5%
2013	11,447	-39	3.7%
2014	11,460	+13	3.3%
2015	10,539	-921	2.7%
2016	10,680	+141	3.5%
2017*	10,674	-6	3.4%
2028	10,938	+264	3.1%
2004-2028	12,404-10,938	-1,466	4.5%-3.1%

*Estimate as of June, 2017.
Source: Nebraska Department of Labor, 2017.
Hanna:Keelan Associates, P.C., 2018.

EMPLOYMENT BY TYPE.

❖ **Table 3.8** identifies **workforce employment by type**, in Gage County, Nebraska, from 2017. The “Health Care & Social Assistance” sector in Gage County, is the largest Non-farm employment sector, with 1,726 employed persons in this category. The second largest Non-farm sector is the “Manufacturing” category with 1,533 employees, followed by “Local Government” with 1,377 employed persons as of 2017.

**TABLE 3.8
WORKFORCE EMPLOYMENT BY TYPE
GAGE COUNTY, NEBRASKA
2017**

<u>Workforce</u>	<u>Employees</u>
Non-Farm Employment (Wage & Salary	9,659
• Agriculture Forestry, Fishing & Hunting.	0
• Mining, Quarrying & Oil/Gas Extraction.	N/A
• Utilities.	N/A
• Construction.	398
• Manufacturing.	1,533
• Wholesale Trade.	324
• Retail Trade.	1,151
• Transportation & Warehousing.	360
• Information.	80
• Finance & Insurance.	289
• Real Estate & Rental/Leasing.	37
• Professional, Scientific & Technical Services.	148
• Management of Companies & /Enterprises,	27
• Administrative/Support/Waste.	246
• Educational Services.	N/A
• Health Care & Social Assistance.	1,726
• Arts, Entertainment & Recreation.	177
• Accommodations & Food Service.	624
• Other Services (except Public Administration).	391
• Federal Government.	87
• State Government.	523
• Local Government.	1,377

N/A=Data not available because of disclosure suppression.

Source: Nebraska Department of Labor, Labor Market Information, 2017.
Hanna:Keelan Associates, P.C., 2018.

HOUSING TRENDS & PROJECTIONS.

HOUSING UNITS BUILT.

❖ **Table 3.9** profiles the **estimated housing units built** for Gage County and rural Gage County, as of 2018. Records indicate that an estimated 10,414 housing units exist in Gage County for 2018, of which approximately 2,325 are located in the rural areas of the County. Approximately 28.9 percent of all housing units in Gage County and 28.1 percent of all housing units in rural Gage County were constructed prior to 1939, or are at least 78 years of age.

Approximately 57 housing units have been constructed in rural Gage County between 2010 and 2018, or seven per year. In comparison, between 2000 and 2009, 31 housing units were constructed on an annual basis.

**TABLE 3.9
HOUSING STOCK PROFILE/YEAR STRUCTURE BUILT
GAGE COUNTY & COMMUNITIES, NEBRASKA
2018**

<u>Year</u>	<u>Gage County</u>	<u>Balance of County</u>
2016 to Present*	27	15
2010 to 2015*	75	42
2000 to 2009*	815	311
1990 to 1999	1,133	281
1980 to 1989	663	172
1970 to 1979	1,709	422
1960 to 1969	1,319	168
1950 to 1959	836	127
1940 to 1949	828	134
<u>1939 or Before</u>	<u>3,041</u>	<u>663</u>
SUBTOTAL	10,446	2,335
<u>Units Lost (2014 to Present)</u>	<u>(32)</u>	<u>(10)</u>
TOTAL EST. UNITS – 2018	10,414	2,325
% 1939 or Before	28.9%	28.1%
% 1959 or Before	44.9%	39.3%

*Specified Data Used. 2015 Estimate subject to margin of error.

Source: 2011-2015 American Community Survey.
Communities of Gage County, 2018.
Hanna:Keelan Associates, P.C., 2018.

OCCUPANCY/VACANCY STATUS.

- ❖ **Table 3.10** identifies the **estimated housing stock occupancy / vacancy status** in Gage County for 2018. As of 2018, rural Gage County is comprised of an estimated 2,325 housing units, consisting of an estimated 1,992 owner units and 333 renter units. Of the 2,325 units, approximately 65 are vacant, resulting in an estimated overall housing vacancy rate of 2.8 percent. The 65 vacant housing units consist of an estimated 40 owner units and 25 renter units, equaling an owner housing vacancy rate of 2.0 percent and a renter housing vacancy rate of 7.5 percent.

- ❖ The **Adjusted Housing Vacancy Rate** only considers year-round vacant units that are available for rent or purchase, meeting current housing code and modern amenities. The 2018 adjusted housing vacancy rate, for Gage County, is an estimated 1.8 percent, with an adjusted owner housing vacancy rate of 1.4 percent and an adjusted vacancy rate of 4.2 for renter housing. **A healthy vacancy rate is 5 to 8 percent, thus persons desiring to purchase a home in rural Gage County generally construct a new house.**

**TABLE 3.10
HOUSING STOCK OCCUPANCY/VACANCY STATUS
GAGE COUNTY & COMMUNITIES, NEBRASKA
2018**

	<u>Gage County</u>	<u>Balance of County</u>
a) Housing Stock	10,414	2,325
	(O=7,259; R=3,155)	(O=1,992; R=333)
b) Vacant Housing Stock	1,019	65
c) Occupied Housing Stock	9,395	2,260
*Owner Occupied	6,670	1,952
*Renter Occupied	2,725	308
d) Housing Vacancy Rate*	9.7% (1,019)	2.8% (65)
*Owner Vacancy	8.1% (589)	2.0% (40)
*Renter Vacancy	13.6% (430)	7.5% (25)
e) Adjusted Vacancy Rate**	6.2% (643)	1.8% (43)
**Owner Vacancy	5.6% (406)	1.4% (29)
**Renter Vacancy	7.5% (237)	4.2% (14)

* Includes all housing stock, including seasonal and substandard housing.

** Includes only year-round vacant units available for rent or purchase, meeting current housing code and modern amenities. Does not include vacant units either not for sale or rent, seasonal units, or units not meeting current housing code.

Source: 2011-2015 American Community Survey.
Gage County & Communities, 2018.
Hanna:Keelan Associates, P.C., 2018.

COST BURDENED HOUSEHOLDS.

- ❖ The following tables identify **households with housing problems/cost burdened** in Gage County for both owner and renter households that spend 30 percent or more of their household income on housing costs. Housing costs include any cost directly attributable to the cost of living, and may include rent, mortgage, insurance, taxes and utilities. Housing problems may also include a lack of plumbing facilities or overcrowded housing conditions. Overcrowded housing conditions exist when more than 1.01 persons per room exist in a housing unit.

- ❖ **Table 3.11** identifies owner households with housing problems/cost burdened. In 2018, an estimated 1,236 owner households in Gage County are cost burdened and have housing problems. By 2028, an estimated 1,212 owner households will be cost burdened and experiencing housing problems.

**TABLE 3.11
ESTIMATED OWNER HOUSEHOLDS BY INCOME
COST BURDENED WITH HOUSING PROBLEMS
GAGE COUNTY, NEBRASKA
2000-2028**

<u>Inc. Rng.</u>	<u>2000*</u> <u># / #CB-HP</u>	<u>2013*</u> <u># / #CB-HP</u>	<u>2018</u> <u># / #CB-HP</u>	<u>2028</u> <u># / #CB-HP</u>
0-30% AMI	409 / 306	425 / 345	429 / 355	4,451 / 348
31-50% AMI	562 / 235	750 / 340	772 / 368	794 / 362
51-80% AMI	1,146 / 307	1,125 / 250	1,139 / 222	1,148 / 201
<u>81%+ AMI</u>	<u>4,553 / 324</u>	<u>4,310 / 270</u>	<u>4,330 / 291</u>	<u>4,315 / 301</u>
TOTALS	6,670 / 1,172	6,610 / 1,205	6,670 / 1,236	6,702 / 1,212

*Specified data

= Total Households # = CB-HP = Households with Cost Burden – Housing Problems

Source: 2000 CHAS Tables.

Hanna:Keelan Associates, P.C., 2018.

- ❖ **Table 3.12** identifies renter households that are experiencing housing problems/cost burdened status. In 2018, an estimated 1,148 renter households are cost burdened and have housing problems. By 2028, an estimated 1,089 households will be cost burdened and experiencing housing problems.

**TABLE 3.12
ESTIMATED RENTER HOUSEHOLDS BY INCOME
COST BURDENED WITH HOUSING PROBLEMS
GAGE COUNTY, NEBRASKA
2000-2028**

Inc. Rng.	2000* # / #CB-HP	2013* # / #CB-HP	2018 # / #CB-HP	2028 # / #CB-HP
0-30% AMI	419 / 250	650 / 520	682 / 511	703 / 490
31-50% AMI	461 / 226	455 / 310	449 / 310	432 / 300
51-80% AMI	616 / 142	525 / 70	503 / 64	484 / 52
<u>81%+ AMI</u>	<u>1,146 / 42</u>	<u>885 / 270</u>	<u>1,091 / 263</u>	<u>1,159 / 247</u>
TOTALS	2,642 / 660	2,515 / 1,170	2,725 / 1,148	2,778 / 1,089

*Specified data

= Total Households #CB-HP = Households with Cost Burden – Housing Problems

Source: 2000 CHAS Tables.

Hanna:Keelan Associates, P.C., 2018.

HOUSING CONDITIONS, SUBSTANDARD HOUSING.

- ❖ Substandard housing, as defined by HUD, as per the 2015 American Community Survey, included 1) housing units lacking complete plumbing and 2) housing units with 1.01+ persons per room. **Table 3.13**, identifies the **general condition of housing**, in Gage County and throughout the Balance of County, 2015, as per this definition.
- ❖ As of the 2015 Estimate in Gage County, 15 housing units lacked complete plumbing, while 72 were experiencing overcrowded conditions. The Balance of County housing units had 14 that were overcrowded, but none lacked complete plumbing.

**TABLE 3.13
HOUSING STOCK PROFILE
DEFINING SUBSTANDARD HOUSING – HUD
GAGE COUNTY & COMMUNITIES, NEBRASKA
2015 ESTIMATE***

	Complete Plumbing			Lack of Complete Plumbing		Units with 1.01+ Persons per Room	
	<u>Total</u>	<u>Number</u>	<u>% of Total</u>	<u>Number</u>	<u>% of Total</u>	<u>Number</u>	<u>% of Total</u>
Gage County:	9,240	9,225	99.8%	15	0.2%	72	0.8%
Balance of County:	2,170	2,170	100.0%	0	0.0%	14	0.6%

*2015 Estimate subject to margin of error.
Source: 2011-2015 American Community Survey.
Hanna:Keelan Associates, P.C., 2018.

OWNER & RENTER HOUSING COSTS.

The cost of housing in any county or community is influenced by many factors, primarily the cost of construction, availability of land and infrastructure, and lastly, the organizational capacity of the County to tie these housing opportunities into an applicable format and secure the appropriate resources. Gage County is challenged to organize needed resources to meet the needs of their residents, including both financial, as well as, organizational resources. A continued effort to upgrade wages, at both existing and new employment settings, should be a top priority.

HOUSING VALUE & GROSS RENT.

❖ **Table 3.14**, identifies **owner occupied housing values** for both Gage County and the Balance of County, from 2000 to 2028. The median housing value in 2018, in Gage County, is estimated to be \$111,200 and is projected to increase to \$136,500 by 2028. In contrast, owner occupied median values in the Balance of County are currently estimated to be \$186,900 and are projected to increase to \$211,300 by 2028.

**TABLE 3.14
OWNER OCCUPIED HOUSING VALUE
GAGE COUNTY & COMMUNITIES, NEBRASKA
2000-2028**

		Less than \$50,000	\$50,000 to \$99,999	\$100,000 to \$149,999	\$150,000 to \$199,999	\$200,000 or More	Total
Gage County:	2000*	1,631	2,3 83	845	276	84	5,219
	2000 Med. Val.	\$68,600					
	2015*	1,193	1,841	1,419	952	1,165	6,570
	2015 Med. Val.	\$108,800					
	2018 2028	\$111,200 \$136,500					
Balance of County:	2000*	139	273	297	116	29	854
	2000 Med. Val.	\$102,500					
	2015*	162	207	351	421	797	1,938
	2015 Med. Val.	\$179,600					
	2018 2028	\$186,900 \$211,300					

*Specified Data Used. 2015 Estimate subject to margin of error.
Source: 2000 Census, 2011-2015 American Community Survey.
Hanna:Keelan Associates, P.C., 2018.

❖ **Table 3.15** identifies gross rent for Gage County, Nebraska, from 2000 to 2028. In 2018, the estimated median gross rent for Gage County is \$618 and is projected to increase to \$703 by 2028. The Balance of County estimated median gross rent in 2018 is \$619 and is anticipated to increase to \$710 by 2028.

**TABLE 3.15
GROSS RENT
GAGE COUNTY & COMMUNITIES, NEBRASKA
2000-2028**

		<u>Less than \$300</u>	<u>\$300 to \$499</u>	<u>\$500 to \$699</u>	<u>\$700 or More</u>	<u>Total</u>
Gage County:	2000*	685	1,016	530	226	2,457
	2000 Median Rent	\$421				
	2015*	443	530	725	745	2,670
	2015 Median Rent	\$602				
	2018	\$618				
	2028	\$703				
Balance of County:	2000*	80	75	60	10	225
	2000 Median Rent	\$386				
	2015*	58	17	78	79	232
	2015 Median Rent	\$610				
	2018	\$619				
	2028	\$710				

*Specified Data Used. 2015 Estimate subject to margin of error.
N/A = Not Available.
Source: 2000 Census, 2011-2015 American Community Survey.
Hanna:Keelan Associates, P.C., 2018.

Land Use Profile & Plan.



**COMPREHENSIVE PLAN
2018 – 2028.**



SECTION 4

SECTION 4 LAND USE PROFILE & PLAN.

INTRODUCTION.

This **Section** is an update to the previous **Land Use Profile & Plan** contained within the original Comprehensive Plan 2000-2010. The detailed analysis of conditions associated with the natural environment, including soils, watersheds, wetlands and ground water for rural Gage County remain in the same condition, as they were in the 2000 Plan and the 2010 Plan - Update. For this reason, the **Comprehensive Plan - Update** does not include an examination of these planning components but concentrates on the existing and future land uses.

DEVELOPMENT ISSUES.

The desire to preserve and protect land for agricultural use, provide for the expansion of agricultural facilities, and allow for development opportunities throughout Gage County were the focus of this **Comprehensive Plan - Update**. The variety of land uses is the result of both natural and human influence impacting Gage County. The expansion of urbanized areas, especially from the City of Beatrice and the encroachment of non-farm rural dwellings and rural subdivisions from Lancaster County into the northern third of Gage County, applies development pressure upon the agricultural environment of the County.

The primary issues considered by the Gage County Planning Commission during the **Update** process were to ensure that the components of the **Land Use Plan** were working as originally established and to allow the County to profit from the potential development of commercial scale wind energy conversion systems.

The previous 2010 Comprehensive Plan – Update was devised to limit the development of non-farm dwellings and rural subdivisions in prime agricultural production areas of the County by only allowing a maximum of four single family dwellings per quarter section. Additionally, higher concentrations of non-farm dwellings and rural subdivisions were only allowed by a Special Use Permit in areas planned and zoned as Transitional Agricultural. These areas were identified as having a higher concentration of highway corridors and hard surfaced county roads in close proximity of Communities where emergency fire and medical services are readily available. Thus, the Transitional Agricultural Districts are concentrated in the northern one-third of the County.

EXISTING LAND USE ANALYSIS.

The **Existing Land Use Map, Illustration 4.1**, was reviewed and updated to include expanded municipal planning jurisdictions, revised Wellhead Protection Area boundaries and new structures built since the completion of the 2010 – 2020 Comprehensive Plan. The influx of non-farm single family dwellings and rural residential subdivisions both adjacent the Highway 77 Expressway and generally north of the Highway 41 Corridor, has continued since 2010.

The increase in rural non-farm households is anticipated to be one of the primary impacts upon agricultural land through the 10-year planning period, 2018 to 2028. The main factors in the location of these non-farm households are as follows:

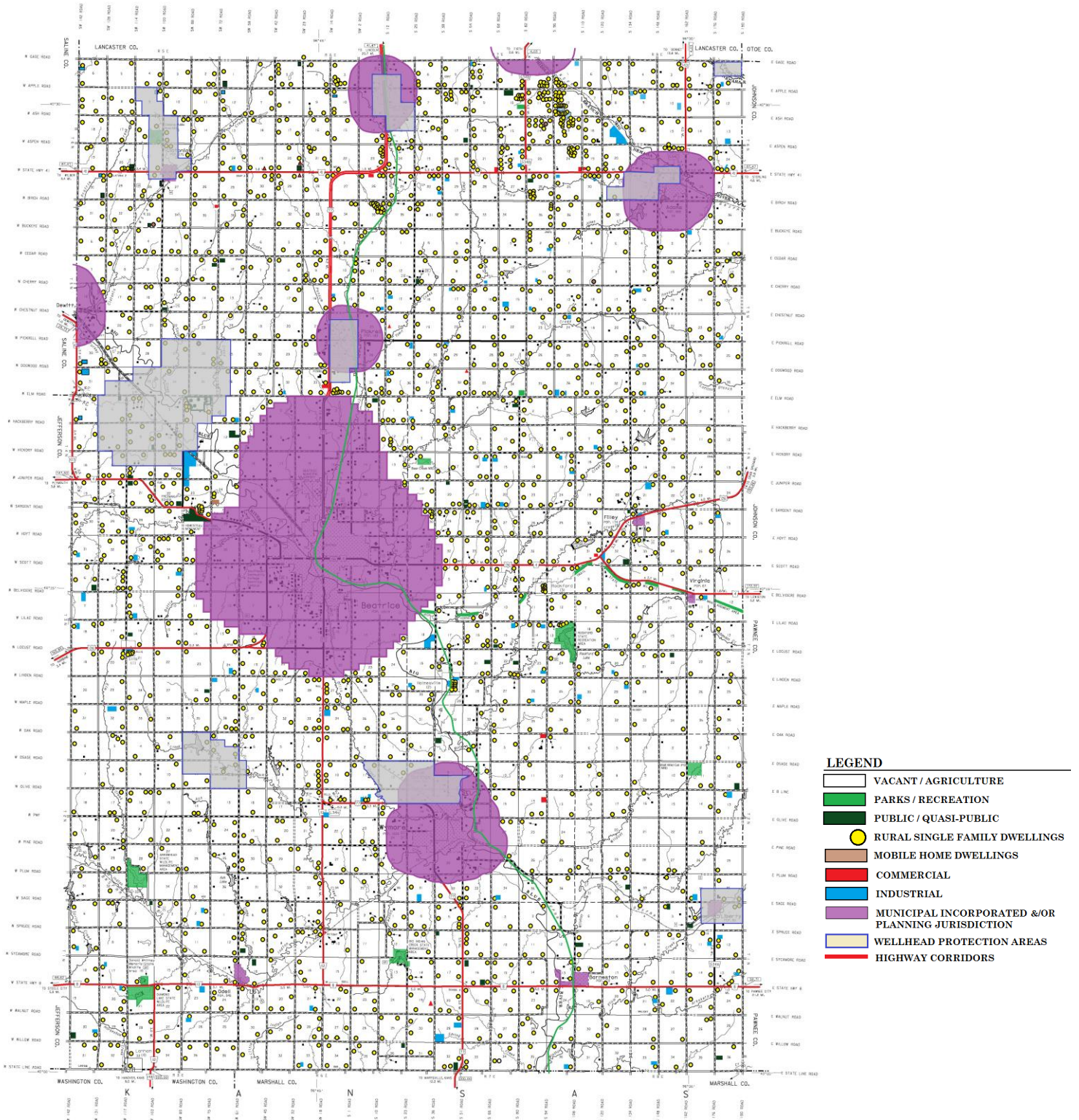
- Proximity of hard surfaced roads, specifically the Highway 41 and 77 Corridors, providing short commute times to the nearby Cities of Beatrice and Lincoln,
- Scenic quality of the area including rolling hills and valleys,
- The ability to construct man-made ponds and small lakes as a feature of rural subdivisions, and
- Proximity of Norris Public Schools, located 2.5 miles north of the Gage County line and to Freeman Public Schools in the Village of Adams. Both school systems are acknowledged for their educational and athletic programs. Rural residents consider these schools an additional benefit to locating in the northern portion of rural Gage County.



Rural Subdivision, three miles northwest of Adams, Nebraska.



GENERALIZED EXISTING LAND USE MAP
GAGE COUNTY, NEBRASKA



- LEGEND**
- VACANT / AGRICULTURE
 - PARKS / RECREATION
 - PUBLIC / QUASI-PUBLIC
 - RURAL SINGLE FAMILY DWELLINGS
 - MOBILE HOME DWELLINGS
 - COMMERCIAL
 - INDUSTRIAL
 - MUNICIPAL INCORPORATED &/OR PLANNING JURISDICTION
 - WELLHEAD PROTECTION AREAS
 - HIGHWAY CORRIDORS

HANNA:KEELAN ASSOCIATES, P.C.
COMMUNITY PLANNING & RESEARCH

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ILLUSTRATION 4.1

EXISTING LAND USES.

The **Existing Land Use Map, Illustration 4.1**, reveals that the most prolific rural land use in Gage County is vacant agricultural land. Irrigated and dry land crop production is located throughout the County. The largest concentration of irrigated cropland in Gage County is located in the west-central portions of the County.

Rural residential dwellings exist at a density throughout most of Gage County that generally ranges from two to four dwellings per square section. The exception to this observation is the southeastern portion of the County, the region to the south of the Village of Virginia and to the east of the Communities of Blue Springs and Wymore. Rural land within southeast Gage County, at most have one to two dwellings and many sections have none. Lastly, non-farm rural residential dwellings exist in high concentrations adjacent the Highway 77 Expressway and the to the north of Highway 41.

Public/quasi-public land uses such as churches and cemeteries are generally found throughout rural Gage County. State Recreation and Wildlife Management Areas are generally located in the low-lying areas of drainage basins, or along drainage ways, creeks or rivers, such as the Rockford State Recreation Area east of Beatrice.

Commercial and industrial land uses in rural Gage County are generally located within the incorporated areas of the Communities or within their rural planning jurisdiction. “Value-added” agricultural production facilities, such as the ethanol plant one-half mile northwest of the Village of Adams, are typically located along railway corridors, beyond or between communities.

AGRICULTURAL PRODUCTION STATISTICS.

NUMBER AND SIZE OF FARMS.

The development of new, small scale farms and the decline of existing large-scale farms has been the trend in Gage County over the last 10 years. *Statistics included in the Nebraska Census of Agriculture are released every five years; the latest being 2012.*

The number and size of farms, identified in **Table 4.1**, indicates that farms with “1 to 9” and “10 to 49” acres increased by a combined total of 84 farms, between 2002 and 2012. The only other farm category to increase included farms with “1,000 acres or more,” which grew by a total of three additional farms. The remaining categories (50 to 179, 180 to 499 and 500 to 999 acres) declined by a combined total of 96 farms. The largest declining category was the “500 to 999 acres” farms, which decreased by 57 or 24.1 percent.

**TABLE 4.1
FARMS BY SIZE
GAGE COUNTY, NEBRASKA
2002 – 2012**

Size	2002	2007	2012	% Change 2002 - 2007	% Change 2002 - 2012
1 to 9 Acres	41	62	79	+51.2%	+92.7%
10 to 49 Acres	211	218	257	+3.3%	+21.8%
50 to 179 Acres	319	320	309	+0.3%	-3.1%
180 to 499 Acres	301	309	272	+2.7%	-9.6%
500 to 999 Acres	237	218	180	-8.0%	-24.1%
1,000 Acres or More	163	153	166	-6.1%	-1.8%
Total Farms	1,272	1,280	1,263	+0.6%	-0.7%
Total Crop Land	429,977	413,217	421,998	-3.9%	-1.9%
Land in Farms	552,316	540,226	534,402	-2.2%	-3.2%
Average Farm Size	434	422	423	-2.8%	-2.5%
Median Farm Size	240	204	167	-15.0%	-30.4%

Source: Nebraska Census of Agriculture, 2002, 2007 & 2012.
Hanna:Keelan Associates, P.C., 2018.

Overall, the total number of farms declined by 0.7 percent, or by nine farms, between 2002 and 2012. The average farm size declined by 2.5 percent, from 434 acres in 2002 to 423 acres by 2012. The decline in total crop land of 1.9 percent, or 7,979 acres, leads to the conclusion that farms in Gage County, during this 10-year period, were experiencing the following factors:

- A) Some farms were consolidating into larger farms,
- B) Retiring farmers were choosing to remain on the farmstead by subdividing the farm buildings as a separate tract and selling off the croplands, or
- C) The farmstead tract was sold as a non-farm dwelling and the croplands were sold separately.

CROP PRODUCTION TRENDS.

Table 4.2 identifies the **status of crop production** in Gage County from 2002 to 2012. The total number of farms that harvested crops decreased by 42, or 4.5 percent from 2002 to 2012. Total acres of harvested crop land increased during the same 10-year period by 22,265 acres, or by 6.1 percent. This leads to the conclusion that crop producing farms are generally becoming larger in size.

As of 2012 the following issues were apparent:

- The number of farms in 2012 with irrigated cropland (234) increased by 10.4 percent between 2002 and 2012, or by an additional 22 farms. Total acres of irrigated cropland also increased during the during the same period by 9,683 acres, or 17.9 percent. *The average size of irrigated farms was 272 acres.*
- The total number of farms in 2012 with un-irrigated croplands, 660, declined from 744 in 2002, or by 84 farms (11.3 percent). During the same 10-year period, total un-irrigated acres increased by 12,582 acres, or by 4.1 percent. Thus, un-irrigated cropland farms were consolidating and becoming larger. *The average size of un-irrigated cropland farms was 488 acres in 2012.*
- Total crop land declined by 7,979 acres, from 429,997 in 2002, to 421,998 acres as of 2012.

**TABLE 4.2
STATUS OF CROP PRODUCTION
GAGE COUNTY, NEBRASKA
2002 – 2012**

	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>% Change 2002 - 2007</u>	<u>% Change 2002 - 2012</u>
<i>HARVESTED CROP LAND</i>					
Farms	936	909	894	-2.9%	-4.5%
Acres	363,830	359,969	386,095	-1.1%	+6.1%
<i>IRRIGATED CROP LAND</i>					
Farms	212	225	234	+6.1%	+10.4%
Acres	54,112	59,275	63,795	+9.5%	+17.9%
<i>TOTAL CROP LAND</i>					
Farms	1,162	1,140	1,074	-1.9%	-7.6%
Acres	429,977	413,217	421,998	-3.9%	-1.9%

Source: Nebraska Census of Agriculture, 2002, 2007 & 2012.
Hanna:Keelan Associates, P.C., 2018.

Table 4.3 identifies **harvested crops by type** in Gage County, from 2002 to 2012. As of 2012, “Corn for Grain or Seed” and “Soybeans for Beans” were the primary crops in the County, accounting for 340,740 acres, or approximately 81 percent of the total crop lands. Harvested acres of corn for grain or seed increased by 38 percent between 2002 and 2012, while soybean production increased by nearly 17 percent. All other identified crop types declined significantly.

Although “Wheat for Grain” production increased by 54.4 percent between 2002 and 2007, harvested wheat acres fell to 17,554 acres as of 2012, which was 62 percent less than the 46,521 acres produced in 2007.

Trends between 2002 and 2012 indicate that farmers throughout Gage County were converting crop lands and pasture lands to corn and soybean production.

**TABLE 4.3
HARVESTED CROPS BY TYPE
GAGE COUNTY, NEBRASKA
2002-2012**

CROP BY TYPE	Production in Acres			% Change	% Change
	2002	2007	2012	2002-2007	2002-2012
Corn for Grain or Seed	129,445	148,748	179,143	+14.9%	+38.4%
Corn for Silage or Green Chop	6,025	2,587	3,821	-57.1%	-36.6%
Sorghum for Grain or Seed	42,227	19,271	3,347	+54.4%	-92.1
Wheat for Grain	29,158	46,521	17,554	+59.5	-39.8
Oats for Grain	1,265	374	114	-70.4	-91.0
Soybeans for Beans	138,304	130,971	161,597	-5.3	+16.8
Hay-alfalfa, Other Wild, Silage	23,220	17,504	19,878	-24.6%	-14.4%

Source: Nebraska Census of Agriculture, 2002, 2007 & 2012.
Hanna:Keelan Associates, P.C., 2018.

LIVESTOCK PRODUCTION TRENDS.

Table 4.4 identifies **livestock production trends** from 2002 through 2012. During this period, the total number of livestock producing farms for all categories, except “Sheep and Lambs,” decreased by 211 or by 80 percent. Total animals produced excluding sheep and lambs, however, declined by approximately 65 percent.

The number of farms for “Sheep and Lambs” increased from 20 in 2002 to 47 as of 2012, but the number of animals produce declined by 159 or by 25 percent. Livestock production by all animal categories has declined between 2002 and 2012 in Gage County.

**TABLE 4.4
LIVESTOCK PRODUCTION TRENDS
GAGE COUNTY, NEBRASKA
2002 – 2012**

<u>Type</u>	<u>Total Farms / Total Animals</u>			<u>% Change</u>	<u>% Change</u>
	<u>2002</u>	<u>2007</u>	<u>2012</u>	<u>2002 - 2007</u>	<u>2002 - 2012</u>
Cattle/Calves	551 / 40,097	433 / 34,687	497 / 35,060	-21.4% / -13.5%	-9.8% / -12.6%
Beef Cows	443 / 15,274	357 / 14,121	370 / 11,139	-19.4% / -7.6%	-16.5% / -27.1%
Milk Cows	34 / 3,051	13 / 883	25 / 1,016	-61.8% / -71.1%	-26.5% / -66.7%
Hogs/Pigs	123 / 88,280	83 / 88,136	48 / 48,020	-32.5% / -0.2%	-61% / -45.6%
Sheep/Lambs	20 / 640	26 / 1,054	47 / 481	+30% / +64.7%	+135% / -24.8%

*Farms less than 180 acres in size were not included in this analysis.
Source: Nebraska Census of Agriculture, 2002, 2007 & 2012.
Hanna:Keelan Associates, P.C., 2018.

SUMMARY OF AGRICULTURAL STATISTICS.

The review of agricultural statistics between 2002 and 2012 indicates that the total number of acres harvested has increased by 6.1 percent, while the total number of farms has declined by nine farms. However, farms in the “1 to 9” and “10 to 49” acre categories increased by a combined total of 84 farms. During the same period, “corn for grain or seed” and “soybean for beans” increase by 38.4 and 16.8 percent respectively, becoming the dominant crops raised in Gage County.

RURAL FUTURE LAND USE ANALYSIS.

Modifications to the Land Use Plan were discussed at length by the Planning Commission throughout this **Comprehensive Plan – Update** process. The primary hard surfaced County, State and Federal roads and Highways were reviewed to determine the impact of rural development adjacent these corridors. The conclusion of the Planning Commission was that the original **Land Use Plan** in the Comprehensive Plan 2000-2010, and the previous Comprehensive Plan Update 2010-2020, has and is still working.

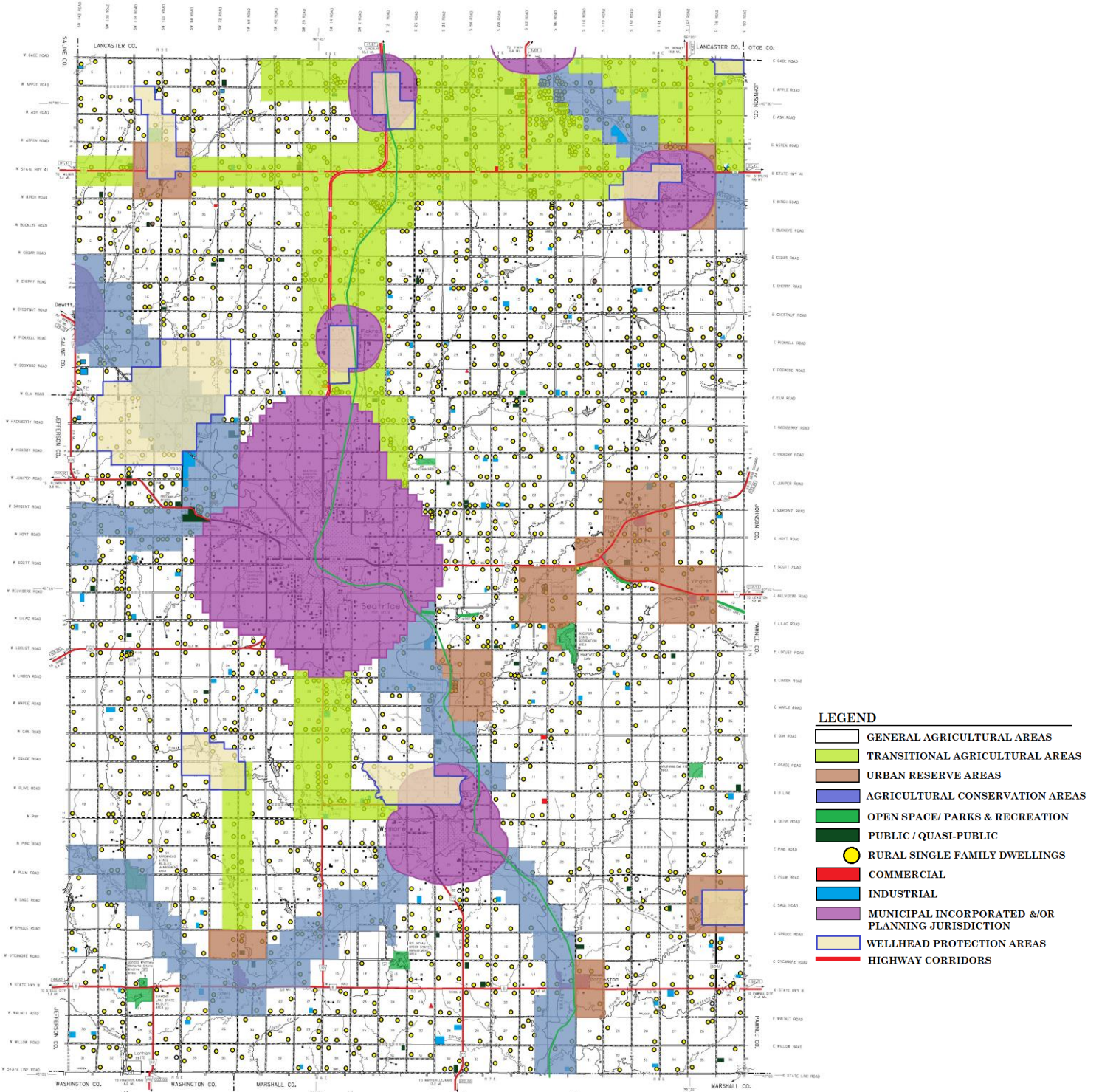
GENERAL AGRICULTURAL AREAS.

The “white” areas, on the **Future Land Use Map**, are significant for their value as agricultural production lands. These areas continue to be preserved and protected by the **Land Use Plan** from unnecessary encroachment of residential, commercial or industrial development. The economy of Gage County continues to be based upon agricultural development, or the growing of crops and the raising of livestock. By the implementation of this **Land Use Plan**, and adherence to the Gage County Zoning and Subdivision Regulations, it is anticipated that the County will continue to grow and develop as planned by these documents.

TRANSITIONAL AGRICULTURAL AREAS.

Several other transportation corridors throughout the County have been upgraded and improved with new asphalt surfacing. These corridors have not attracted non-farm single family subdivisions, or significant numbers of individual houses. Thus, the configuration of Transitional Agricultural areas did not change within the **Future Land Use Map, Illustration 4.2.**

The Gage County Planning Commission choose to guide non-farm residential development to Transitional Agricultural areas in the **Land Use Plan**, generally along the Highway 77 Expressway and in the region adjacent and to the north of the Highway 41 Corridor. These areas also served as the basis for the “AG-2 Agricultural Transitional Zoning District.” This District allows rural subdivisions by special permit in excess of the density standard of four dwellings per quarter section utilized in the “AG-1 General Agricultural Zoning District.”



LEGEND

	GENERAL AGRICULTURAL AREAS
	TRANSITIONAL AGRICULTURAL AREAS
	URBAN RESERVE AREAS
	AGRICULTURAL CONSERVATION AREAS
	OPEN SPACE/ PARKS & RECREATION
	PUBLIC / QUASI-PUBLIC
	RURAL SINGLE FAMILY DWELLINGS
	COMMERCIAL
	INDUSTRIAL
	MUNICIPAL INCORPORATED &/OR PLANNING JURISDICTION
	WELLHEAD PROTECTION AREAS
	HIGHWAY CORRIDORS

ILLUSTRATION 4.2

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AGRICULTURAL CONSERVATION AREAS.

Sensitive environmental areas were, and continue to be, areas with concentrations of soils conditions not supportive of development, flood prone or floodplain areas, or have shallow depths to the groundwater table. These areas of the County continue as Agriculture Conservation areas depicted in the **Future Land Use Map**.

OPENSOURCE & PARKS/RECREATION AREAS.

State Wildlife Management Areas, State Recreation Areas, Natural Resource District Recreation Areas, and designated Trail Systems are identified on the **Future Land Use Map, Illustration 4.2**. Designated Trail Systems within Gage County include the Homestead Trail, from Beatrice to Lincoln, that is owned and operated by the Lower Big Blue Natural Resource District and Chief Standing Bear Trail, from Beatrice to the Kansas State line that is owned by the Nebraska Ponca Tribe.

URBAN RESERVE AREAS.

Areas within one to two miles from unincorporated communities or incorporated municipalities without their own Comprehensive Plan, Zoning and Subdivision Regulations, are identified as “Urban Reserve” areas. These areas are located near urban and built-up areas within reasonable reach of fire protection and hard surfaced roads. Urban Reserve areas are depicted in the **Future Land Use Map, Illustration 4.2**.

CONCLUSIONS.

Based upon the analysis of the above areas contained within the Future Land Use Map, it was the conclusion of the Gage County Planning Commission that the Land Use Plan is effectively working to both preserve and protect agriculture production land and livestock facilities, and to promote, where appropriate, non-farm rural dwellings and subdivisions.

Public Facilities & Transportation.



**COMPREHENSIVE PLAN
2018 – 2028.**



SECTION 5

SECTION 5 **PUBLIC FACILITIES & TRANSPORTATION.**

INTRODUCTION.

Public facilities are vital components to the County and add to the quality of the living environment. Many of these public facilities have been developed out of necessity, while others have developed in response to the demands of the citizenry. Each public facility requires substantial financial commitment, and therefore, necessitates the careful review and planning for future needs.

The major emphasis of this section is to determine the present capacity of the Gage County public facility inventory and to determine the adequacy of these facilities to meet the future, estimated demands throughout the planning period. Although much of public facilities in Gage County are in each of the communities, except for parks and recreation facilities, rural portions of the County do not contain public facilities.

PARKS & RECREATION.

Nebraska's **State Wildlife Management Areas** are managed by the Nebraska Game and Parks Commission's Wildlife Division for the enhancement of wildlife habitat. These State lands are utilized for public hunting, trapping and fishing. However, they are also open to hiking, bird watching, nature study and primitive camping.

Hunters and anglers fund the acquisition, development and maintenance of these areas through the purchase of hunting, trapping and fishing permits, Habitat Stamps and through excise taxes on hunting and fishing equipment. Access to these lands is free, and no entry permit is necessary. **State Wildlife Management Areas within Gage County include:**

- **Arrowhead** – 320 acres, at intersection of West Plum Road and SW 117 Road.
- **Diamond Lake** - 61 acres, between SW 103 and 117 Roads on north side of Highway 8.
- **Donald Whitney Memorial** - 160 acres, between SW 103 and 117 Roads on south side of Highway 8.
- **Iron Horse Trail** - 160 acres, several sections of linear strips of land adjacent creeks along and south of Highway's 4 and 136 to the east of the City of Beatrice.

The **Lower Big Blue Nebraska Natural Resource District** owns the and operates following Recreation Areas in Gage County including:

- **Big Indian Creek** - 233 acres, either side of West Sycamore Road, two miles west of the Highway 77 Corridor.
- **Bear Creek** - 118 acres, between South 23 and 33rd Roads on East Hickory Road, northeast of the City of Beatrice.
- **Clatonia Public Area** - 46 acres, one mile north of the Village of Clatonia on SW 100th Road.
- **Wolf-Wild Cat. #12** - 160 acres, at the southeast corner of the intersection of East Osage Road and South 162nd Road.
- **Rockford Lake** - 436 acres, between South 94th and 108th Roads to the north and south of East Locust Road.

The following historic sites, museums and national monuments are located within Gage County:

The Homestead National Monument of America is located between SW 75th and 89th Roads along either side of Highway 4. There is no cost for admittance to the monument, which commemorates the Homestead Act of 1862. The monument has a visitor's center, a circular walking trail, log cabin and a one-room school building.

The Gage County Historical Society owns and operates the following facilities:

- The **Gage County Museum** is located at 2nd and Court Street, 101 North 2nd Street, in Beatrice. The history of Gage County is housed in the 1906 Burlington Depot building, which is listed on the National Register of Historic Places. The Society's collection offers an insight into the people, railroads, industries, medical, and agricultural history of Gage County.
- The **Filley Stone Barn** was constructed in 1874 and is listed on the National Register of Historic Places. The 20-acre property is owned by the Gage County Historical Society. Located on South 134th Road, approximately 1.5 miles south of the Village of Filley.
- **The Oregon Trail Monument**, a stone monument erected in 1913 by the Daughters of the American Revolution. The Monument marks the location where people crossed the Kansas-Nebraska border on the Oregon Trail and is located 1 3/4 miles west of the un-incorporated community of Lanham.

PUBLIC ADMINISTRATION.

Public Administration facilities are designed to serve citizens of the County and provide a location to conduct the business of the government. These facilities are located within the Cities and Villages of Gage County.

GAGE COUNTY COURTHOUSE.

The **Gage County Courthouse** is located at 612 Grant Street in Beatrice, Nebraska. Built between 1890 and 1892. The Building was substantially renovated 2010 and is listed in the National Register of Historic Places and does meet ADA standards. Offices at the Courthouse include:

- Assessor’s Office.
- Board of Supervisor’s Office.
- County Clerk/Election Commissioner’s Office.
- County Treasurer’s Office.
- Clerk of the District Court Office.
- Emergency Manager and Planning / Zoning Administrator.
- Register of Deeds Office.
- Treasurer’s Office.

LAW ENFORCEMENT

The **Gage County Sheriff Department** is located at 612 Lincoln Street in Beatrice, Nebraska. The Sheriff Department has approximately 11 sworn officers and 2 reserve officers, not including civilian employees. Additional staff includes eight communications officers and one office manager. In addition to rural law enforcement duties, the Sheriff’s Department provides law enforcement services to all areas without police protection. The County jail has 30 cells, but currently limits the inmate population to 25. The Sheriff’s Department has 12 vehicles ranging from marked patrol cars, pickups and a van. The equipment used by the Sheriff Department includes radar, video cameras, mobile computers and other equipment standard to police departments.

EMERGENCY MANAGEMENT.

The **Gage County Emergency Management Agency** is a Gage County agency with county-city inter-local agreements authorized by the Nebraska Emergency Management Act. The agency's office is located on the lower level of the Gage County Courthouse. Staff consists of a full-time Director, two part-time Deputy Directors, and volunteer personnel.

Primary functions include assisting emergency services in planning for efficient operations during disasters, acting as liaison between emergency operations agencies and county-city executives, updates in the Local Emergency Operations Plan, maintaining the **Emergency Operations Center**, development and maintenance of the all hazard warning systems throughout Gage County.

The Emergency Management Agency also conducts training for severe weather spotters and coordinating storm watch operations; coordinates county-wide hazardous materials, planning reporting and response; planning and conducting various types of training exercises, instructing and assisting the public in disaster procedures, and assisting schools, hospitals, nursing homes, business and industry in developing and implementing disaster plans.

The Director also serves as the **Gage County Safety Officer** and as the information coordinator for the **Local Emergency Planning Committee**. The office also serves as the **County Emergency Operations Center** for use in coordinating disaster response operations and has auxiliary communications equipment for the county.

FIRE & RESCUE

Eight Rural Fire Districts are located within Gage County and are highlighted on the **Fire Districts Map, Illustration 5.1, on Page 5.5** and include the following:

- **Beatrice Fire and Rescue Department:**
Includes coverage of the City of Beatrice, while the Beatrice Rural Fire District has a service area of 200 square miles with an insurance rating of “3.” The Rural Fire District has a mutual aid agreement service area of 1,200 miles that covers Gage and Jefferson Counties and portions of Saline County. The fire department also operates a county-wide ambulance service that covers a total of 600 square miles. The Rural Fire District has approximately 70 volunteer fire fighters.

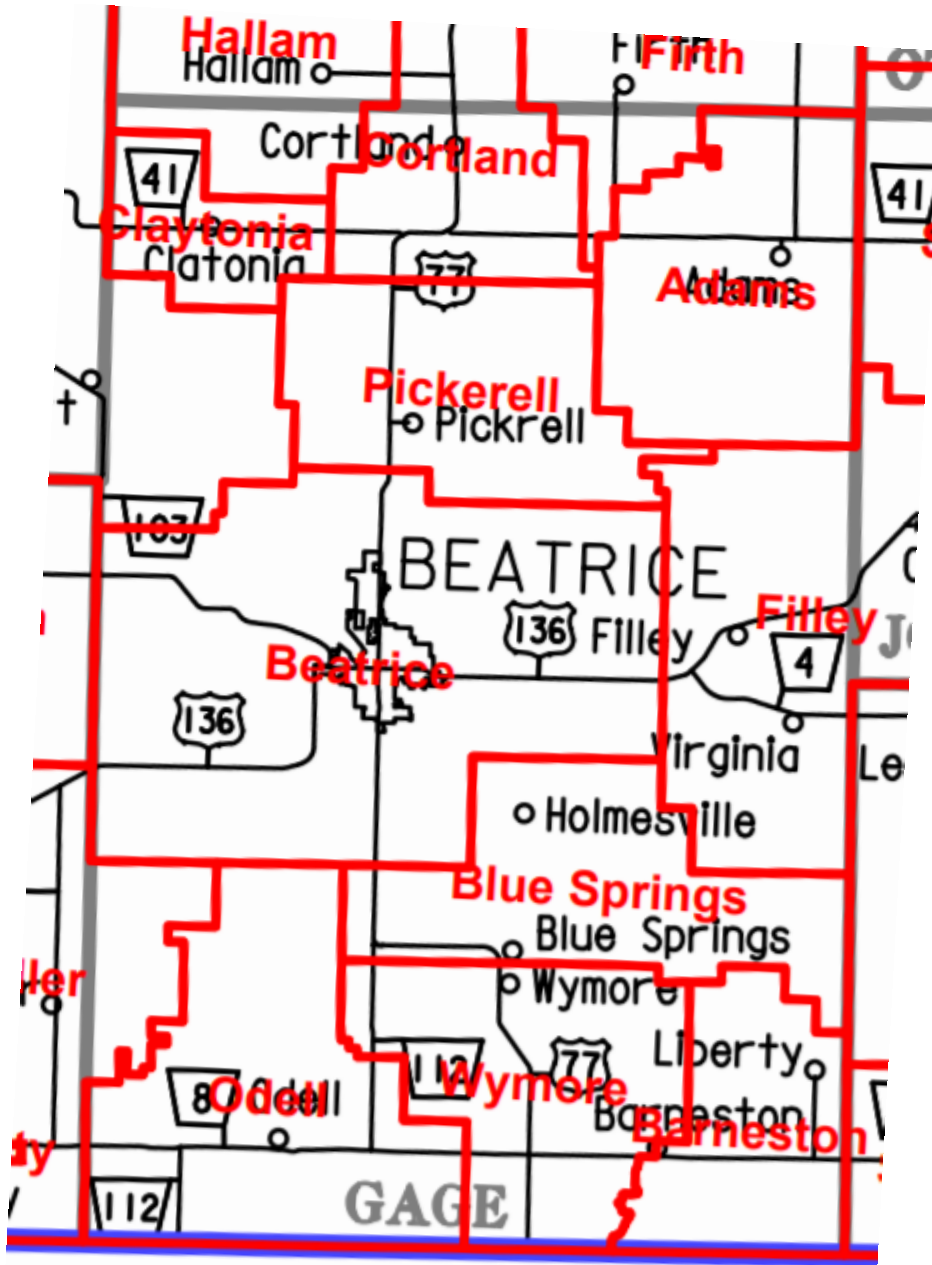
Gage County Fire and Rescue protection services are also provided by the following Community/Rural Volunteer Rural Fire and Rescue Squads:

- City of Adams,
- Village of Barneston,
- City of Blue Springs,
- Village of Clatonia,
- Village of Cortland,
- Village of Filley,
- Village of Odell and
- City of Wymore.



FIRE DISTRICTS MAP

GAGE COUNTY, NEBRASKA



LEGEND

— Fire District Boundaries

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ILLUSTRATION 5.1

U.S. POST OFFICES.

The **U.S. Post Office of Beatrice** provides house-to-house service throughout the City. The building was constructed in 1963 and is handicap accessible. The Post Office has nine city routes and five rural routes. A total of 582 postal boxes are available. The Post Office employs a staff of 31, of which 20 are full-time. Postal Service is also provided to the Village of Virginia. Window hours are Monday through Friday 8:30 am to 4:30 pm and Saturday 8:30 am to 11:30 am.

The **Adams, Nebraska, U.S. Post Office** is located at 615 Main Street and was constructed in 1991. The Office is ADA Accessible and contains 200 postal boxes. The Post Office does not provide house-to-house delivery, but services two rural routes. The office has one postal clerk and two rural carriers. The window hours are open Monday through Friday 7:00 am to 12:00 pm, and 12:30 to 1:30 pm, and Saturday 8:45 to 10:00 am.

The **U.S. Post Office in Blue Springs** is located at 204 East Broad Street. The Post Office was built in 1930 and is handicap accessible. There are 206 postal boxes. The Post Office does not have house-to-house delivery. There is one rural route based out of the Wymore, Nebraska Post Office. The facility has one office clerk with window hours of 8:00 am to 12:00 pm Monday through Friday and 9:15 to 11:00 am on Saturday.

Located at 140 Washington, the **U.S. Post Office of Clatonia** is located in a one-story building leased from Clatonia Plumbing. The building meets **ADA** standards. The Post Office does not provide house-to-house service but has one rural route serviced by the Wilber Post Office. A total of 129 postal boxes are available and window hours are Monday through Friday 12:45 am to 4:45 pm and Saturday 1:45 to 2:45 pm. A staff of one part-time postal clerk is maintained at the Office.

Located at 355 West 4th Street, the **U.S. Post Office of Cortland** was built in 1989 and is handicap accessible. Of the 224 postal boxes, 177 are currently being used. There is no house-to-house delivery. The Post Office has two part-time employees, one of which is the rural route carrier. Window hours are Monday through Friday 8:00 am to 12:00 pm and Saturday 8:00 am to 9:30 am.

The **U.S. Post Office of Filley** is located at 208 Livingston. The one-story building was constructed in 1968 and is handicap accessible. The office has one full time employee and one part-time employee, contracted out of Adams. There is one rural route with 103 customers. A total of 100 postal boxes are located at the Post Office, of which 91 are rented. House-to-house delivery is not available.

The **U.S. Post Office of Odell** is located at 205 Main Street, with 184 postal boxes. The Office has one rural route. No house-to-house delivery is provided. Two people are employed by the Post Office, including one rural route carrier. Window hours are Monday through Friday 8:00 am to 12:00 pm and Saturday 8:15 am to 9:45 am.

The **U.S. Post Office of Pickrell** is located at 222 Austin Street, the one-story building was constructed in 1967 and is handicap accessible. The Post Office has a total of 275 postal boxes and window hours are Monday through Friday 8:00 am to 12:00 pm and Saturday 8:00 am to 9:15 am. Service is provided to two rural routes. No house-to-house delivery is available, and the office employs one postal clerk and two rural carriers.

Located at 119 West "F" Street, the **U.S. Post Office in Wymore** was constructed in 1973. The building does meet ADA standards. There are 195 total postal boxes. House-to-house services are provided by the post office with two city routes. Two rural routes are also served. The Post Office has a total of seven employees, with four being full-time and window hours are Monday through Friday 8:00 to 11:30 am, 12:30 to 4:30 pm and Saturday 8:00 to 9:30 am.

PUBLIC LIBRARIES.

Public libraries can be found in Beatrice and Wymore.

The **Beatrice Public Library** is located at 100 North 16th Street and was opened in 1991 and is fully ADA accessible. It is open seven days a week; Monday thru Thursday 10:00 am – 7:30 pm, Friday and Saturday 10:00 am – 5:30 pm, and Sunday 2:00 to 5:00 pm. The Library has an annual circulation of 105,035 and is home to over 147,978 resources including books, newspapers, magazines, DVD's and CD-ROMS audio books and "Overdrive – Audio & E-books," 15 public access computers, genealogy and local history collections. Special services include story-times, book discussion groups for all ages, locally-produced exhibits, traveling displays, and cultural programs reflecting the diverse cultural backgrounds of the region. The Library serves a 15-county area and has a meeting room for over 100 people, as well as a small conference room. Library Staff includes the Director, seven part-time Library Clerks, a Youth Services Librarian, a Technology and Information Services Librarian, a Technical Services Clerk and an Interlibrary Loan Clerk.

Wymore maintains a **library** at 116 West "T" Street. The Library began operation in 1919 and was renovated and expanded in 2002 and is fully ADA accessible. The Library maintains a collection of 48,645 resources with an annual circulation of 11,380 including books with an average circulation of 1,500 books, newspapers, magazines, DVD's and CD-ROMS audio books and "Overdrive – Audio & E-books." Library hours are 12:30 p.m. to 5:30 p.m. on Monday, Tuesday, Thursday and Friday, 12:30 p.m. to 7:30 p.m. on Wednesday and 9:00 a.m. to 12:00 p.m. on Saturday. There is full-time Director, an assistant Librarian and a Library Assistant. There are nine computers available for public use.

MEDICAL SERVICES.

Adams:

The **Adams Primary Care** medical clinic is located at 620 Main Street. This clinic employs four physicians and specializes in family care in the Community of Adams.

Beatrice:

Beatrice Community Hospital & Health Center opened in 2016 at 4800 Hospital Parkway, adjacent Highway 77 at the northern Corporate Limits of Beatrice. The Hospital is a community, non-profit organization dedicated to serving the City of Beatrice and surrounding communities. The hospital is the largest rural hospital in Southeast Nebraska and provides a continuum of care that includes emergency, inpatient and outpatient services, women's and children's care, orthopedic and general surgery, and family and internal medicine physicians, as well as home care and hospice services.

The Beatrice Community Hospital & Health Center staffs and maintains the following medical clinics either on-site or at other locations:

- **Beatrice Orthopedics and Sports Medicine:** Located on the second floor of the Hospital and is staffed with one Orthopedic Surgeon and one Certified Physician Assistant.
- **Beatrice Internal Medicine Clinic:** Located on the second floor of the Hospital, staffing includes three Medical Doctors, two Physician Assistants and one Nurse Practitioner.
- **Beatrice Women's and Children Clinic:** Located on the north end of the Hospital, staffing include one Pediatrician, one Family Medicine Physician, two Physician OB-GYN's, two Pediatric Nurse Practitioners, one Family Nurse Practitioners, two Certified Nurse Midwife's, and one Clinical Psychologist.
- **Southeast Nebraska Surgery:** Located on the second floor of the Hospital, staff includes two General Surgeon's.
- **Specialty Physician Clinics:** Located on the second floor of the Hospital, specialty physicians include, Cardiology, Oncology, Nephrology, Neurology, Neurosurgery, Podiatry, Pulmonology, Urology and Vascular.

PUBLIC FACILITIES & TRANSPORTATION.

- **Community Medical Clinic:** Located at 1123 North 10 Street in Beatrice, the Clinic has one Medical Doctor and one Certified Physician Assistant.
- **Community Medical Center:** Located at 805 West Court Street in Beatrice, the Center provides one Medical Doctor and one Certified Physician Assistant.
- **Gage County Medical Clinic:** Located at 1101 North 10th Street in Beatrice, the Clinic has three Physicians and three Certified Physician’s Assistants.
- **Wymore Medical Clinic:** Located in Wymore at 116 East “H” Street, the Clinic provides one Physician, two Certified Physician Assistants.
- Former Parkview Center building is the location of the Hospital’s **Home Care and Hospice Departments**, as well as an **Immunization Clinic**.

Wymore:

The Community Physicians Clinic is located at 100 North Seventh Street in Wymore. The Clinic employs a total staff of three including two MD Family Practice Physicians, one nurse practitioner and one receptionist. With two patient rooms, the clinic sees approximately 10 people daily. There are no current plans for expansion.

RETIREMENT FACILITIES.

Gold Crest Retirement Center, located at 200 Levi Lane in Adams, was built in 1984. The facility has a staff of approximately 100, of which approximately 30 are certified. The facility is licensed for an 84-bed capacity. Services provided by the Gold Crest Retirement Center include meals, handy man services, homemaker services, transportation and social activities. A pharmacy is located on site.

Paddock Kensington-Evergreen is an assisted living facility located at 105 North 6th Street in Beatrice. Opened in March 1987, the facility has 67 assisted living units. A total staff of 32 is employed by Paddock Kensington, including Registered Nurse – supervised care. Additional staff is contracted from Beatrice Community Hospital. Services include unlimited local transportation, three meals a day, homemaker, laundry and health care. Educational programs such as computer education and health issues are also offered.

Homestead House, an assisted living facility located at 2300 Lincoln Street in Beatrice, was established in 1997. This facility has 39 units with a housing capacity of 46 persons. The facility employs 18 persons, 10 of which are full time. The facility has no plans for expansion.

Built in 1971, **Beatrice Manor Care Center/Health and Rehabilitation** is located at 1800 Irving Street in Beatrice. The licensed skilled nursing center has a staff of 125, of which approximately 50 are certified. The nursing home has a 95-bed capacity. Services provided by Care Center include long-term nursing, special care for Alzheimer patients, in house rehabilitation therapy, transportation and various social activities.

The **Beatrice Good Samaritan Society – Samaritan Springs** is located at 600 South 22nd Street in Beatrice. The Care Facility offers skilled nursing care, memory care, post-acute rehabilitation and respite care. Assisted living apartments are also available.

The **Gardens at Fair Oaks** is an assisted living facility located within the Fair Oaks retirement campus, at 22nd and Scott Streets in Beatrice. The facility provides 24-hour nursing staff, physical therapists, activity coordinators, and housekeeping services. Restaurant style dining, a beauty salon, and transportation are a few of the amenities. Residents have priority access to the “Fairfax Rehabilitation and Nursing Center if a higher level of care is needed. The nursing center provides 24-hour skilled care, long-term care, memory care, rehabilitative and respite care.

Located in Beatrice, the **Martin Luther Home** offers many services for persons with developmental disabilities. The services include, but are not limited to, audiology, developmental training, education, integrated work setting, job coaching, nursing, occupational therapy, physical therapy, recreation, speech therapy and vocational training.

Services for Independent Living, located at 815 West "D" Street in Wymore. Services for Independent Living opened in 1976. Approximately 50 people attend the Senior Center daily. Food is prepared at the Center and approximately 22 meals are delivered through the meals-on-wheels program. A variety of social activities are provided including bingo and card games.

The **Blue Rivers Area Agency on Aging** provides senior services for eight counties. There are two offices located in Gage County, one in Beatrice and one in Wymore. A total of 1,700 seniors are served in Gage County. Open 8:00 a.m. to 4:30 p.m. Monday through Friday, the centers provide noon meals and a meals-on-wheels program. Other services provided by the Blue Rivers Area Agency on Aging include transportation services, in home services such as personal care, chores and housekeeping, care management which includes the development and implementation of a care plan, state assessments for Medicare waivers, senior care options and other independent living services.

To remain viable, every community needs to continue to evaluate its market and consider potential means of expanding medical services.

EDUCATIONAL FACILITIES.

Students in Gage County attend school in many communities in and near Gage County. School district consolidation has had a geographic impact on the affiliations of Gage County Communities with area public school districts.

The following is a list of the Gage County Communities and the public schools they are currently affiliated with:

- Beatrice and Pickrell students attend the Beatrice Public Schools, including four elementary schools, the Beatrice Middle School and Beatrice High School.
- Wymore and Blue Springs students are members of the Southern Public Schools District which maintains an elementary school in Blue Springs and the Southern Junior/Senior High School in the City of Wymore.
- Cortland area students attend Norris Public Schools in Firth, Nebraska, in Lancaster County.
- Odell, Nebraska Schools District is consolidated with Diller, Nebraska in the Diller-Odell Public Schools District, which maintains an elementary school in Diller and the Junior/Senior High School in Odell.
- Students from Filley and Adams attend the consolidated Freeman Public School District, with the elementary school, Middle and High School located in Adams.
- Clatonia area students attend classes in the Wilber-Clatonia Public School District in Wilber at the Elementary and Junior/Senior High School facilities.
- Virginia, Nebraska area students are affiliated with the Lewiston Consolidated Schools District and attend all classes in Kindergarten through 12th grade school building, in Lewiston.
- Students from the communities of Liberty and Barneston have the option of attending school in the Southern Public Schools District in Wymore/Blue Springs, the Diller-Odell Public Schools District, or in the Lewiston Consolidated Schools in Lewiston, Nebraska.

PUBLIC FACILITIES & TRANSPORTATION.

The main campus of **Southeast Community College, Beatrice Campus**, is located at West Scott and Highway 136. The College serves a 15-county area, which includes Gage County. The College offers many degree programs including practical nursing, business and agricultural management. The College also offers academic transfer credit. Adult education courses are also available. Enrollment and staff at the College varies depending on the department.

The **Gage County Fairgrounds** are located on West Court and Logan Streets in Beatrice, Nebraska. The County Fair is held each year in July. The fairgrounds include such facilities as an enclosed rodeo arena, exposition center and an open space for a carnival. The fairgrounds also host an array of activities throughout the year including rodeos, home, antique, farm, cattle and horse shows, dances and wedding receptions. The fairgrounds also have electrical hookups for camping. The Fairgrounds also operates the Beatrice Speedway from March to September.

TRANSPORTATION.

The availability of a convenient and efficient transportation system is essential to the continued economic and physical development of Gage County. An adequate transportation system is required to transport goods and services to and from major travel routes and market centers within and outside the County. The overall purpose of this transportation analysis is to provide the necessary guidelines for the safe movement of people and vehicles throughout the County.

The primary sources of information utilized to develop the transportation analysis were (1) Gage County “One and Six Year Road Improvement Program” and (2) State of Nebraska Department of Roads “Nebraska Highway Program” (Fiscal Years 2018-2022 and Beyond).

EXISTING TRANSPORTATION SYSTEM.

Illustration 5.2, National Functional Classification Map, Page 5.14, as identified by the Nebraska Department of Transportation, depicts the transportation system in Gage County. The transportation system is comprised of Highways 77 and 136, which are both designated “Other Principal Arterials.” Highways 4, 8 and 41 are identified as “Minor Arterials” and several Gage County hard surfaced roads are either designated “Major or Minor Collector” roads. All other roads within the County jurisdiction are classified as local or minimum maintenance roads.

Local streets provide transportation to and throughout the Gage County Villages, while state and federal highways provide transportation into the County, adjacent counties and communities and areas beyond.

ROAD CLASSIFICATIONS.

National Functional Classifications of Highways and Roads identifies the six functional classifications of rural highways as follows:

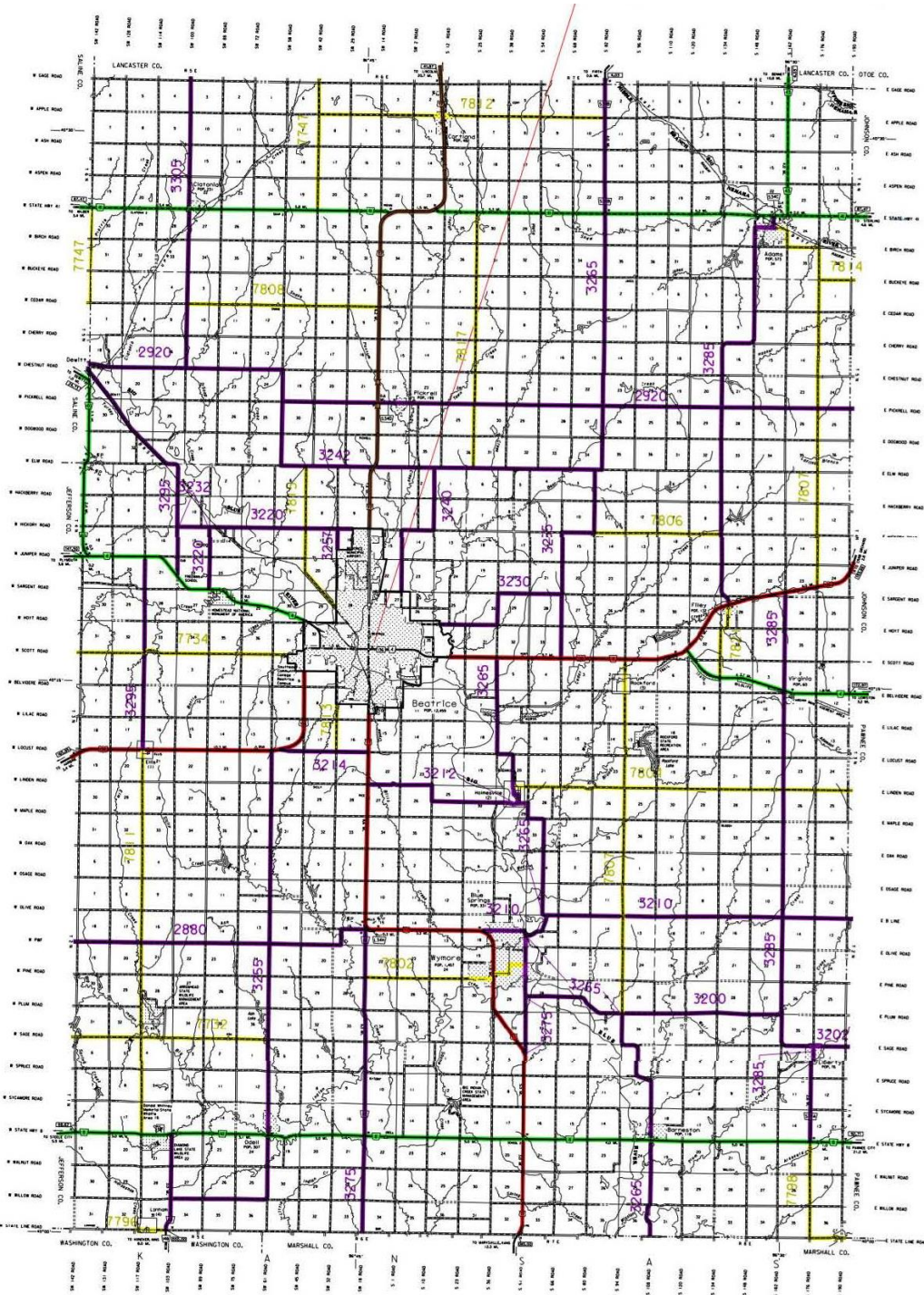
- (1) **Interstate:** Which shall consist of the federally designated National System of Interstate and Defense Highways;
- (2) **Expressway (Other Freeways & Expressways):** Second in importance to Interstate. Shall consist of a group of highways following major traffic desires in Nebraska and ultimately should be developed to multilane divided highway standards;
- (3) **Major Arterial (Other Principal Arterials):** Consists of the balance of routes which serve major statewide interests for highway transportation in Nebraska. Characterized by high speed, relatively long distances, and travel patterns;
- (4) **Other Arterial (Minor Arterials):** Which shall consist of a group of highways of less importance as through-travel routes which would serve places of smaller population and smaller recreation areas not served by the higher systems;
- (5) **Major Collector:** Which consists of a group of highways which pick up traffic from many local or land-service roads and carry it to community centers or to the arterial systems. They are the main school bus routes, mail routes, and farm-to-market routes;
- (6) **Minor Collector:** Make connections between “Major Collector” routes or along minor County Roads connecting to Gage County municipalities.

All other County roads are generally classified by Gage County Highway Department as follows:

- (A) **Local:** Which shall consist of all remaining rural roads, except minimum maintenance roads;
- (B) **Minimum Maintenance:** Which shall consist of (a) roads used occasionally by a limited number of people as alternative access roads for area served primarily by local, collector, or arterial roads, or (b) roads which are the principal access roads to agricultural lands for farm machinery and which are not primarily used by passenger or commercial vehicles.



**NATIONAL FUNCTIONAL CLASSIFICATION MAP
GAGE COUNTY, NEBRASKA**



LEGEND
NATIONAL FUNCTIONAL CLASSIFICATION

- INTERSTATE [Red line]
- OTHER FREEWAYS & EXPRESSWAYS [Orange line]
- OTHER PRINCIPAL ARTERIALS [Yellow line]
- MINOR ARTERIAL [Green line]
- MAJOR COLLECTOR [Purple line]
- MINOR COLLECTOR [Blue line]
- URBANIZED BOUNDARY [Hatched area]

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All Roads Not Otherwise Indicated Are Classified As Local.
FHWA Approval: September 11, 2015.

ILLUSTRATION 5.2

TRAFFIC VOLUME.

The Nebraska Department of Roads monitors traffic volume in the Gage County area, for local roads and State and Federal highways. This tabulation process is done to identify appropriate existing road classification and engineering standards. **Table 5.1** also identifies the average daily traffic counts for State and Federal transportation routes around Gage County. **Highways 77 and 136 are both designated “Other Principal Arterials.”** Highways 8 and 41 are identified as “*Minor Arterials.*”

TABLE 5.1 TRAFFIC VOLUME – AVERAGE DAILY TRAFFIC COUNTS STATE AND FEDERAL ROADS* GAGE COUNTY, NEBRASKA 2010, 2012 & 2014			
	<u>2010</u>	<u>2012</u>	<u>2014</u>
Highway 77, south of Cortland.	8,005/895	7,765/240	8,155/915
Highway 77, at Pickrell exit.	8,170/750	7,690/705	8,020/735
Highway 77, at Blue Springs exit.	3,155/345	2,905/315	2,895/315
Highway 77, at Kansas State Line.	1,520/260	1,605/250	1,600/200
Highway 41, west of Adams.	2,045/270*	2,050/270	1,920/250
Highway 41, west of Clatonia.	1,380/165	1,680/200	1,635/195
Highway 136, east of Filley.	1,095/180	930/150	1,120/180
Highway 136, at Jefferson County Line.	2,680/275	2,505/255	2,740/280
Highway 8, at Barneston.	330/50	280/40	635/50
Highway 8, at Jefferson County Line.	515/65	455/55	660/80
*Total Vehicles / Heavy Commercial Vehicles.			
Source: Nebraska Department of Roads, 2018. Hanna:Keelan Associates, P.C., 2018.			

The analysis of average 24 hour traffic volumes at the above identified locations indicates that in the two-year period, between 2010 and 2012 traffic volumes decreased in terms of total vehicles traveling through the County, with the exception of Highway 41. Traffic volumes during the four-year period, from 2010 to 2014 also declined or remained steady at all locations, with the exception of Highway 8.

Traffic volumes, along Highway 77 south of Cortland and at the Kansas State Line, in terms of total vehicles, increased slightly during the four-year period, 2010 to 2014.

FUTURE GAGE COUNTY TRANSPORTATION SYSTEM.

COUNTY ONE AND SIX-YEAR ROAD IMPROVEMENT PLAN.

The future transportation system is outlined in the Gage County **One and Six Year Road Improvement Program**. The County’s One-Year Plan is for projects to be undertaken in Fiscal Year 2017, while the Six-Year Plan is for projects to be undertaken through 2023, or earlier if funding becomes available

The Gage County Highway Superintendent annually prepares the One and Six-Year Road Plan and reports directly to the County Commissioners. The County Board of Commissioners approves the Plan and files it with the Nebraska Department of Transportation. **A copy of the 2018 Fiscal Year One and 2024 Six Year Plan “summary” is in the process of final approval and will be available from the County Highway Superintendent this Spring.**

STATE ONE AND FIVE-YEAR TRANSPORTATION PLAN.

The Nebraska “Surface Transportation Program 2018-2023” is an annual publication that includes a list of One-Year short-term and Five-Year long-range improvement projects for State and Federal Highways. Improvement projects located in Gage County include the following projects:

One-Year Projects (Fiscal Year 2018 - July 1, 2017 to June 30, 2018):

- Highway 41, STP41-6(116) between Highway 77 and Adams – bridges. \$6,717,000.
- Highway 77, NH-77 (133), Pickrell south, 4.9 miles. Resurfacing. \$4,472,000.
- Highway 77, NH-77-1(134), Princeton south, 6.5 miles. Mill, resurfacing and bridge repair. \$3,274,000.
- Highway 112, RD-112-1(1005), East junction N-8 to Highway 77, 6.7 miles. Mill resurface and bridge repair. \$3,744,000.

Five-Year Planning Program Projects (Fiscal Years 2019-2023):

- Spur 34D, STP-S34D(103). Pickrell Spur, bridge repair. \$360,000.
- Highway 4, STP-4-6(114). East Junction U.S. Highway 136, Lewiston Spur, 12.1 miles. Mill and resurface. \$5,630,000.
- Highway 41, STP-HSIP-41-6(115). Adams west, 11.3 miles. Mill, resurface and bridge deck overlay. \$5,980,000.

PUBLIC FACILITIES & TRANSPORTATION.

- Highway 41, STP-41-6(118). Adams to Sterling, 6.7 miles. Mill, resurface and bridge. \$6,310,000.
- Highway 77, NH-77-1(135). Pickrell north, 7.6 miles. Resurface and Bridge. \$ 9,150,000.
- Highway 136, NH-136-6(125). Beatrice east, 7.9 miles. Mill, resurface and bridge repair. \$4,560,000.

Energy Element.

**COMPREHENSIVE PLAN
2018 – 2028.**



SECTION 6

SECTION 6 ENERGY ELEMENT.

INTRODUCTION.

This **Section** of the **Gage County Comprehensive Plan – Update** complies with a 2010 amendment to Nebraska State Statutes 23-114.02, requiring updates to a County Comprehensive Plan to include an “**Energy Element.**” This component of the **Plan** assesses the energy infrastructure and energy use by sector, including residential, commercial, and industrial. This section is also intended to evaluate the utilization of renewable energy sources and promote energy conservation measures.

PUBLIC POWER DISTRIBUTION.

Energy usage and consumption throughout Gage County has followed the trends prevalent in the State of Nebraska. Electrical power is distributed across rural Gage County by **Norris Public Power District (Norris PPD)**. The Norris Public Power District purchases 98 percent of their electricity from **Nebraska Public Power District (NPPD)** and the remaining two percent from **Western Area Power Administration (WAPA)**.

Beatrice is the only municipality in Gage County that owns and operates its own electric system. **Beatrice Board of Public Works** is also a member of the **Nebraska Municipal Power Pool (NMPP)**, which supplies the electrical power that is distributed by Beatrice. These Gage County Utility Districts do not generate electricity. The electricity they distribute originates from either NPPD or NMPP.

As the largest electric generating utility in the State of Nebraska, NPPD provides electricity to all or parts of 91 of the State’s 93 Counties. The fuel source of NPPD’s generating facilities includes coal, oil, natural gas and nuclear energy. Additionally, NPPD also purchases electricity from the **WAPA**, which markets and transmits electricity for federally owned hydropower facilities.

RENEWABLE ENERGY STRATEGIC PLAN.

Since 2008, the NPPD Goal for Renewable Energy has been:

“NPPD will evaluate all forms of renewable resources feasible in Nebraska and incorporate them in the total mix of NPPD-owned generation and contract purchases with a goal of achieving 10 percent of our energy supply for NPPD’s native load from renewable resources by 2020”.

The Strategic Plan promotes the addition of a minimum 80 megawatts of wind-generated power during every two-year period, reaching the 10 percent goal by 2020.

As of 2016, NPPD’s energy generation was comprised of:

- ❖ **48 percent of coal,**
- ❖ **32.3 percent nuclear,**
- ❖ **6.9 percent from alternative energy sources, primarily wind.**
- ❖ **6.8 percent hydro,**
- ❖ **1.5 percent gas & oil, and**
- ❖ **The remaining 4.5 percent of NPPD’s energy was supplied through purchases, with over half of these purchases from the WAPA, or hydro-electricity facilities. (as per the Norris PPD 2016 Sustainability Report)**

MORE THAN 46% OF NPPD’S GENERATION SOURCES ARE CARBON-FREE.

For NPPD to meet its goal of 10 percent of its generating capacity originating from renewable resources, *primarily wind*, the District will need to develop 533 megawatts of total wind generation by 2020.

As of 2014, the entire State of Nebraska had a total wind turbine production of over 900 megawatts produced by 539 operational turbines. Energy generated by wind power is estimated to be 2.77 percent of Nebraska’s energy consumption in 2014. (Nebraska Energy Office)

GENERATING RESOURCES.

The source of NPPD’s generating facilities includes Fossil fuels – “Coal, Oil or Natural Gas,” Nuclear, Hydroelectric, Wind and Methane. Additionally, NPPD purchases electricity from the **WAPA**, which markets and transmits electricity for federally owned hydropower facilities.

SOURCES OF NPPD ENERGY PRODUCTION.***NPPD renewable energy capabilities:***

- 1.) **Western Area Power Administration** – NPPD purchases electrical energy produced from Hydropower in the amount of 451 MW of “firm” power, 72 MW of Summer “firm peaking” and 22MW of Winter “firm peaking” power;
- 2.) **Hydroelectric Generators** – NPPD operates three hydroelectric generating facilities, at North Platte and Kearney on the Platte River and near Spencer on the Niobrara River. Combined these facilities produce 28 megawatts and serve approximately 9,500 homes. An additional 136 MW are acquired through purchase agreements with five hydro facilities owned by other Nebraska Utility Districts.
- 3.) **Wind Turbine Generators** – NPPD owns 32 MW of the Ainsworth Wind Energy Facility, while Omaha Public Power District (OPPD) and JEA of Jacksonville, Florida each own 10 MW’s of the facility, the Municipal Energy Agency of Nebraska purchase 7 MW and the City of Grand Island purchases one MW.

NPPD has power purchase agreements with six additional wind generating facilities in Nebraska. NPPD purchases a total of 435 MW, of which NPPD utilizes 281 MW and has purchase agreements for the remaining 154 MW to other utility districts.

- 4.) **Solar Energy** – Under NPPD’s 2016 wholesale power contract, customers can invest in their own, local renewable energy sources by installing qualifying local generation, including solar, and offset its purchases of demand and energy from NPPD by up to two megawatts or 10 percent of their demand, whichever is greater.

Central City installed a 200 KW facility and became Nebraska’s first “Community Solar Garden.” This 100-panel system was installed in an industrial park and is owned by the City. Plans include installing an additional 500 KW system later this year. A new solar project near Callaway, Nebraska, in Custer County is a 600 KW solar facility owned by a private company. Custer Public Power District purchases power generated from the system. Lincoln Electric System constructed a community solar facility that generates 5 MW of energy and is the largest and first utility-scale solar installation in Nebraska. The facility utilizes 15,333 solar panels to produce enough energy to power 900 homes in the City of Lincoln.

NPPD is also developed a “community solar program” that is currently being implemented as a pilot program in Scottsbluff and Venango. The Program allows community members to purchase solar energy without having to install solar panels on individual rooftops. Solar subscribers can purchase different amounts of solar energy based on their annual electricity usage.

NPPD Traditional Production Facilities:

Coal-Fired Generators -

NPPD owns the Gerald Gentleman and Sheldon Stations, which are both coal-fired generating stations. Together, these facilities produce 1,590 MWs. The Gerald Gentleman Station produces enough power to supply electricity to 600,000 Nebraskans. Additionally, NPPD has a coal power purchase agreement with the Nebraska City #2, owned by Omaha Public Power District, for 162 MW.

Natural Gas & Oil-Fired Generators -

Gas and Oil-fired generators are utilized only during peak loads or as replacement power if another facility is down. NPPD owns two natural gas-fired generation facilities, the Beatrice Power Station and the Canaday Station that produce a combined total of 365 MW.

Three oil-fired generation facilities located in Hallam, McCook and Hebron, Nebraska produce 162 MW. NPPD also have capacity purchases agreements with 12 municipal systems in Nebraska for an additional 93 MW.

NPPD Emission Free Electricity:

Cooper Nuclear Station operates as the largest single unit electrical generator in Nebraska, by generating 810 MW of electricity. This facility is capable of supplying power to more than 310,000 customers during peak summer usage. In November of 2010, NPPD received an additional 20 years beyond its initial 40-year license to provide power through at least January 2034.

Hydropower Facilities –

NPPD operates three hydroelectric generating facilities; at North Platte and Kearney on the Platte River and near Spencer on the Niobrara River. At each plant, water passes through turbines, generates electricity. The generators, totaling 28 MW, can serve 9,500 homes. In 2015, six percent of the electric power sold came from water power, including purchases from plants operated by other Nebraska utilities and the Western Area Power Administration (WAPA), a federal agency

WIND TURBINES AND “NET METERING”.

Commercial, large scale wind turbines, or “Wind Conversion Systems,” are being promoted in Nebraska Counties by companies and local property owners alike. Wind towers of up to 400’ in height are typically developed as “wind farms,” where multiple wind towers are constructed in a single area, or linearly along a ridge line, such as Steele Flats Commercial Wind Energy Conversion System, within both Gage and Jefferson Counties, between Steele City and Odell, for example. This facility consists of 44 commercial scale, 1.7 megawatt (MW) turbines.

As of August 2009, the State of Nebraska Legislature approved and signed into law, LB 439 (**Nebraska State Statute §70-2001 to 2005**), which is also referred to as “**Net Metering**.” This law allows individual residences and businesses to supplement their standard electric service with one, or combinations of, six alternate energy systems, including Solar, Methane, Wind, Biomass, Hydropower and Geothermal. By implementing these types of alternative energy systems, the desire of the individual is to reduce their reliance on public utility systems, potentially by where they generate more electricity than they can use and profit by having the public utility district purchase their excess energy.

The latest Norris Public Power District “Net Metering Report – December 2016” indicated that there were 44 qualified facilities in its District (including Seward, Saline, Jefferson, Thayer, Gage and Lancaster Counties). None of the net metering producers sold any electricity back to the Norris Public Power District.



*Net Metering Small Wind Energy System
Rural Furnas County, Nebraska.*



*Net Metering Small Wind Energy Systems
Winnebago, Nebraska.*

The Gage County Planning & Zoning Board chose to allow residences and businesses to utilize the provisions of **Net Metering**, specifically **Small Wind Energy Systems**. These same small Wind Energy Systems are permissible as Special Uses in each of the Districts of the County Zoning Regulations.

Commercial Wind Energy Conversion Systems, or what are commonly known as “**Wind Farms**” are permitted in Gage County via a Special Use Permit in the “AG-1” and “AG-2” Agricultural Districts. The first Wind Energy Farm constructed in Gage County was the “Steele Flats Wind Energy Center.” The facility is located in both Gage and Jefferson Counties and is a 74.8 MW “Farm” that has a total of 44, 1.7 MW turbines that are capable of generation enough electricity to power 19,000 homes.



Steele Flats Commercial Wind Energy Conversion System.

ENERGY CONSUMPTION.

Norris Public Power District provided annual Gage County consumption and revenue data between 2012 and 2016, highlighted in **Table 6.1**. The Utility District only tabulates County Data within their six-county region by Commercial, Irrigation and Rural Residential Sectors. The Commercial Sector also includes agricultural and industrial energy data.

The three-year period between 2012 and 2014 revealed a gradual increase in Rural Residential energy totals, increasing by 11.3 percent in consumption and 8.3 percent in revenue. During the same time period, irrigation consumption decreased by 49.6 percent and revenues declined by 20.2 percent. **However, between 2012 and 2016 irrigation consumption had only declined by 30.8 percent and revenues declined by just 5.6 percent**

The lowest annual totals for both consumption and revenue occurred in 2015 when consumption was 11.1 percent lower than the total in 2012 and revenues were 6.5 percent lower.

**TABLE 6.1
GAGE COUNTY RURAL CONSUMPTION AND REVENUE DATA
2012-2016**

Consumption of Electricity (KWh)	2012	2013	2014	2015	2016
Commercial	131,975,950	145,959,124	132,359,820	114,828,708	130,699,319
Irrigation	8,656,357	5,311,728	4,364,967	4,231,851	5,989,637
<u>Rural Residential</u>	<u>41,243,156</u>	<u>44,977,942</u>	<u>45,896,564</u>	<u>42,589,355</u>	<u>43,001,310</u>
TOTALS	181,875,463	196,248,794	182,621,351	161,649,914	179,690,266
Revenues					
Commercial	\$8,345,167	\$9,016,563	\$8,319,360	\$7,591,005	\$8,174,845
Irrigation	\$1,170,302	\$991,387	\$934,378	\$928,402	\$1,104,341
<u>Rural Residential</u>	<u>\$3,980,065</u>	<u>\$4,258,458</u>	<u>\$4,309,907</u>	<u>\$4,101,341</u>	<u>\$4,161,840</u>
TOTALS	\$13,495,534	\$14,266,408	\$13,563,644	\$12,620,749	\$13,441,026

*Note: Commercial also includes agricultural and industrial usage. Norris Public Power does not separate these sectors in their County Data.
Source: Norris Public Power District.

NEBRASKA TRENDS IN ENERGY CONSUMPTION

STATE-WIDE ENERGY CONSUMPTION.

According to the Nebraska Energy Office, the only available energy consumption statistics by Sector are the State totals. As of the 2016 Annual Energy Report, utilizing 2014 data (the most recent data available) the Industrial Sector, consumed 42 percent, or more than a third of the Total Energy Consumption of the State of Nebraska. The other three Sectors comprised nearly equal portions, at 16 percent in the Commercial Sector, 19 percent for the Residential Sector and 23 percent in the Transportation Sector.

Between 2013 and 2014, the Industrial and Residential Sectors were the only sectors to have declined in consumption. Industrial Sectors energy use decreased 43.1 percent and the Residential Sector declined by 0.3 percent. The Transportation Sector energy use increased by 3.6 percent, while the Commercial Sector's consumption increased 0.8 percent during the same period.

The Total Energy Consumption, in 2014, was 864.3 trillion British Thermal Units (BTU), which more than doubled, since 1960, when total consumption was 308.3 trillion BTU, an increase of 180.3 percent.

TRENDS IN ENERGY CONSUMPTION.

During the last 54 years, the State of Nebraska has vastly increased energy consumption. The Nebraska Energy Office "Annual Report – 2016," (the latest publication available) details the most recent state-wide statistics from 2014. Throughout Nebraska, energy consumption as a percentage share of personnel income has remained constant. In 1970, 11.8 percent of personnel income was spent on energy. As of 2014, 11.5 percent was spent on energy consumption. The historic peak percentage of personnel income spent on energy was 17.1 percent. **In 1970, 11.8 percent of personnel income was spent on energy. As of 2014, 11.5 percent was spent on energy usage. The peak percentage occurred in 1980 at 17.1 percent.**

Trends in the Total Energy Consumption for the State of Nebraska is mirrored in each of the individual energy categories, coal, natural gas, gasoline and distillate fuel oil (primarily diesel fuel), nuclear power and hydroelectric production. Each of these energy types are detailed between 1960 and 2014, as follows:

- Coal consumption increased from 20 trillion BTUs in 1960 to 276.5 trillion BTUs, as of 2014. The historic peak consumption of coal was reached in 2013 at 292.96 trillion BTUs.
- Natural gas consumption rose and fell during the 54-year period between 1960 and 2014, beginning at 140.4 trillion BTU, peaking in 1973 at 230.7 trillion BTU and by 2014 decreasing again down to 179.2 trillion BTU.
- Gasoline and diesel fuel consumption increased in Nebraska between 1960 and 2014. Overall, petroleum consumption overall peaked in 1978 at 246.6 trillion BTU. **Gasoline consumption** rose by 25 percent, from 78.7 BTU in 1960 to 100.3 trillion BTU, as of 2014, but peaked in 1978 at 115.9 trillion BTU. During the same time-period, **diesel fuel consumption** quadrupled from 24.1 trillion BTU to 110.6 trillion BTU.
- Nuclear power generation began in Nebraska in 1973 at 6.5 trillion BTU and has increased to 105.7 trillion BTU as of 2014 but peaked in 2007 at 115.7 trillion BTU.
- Renewable energy consumption from 1960 to 2014 increased and decreased throughout the decades, beginning in 1960 at 13.4 trillion BTU to 2014 at 140.9 trillion BTU. Hydropower was the primary renewable energy source between 1960 and 1994, but as of 1995, biofuels (ethanol) production began at levels equaling hydropower, and production soared. By 2014, 69.7 percent of all renewable energy produced in that year came from biofuels, 7.3 percent from hydroelectric power, 11.7 percent from wind and 3.1 percent from wood and wood waste.

INCREASED ENERGY COSTS & CONSERVATION.

A comparison of “Total Energy Expenditures Per Capita” between the United States and the State of Nebraska indicated that between 1970 and 1994, Nebraska and the Nations per capita energy consumption were very close to one another. But, after 1994, Nebraska’s consumption began to be drastically higher than that of the Nation. The industrial sector, which includes agriculture, was the one sector that was surging in energy consumption in Nebraska.

Ethanol production in Nebraska in 1994 was 78.9 million gallons, by 2016 production had increased to 2.1 billion gallons. Considering ethanol production uses high volumes of both electricity and natural gas, the State’s energy expenditures per capita increased as well. Additionally, in 2016, 43 percent of the State’s total corn harvested, or 727 million of the total 1.692 billion bushels of corn was consumed by ethanol production.

High fuel costs or limited availability of a particular energy type increases the desire for energy efficiency practices. For example, historic peak prices for natural gas in 2008 motivated farmers to convert natural gas and propane fueled irrigation equipment to electric power; to limit frequency and amount of applications of anhydrous ammonia fertilizer (a natural gas product); and to increase the use of conservation tillage practices to reduce crop cultivation. Access to low-cost financing through the Nebraska Energy Office and locally available low-interest loans to modernize agricultural equipment have led to conservation increases in the Agricultural Sector.

The U.S. Department of Agriculture issued a report in 2008 that concluded that farmers have increased conservation practices. **Since the 1970s, total farm energy consumption fell by 26 percent, while farm production increased by 63 percent, due to the adoption of energy conservation practices.** This figure is even more significant when the consolidation of farms is considered.

In 1966, just 3.1 million acres of Nebraska crop lands were irrigated, but as of 2016, 8.3 million acres were irrigated. Thus, approximately 38.4 percent of the total cropland in Nebraska was irrigated.

ENERGY CONSERVATION POLICIES.

The most effective means for Gage County to reduce its total energy consumption in each of the Energy Sectors (and by energy type) is by conservation practices and by promoting the conversion to alternative energy systems when appropriate.

The following is a list of policies to guide energy practices throughout rural Gage County:

- ❖ **Promote the use of “Net Metering” or the use of one, or combinations, of the five alternative energy sources to reduce rural residential and agricultural facilities consumption of energy.**
 - Utilize the Gage County Zoning Regulations to control the placement and operation of alternative energy systems.
 - Require compliance with the Accessory or Special Use permit processes so that established conditions are met by the applicant.
 - Promote the development of vocational education opportunities in local high schools, regional trade schools, and in state colleges and universities to educate the current and future workforce in alternative energy design, fabrication of equipment and maintenance.

- ❖ **Promote the use and placement of large scale Commercial/Utility Grade Wind Energy Conversion Systems, commonly referred to as “Wind Farms.”**
 - Continue to utilize the Gage County Zoning Regulations to guide the potential use and placement of large scale Commercial Wind Energy Conversion Systems, by a Special Use Permit.
- ❖ **As other sources of Alternative Energy Systems are developed or become cost-effective for use in Nebraska, amend Gage County planning documents to locate and control their operation.**
- ❖ **Promote the use of conservation methods to reduce the consumption of Energy Usage in each of the individual sectors including residential, commercial, industrial (agricultural) and transportation.**
 - Promote the use of weatherization methods and energy efficient or “green building” materials in conformance with the “LEED” Certified Building techniques.
 - Support and provide incentives for the expanded use of agricultural practices to reduce energy consumption. Techniques such as conservation tillage, high efficiency irrigation equipment and cost-effective fuel sources to power irrigation systems.
 - Support State and Federal incentive programs to continue to provide low-cost financing to purchase modern agricultural equipment such as low-pressure pivots and no-till equipment. Programs such as the U.S. Department of Agriculture’s Rural Energy for America Program (REAP) that finances irrigation efficiency improvements switching diesel, propane and natural gas pumps to electric.
 - Promote the availability of incentives provided by public power districts to develop alternative energy sources for and from agricultural practices. Modern methods such as producing methane gas from livestock confinement facilities to power agricultural equipment, is just one example.
 - Promote the expanded use of **solar and geothermal exchange energy systems** for agricultural applications that power equipment and heat/cool farm buildings.