

JEFFERSON COUNTY, NEBRASKA



COMPREHENSIVE PLAN- UPDATE – 2023.

PREPARED BY:
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*COMPREHENSIVE PLANS & ZONING * HOUSING STUDIES *
DOWNTOWN, NEIGHBORHOOD & REDEVELOPMENT PLANNING *
CONSULTANTS FOR AFFORDABLE HOUSING DEVELOPMENTS**

**Lincoln, Nebraska* 402.464.5383 **

JANUARY, 2013

JEFFERSON COUNTY, NEBRASKA COMPREHENSIVE PLAN UPDATE - 2023

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RESOLUTION 2013 - 8

BE IT RESOLVED BY THE CHAIRMAN AND COUNTY BOARD OF COMMISSIONERS OF JEFFERSON COUNTY, NEBRASKA:

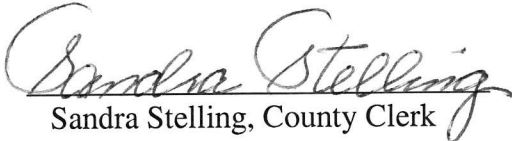
WHEREAS, that upon said hearing held the 12 day of March, 2013 the Jefferson County Board of Commissioners finds that the Comprehensive Plan update is adequate for the purpose prescribed by law and that the same should be approved;

BE IT FURTHER RESOLVED; That pursuant to the recommendation of the Jefferson County Planning Commission for Jefferson County, Nebraska, and after notice given and public hearing thereon, as required by *Nebraska State Statutes* § 19-901, the Jefferson County Board of Commissioners hereby adopts the Comprehensive Plan update. A copy of said document shall be kept in the office of the Jefferson County Clerk.

BY ORDER OF THE CHAIRMAN AND COUNTY BOARD OF COMMISSIONERS OF JEFFERSON COUNTY, NEBRASKA THIS 12 DAY OF March 2013.

ATTEST:

JEFFERSON COUNTY


Sandra Stelling, County Clerk




Michael T. Dux, Chairman

The foregoing resolution was presented and after discussion it was moved by Grummett and seconded by Craig that said resolution be adopted, and upon a roll call vote, the Jefferson County Board of Commissioners voted as follows:

Ayes: 3
Nays: 0
Absent: 0

The Chairman then declared said motion duly carried and said Resolution adopted this 12 day of March 2013.



SECTION 1
THE JEFFERSON COUNTY
PLANNING PROCESS

SECTION 1

THE JEFFERSON COUNTY PLANNING PROCESS

THE COMPREHENSIVE PLAN

This **Comprehensive Plan-Update** was prepared as a guide to direct future growth and development opportunities in Jefferson County during the 10-year planning period 2013 to 2023. The current Comprehensive Plan was completed in 2001.

Components identified in the existing Comprehensive Plan addressing the natural environment, public facilities and transportation in the County have not changed to any great extent and remain the same today, as presented in 2001.

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. The primary facilities and services exist in the City of Fairbury.

The focus of this **Comprehensive Plan-Update** concentrates on the potential for growth and development of the unincorporated, rural areas of Jefferson County in terms of ***“Goals & Policies,” “Population, Income, Economic & Housing Profile,” “Land Use Profile & Plan” and the “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 and policies identified in the **Plan-Update**.

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. Plan implementation methods should 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 **Jefferson County Planning Commission** and Planning Consultants, **Hanna:Keelan Associates, P.C.**, of Lincoln, Nebraska.

PLANNING PERIOD

The planning time period for achieving the goals, programs and economic development activities identified in this **Comprehensive Plan-Update** for Jefferson County, Nebraska, is 10 years (2013-2023).

AUTHORITY TO PLAN

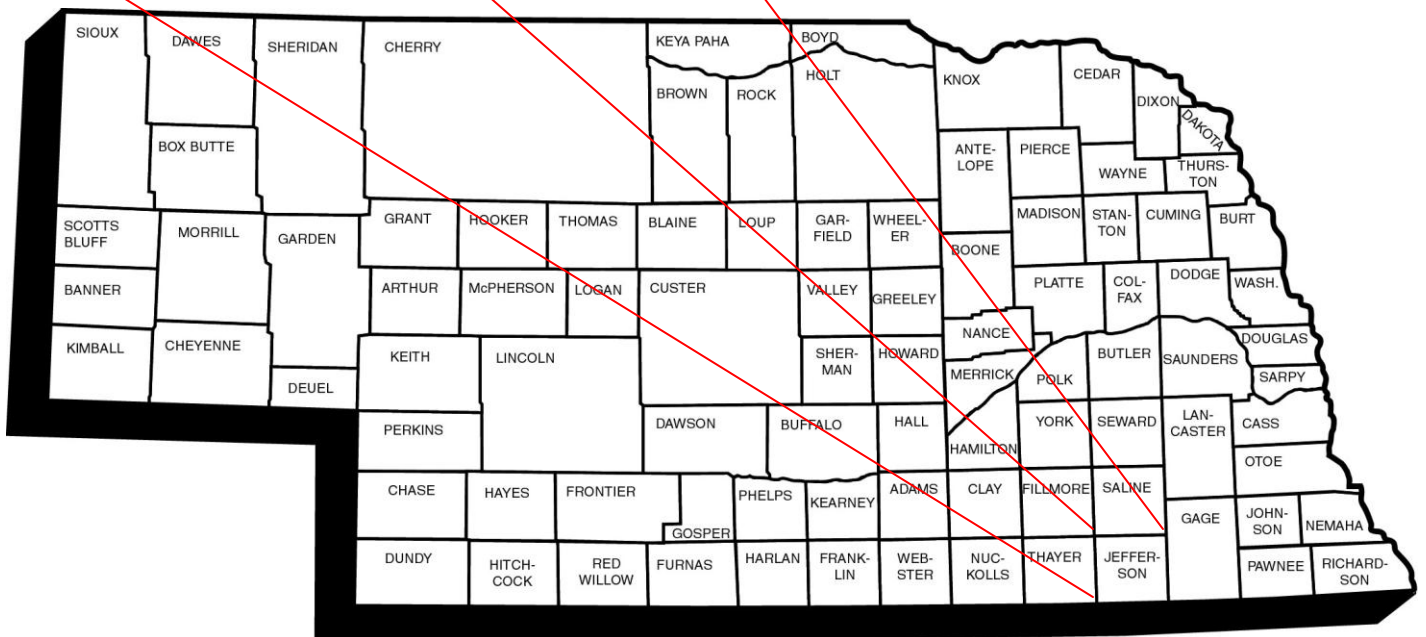
This **Comprehensive Plan-Update** for Jefferson County is prepared under the Authority of Sections 23-114 to 23-174.10, Nebraska State Statutes 1943, as Amended.

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
JEFFERSON COUNTY, NEBRASKA**



Section 1
The Curtis Planning Process



SECTION 2
GOALS & POLICIES

SECTION 2 GOALS & POLICIES

INTRODUCTION

A **Comprehensive Plan** is an **essential tool** to properly guide the development of a County. 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 the **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 include **land use, housing, economic development, public infrastructure, facilities & transportation, and plan maintenance and implementation**. Goals are long-term in nature and, in the case of those identified for this **Comprehensive Plan-Update**, will be active throughout the 10-Year planning period.

POLICIES

Policies help to further define the meaning of goals. 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 frame.

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 **Comprehensive Plan-Update** was the creation of **general 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 Jefferson County.

- ◆ Jefferson County is projected to be impacted by a declining population throughout the 10-Year Planning Period. The rural areas of the County are anticipated to decrease by 271 persons or 11.9 percent, between 2013 and 2023. *This rural population decline is expected to result in retiring farm residents relocating to Jefferson County Communities.*
- ◆ Actively market the development potential of Jefferson County in an effort to stabilize population declines, by broadening the economic base and expanding employment opportunities.
- ◆ The future of Jefferson County will greatly depend on the willingness of residents to accept changes in the population and economic structure and their willingness to be a part of the ongoing planning and implementation process of the County.
- ◆ Promote the preservation of the agricultural industry, including crop diversification. Historically, agriculture has been the primary income producing activity for rural Jefferson County. This is anticipated to remain as such through the 10-year planning period, 2013 to 2023.
- ◆ Protect the natural resources and living environs of Jefferson County by controlling and prohibiting, in specific regions, large scale intensive livestock/confinement facilities in areas deemed inappropriate for such activities.
- ◆ Continue to enforce rural conservation districts to limit development in environmentally sensitive areas of the County. These districts are concentrated along the Little Blue River, Cub Creek and their associated tributaries.

- ◆ Programs of citizen participation should be fostered in rural Jefferson County to maintain and improve the economic and social quality of life.
- ◆ Foster and market the values of rural Jefferson County to encourage the development of organized local action to preserve and strengthen the County.
- ◆ Preserve and protect rural lands for agricultural use and encourage future residential development in close proximity to Jefferson County Communities, or at appropriate locations along hard surfaced transportation corridors.
- ◆ Monitor the consumption of energy by all sectors of the County and promote of the implementation of alternative energy sources such as Wind, Solar, Geothermal, Biomass and Methane, to reduce the reliance on traditional fuel and energy sources.
- ◆ 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.
- ◆ Continue to strengthen relationships between the County and Jefferson County Communities to produce planning practices supportive of associated land usage, as well as appropriate planning and zoning administration procedures to ensure the proper implementation of the **Jefferson County Land Use Plan**.

LAND USE

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

Policies:

- 1.1 Insure all areas for future non-agricultural development in rural Jefferson County are equipped with an adequate, modern utility system.
- 1.2 Avoid non-agricultural developments that could result in the contamination of soils and ground water resources.
- 1.3 Limit future non-agricultural 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 the process of allowing large scale intensive livestock/confinement facilities in appropriate areas of rural Jefferson County, as a special use permitted exception.
- 1.5 Provide for the use of alternative energy systems to supplement individual residential and business electric consumption in accordance with Nebraska State Statute 70-1012, as amended August, 2009. The use of 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 known as “**Net Metering.**”
- 1.6 Promote the development of Commercial Wind Energy Conversion Systems in appropriate areas via a special use permit process.

Goal 2 – *Utilize land use development patterns and densities in rural Jefferson County that conform to uniform planning standards.*

Polices:

- 2.1 Maintain and follow the **Land Use Plan** for the County, which is based upon present conditions and the sound forecast of future needs.

- 2.2 Strive to improve blighted and substandard conditions in rural Jefferson County by providing a planned program for clean-up and reuse of selected areas.
- 2.3 Continue to implement the County **Land Use Plan** which limits development of intensive livestock/confinement facilities and operations from areas with sensitive soils conditions. Regions along the Little Blue River and Cub Creek contain the highest concentration of sensitive soils conditions.
- 2.4 Preserve and protect the highest concentration of irrigated crop lands located in northern two-thirds of the County, and dry land crop production areas in the southern third of the County. Emphasis on groundwater protection and preservation of agricultural land uses should be emphasized.
- 2.5 Insure that adequate open and recreational space is maintained in the County. Emphasize recreational opportunities associated with Wildlife Management Areas, the Little Blue River and Cub Creek corridors, and the proposed “Southeast Trails Development Plan,” as part of the Comprehensive Trails Plan for the State of Nebraska.
- 2.6 All intensive livestock facilities should be classified as intensive agricultural uses, allowable as specially permitted exceptions within the Jefferson County Zoning Regulations.
- 2.7 Continue to implement zoning and other policies/regulations that will provide incentives for maintenance of agricultural lands for traditional agricultural uses.

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

Policies:

- 3.1 Continue to annually review and modify the zoning districts and regulations to encourage both development and redevelopment activities.
- 3.2 Facilitate residential developments that are not detrimental to the environment.

- 3.3 Non-farm residential structures should be encouraged to locate in rural areas near the City of Fairbury Planning Jurisdiction and within a mile of incorporated Villages of Jefferson County.

Goal 4 – *Work cooperatively with Federal, State, and adjoining County governments to develop compatible flood control measures.*

Policies:

- 4.1 Enforce State and Local regulations protecting the environment from contamination or pollutants.
- 4.2 Require all developments to be consistent with regulations set forth for flood prone areas.
- 4.3 Identify development measures that 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 developments that encourage economic stability and strengthen the overall tax base in the County.*

Policies:

- 5.1 Encourage the development and redevelopment of local businesses at strategic locations along County highway corridors that are within or adjacent the Planning Jurisdiction of Jefferson County Communities.
- 5.2 The development of new commercial and industrial uses are recommended to be located within the Planning Jurisdictions of Jefferson County Communities, or generally within one-mile of their Corporate Limits.
- 5.3 Encourage the development of land uses that complement the future Nebraska Comprehensive Trails Plan, proposed as the “Southeast Trails Development Plan,” generally adjacent Highways, County Roads and Railway Corridors.

HOUSING

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

Policies:

- 1.1 Develop organizational structures to improve housing conditions throughout Jefferson County, including, but not limited to a Regional Housing Development Corporation or County-Wide Housing Development Corporation, in cooperation with the City of Fairbury and other County Communities.
- 1.2 Develop housing programs for both the removal and rehabilitation of unsafe housing.
- 1.3 Promote the development of housing in rural Jefferson County, considering a variety of styles, prices, densities and quantities, in locations that are in conformance with the Jefferson County **Land Use Plan**.

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

Policies:

- 2.1 Create an ongoing County-Wide housing rehabilitation program for both owner and renter housing.
- 2.2 Create a program to demolish substantially dilapidated housing units within rural Jefferson County, with emphasis on units located in close proximity to Jefferson County Communities.
- 2.3 Identify and rehabilitate historically significant housing units in rural Jefferson County.

Goal 3 – *Encourage future residential developments compatible with and complementary to existing residential areas.*

Policies:

- 3.1 Increase education and awareness for housing development throughout the County.

- 3.2 Prohibit residential development in environmentally sensitive areas and within designated floodplains throughout the County.
- 3.3 Promote rural residential developments in close proximity to Jefferson County Communities, or hard surfaced State, Federal and County Roads/Highways.

ECONOMIC DEVELOPMENT

Goal 1 – *Continue to coordinate economic development efforts in Jefferson County with 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 Develop and actively pursue the implementation of a Jefferson County Tourism Plan, to promote recreational and educational uses throughout the County.
- 1.3 Develop a self-guided tour of historic buildings in the County, utilizing the Nebraska Historic Buildings Survey of Jefferson County.

Goal 2 – *Housing and public facility improvements, coupled with economic development opportunities, should be the foundation of community and economic development programming and implementation in Jefferson County.*

Policies:

- 2.1 Community and economic development activities should address County-Wide and regional residential and commercial needs.
- 2.2 Insure job creation is a recognizable issue of any economic development activity implemented in Jefferson County Communities, with emphasis on benefiting 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 Jefferson County.
- 3.2 Insure all economic development activities be consistent with the Comprehensive Plan - Update.
- 3.3 Target new businesses and industries capable of producing competitive incomes for the residents of Jefferson County.
- 3.4 Promote cooperative economic development activities with neighboring Counties.

***PUBLIC INFRASTRUCTURE,
FACILITIES & TRANSPORTATION***

Goal 1 – *Plan, program and implement the most effective, safe and cost efficient infrastructure and public facilities systems throughout rural Jefferson County.*

Policies:

- 1.1 Recognize the need for and improve on intergovernmental and regional cooperation to reduce duplication of services.
- 1.2 Maintain modern design standards and policies for public infrastructure improvements throughout rural Jefferson 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 public utilities and facilities.

- 2.2 Continue to develop County road systems in accordance with the standard State of Nebraska “Functional Street Classifications.”
- 2.3 Develop a comprehensive trails plan to allow for educational and recreational activities throughout the County. The coordination of recreational trails with wildlife management areas transportation corridors will provide greater access to Jefferson County historic and natural environments.

Goal 3 – *Provide adequate, efficient and appropriate public utilities and services to both new and existing agricultural and residential developments.*

Policies:

- 3.1 Maintain and improve existing public utilities and services on an as needed basis.
- 3.2 Provide facilities and services in rural Jefferson County necessary to prevent degradation of the environment, including modern sewage treatment and disposal, and similar environmental control processes as necessary. This includes the proper disposal of animal waste.
- 3.3 Insure rules and regulations governing safe drinking water and sewage treatment are adhered to.

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 opportunities for all residents to experience, develop and share their values, abilities, ambitions and heritage.
- 4.3 Continue to support the evolution of the public educational system and insure that it is capable of elevating the County’s overall educational level.

- 4.4 Develop and promote programs to educate the residents of Jefferson County and visitors on the heritage and history of the region. Utilize current and future public and cultural facilities such as community libraries, museums and wildlife management areas.
- 4.5 Insure rules and regulations of the Americans with Disabilities Act adhere to at all public facilities.
- 4.6 Expand the availability of supportive services to youth and older adults in Jefferson County.

PLAN MAINTENANCE & IMPLEMENTATION

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

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.



SECTION 3
**POPULATION, INCOME, ECONOMIC
& HOUSING PROFILE**

SECTION 3

POPULATION, INCOME, ECONOMIC & HOUSING PROFILE

INTRODUCTION

Population, income, economic and housing trends in Jefferson County serve as valuable indicators of future development needs. The quantity, location and density of population, jobs and housing play an important role in meeting the social and economic needs of the County.

The population trends and projections for the years 2000 through 2023 were studied and forecasted, utilizing a process of both trend analysis, U.S. Census population estimates and popular consent. **Jefferson County is projected to decrease in population during the next 10 years.** This anticipated decline can be stabilized or reversed if the County creates partnerships with new businesses, improves public facilities and utilities and promotes the aggressive development of a variety of housing types during the 10-year planning period for Jefferson 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 dynamic economic and social structure.

POPULATION

- ❖ **Table 3.1** identifies **population trends and projections** for Jefferson County, from 1990 through 2023. Jefferson County, as a whole, is estimated to have a current (2013) population of 7,473. By 2023, the County is projected to have a population of 7,161, declining by an estimated 4.2 percent, or 312 persons.

- ❖ All the Municipalities of Jefferson County, with the exception of the City of Fairbury, are projected to experience a population decrease, during the next 10 years. The City of Fairbury is anticipated to stabilize and increase by approximately 13 persons. Rural Jefferson County is projected to decline by 11.9 percent, or by 271 persons.

**TABLE 3.1
POPULATION TRENDS & PROJECTIONS
JEFFERSON COUNTY, NEBRASKA
2000-2023**

	<u>2000</u>	<u>2010</u>	<u>2013</u>	<u>2023</u>	<u>% Change 2013-2023</u>
Jefferson County:	8,333	7,547	7,473	7,161	-4.2%
Daykin:	177	166	163	151	-7.4%
Diller:	287	260	256	242	-5.5%
Endicott:	139	132	129	124	-3.9%
Fairbury:	4,262	3,942	3,947	3,960	+0.3%
Harbine:	56	49	48	44	-8.3%
Jansen:	143	118	116	109	-6.0%
Plymouth:	477	409	404	398	-1.5%
Reynolds:	88	69	69	66	-4.3%
Steele City:	84	61	61	58	-4.9%
Rural County:	2,620	2,341	2,280	2,009	-11.9%

Source: 2000, 2010 Census.

Hanna:Keelan Associates, P.C., 2013.

- ❖ Since 2000, rural Jefferson County and the Villages of Daykin and Diller have experienced a slight increase in their 65+ population, highlighted in **Table 3.2**. This trend is projected to continue through 2023. Persons 65+ in Rural Jefferson County are projected to increase by 6.9 percent, or by an additional 32 persons.

**TABLE 3.2
POPULATION TRENDS & PROJECTIONS – 65+ YEARS
JEFFERSON COUNTY, NEBRASKA
2000-2023**

	<u>2000</u>	<u>2010</u>	<u>2013</u>	<u>2023</u>	<u>% Change 2013-2023</u>
Jefferson County:	1,889	1,661	1,652	1,598	-3.3%
Daykin:	41	46	48	52	+8.3%
Diller:	39	40	41	43	+4.9%
Endicott:	30	26	25	23	-8.0%
Fairbury:	1,163	937	919	841	-8.5%
Harbine:	7	6	6	5	-16.7%
Jansen:	38	26	24	20	-16.7%
Plymouth:	92	89	89	87	-2.2%
Reynolds:	22	20	19	17	-10.5%
Steele City:	28	19	19	16	-15.8%
Rural County:	421	452	462	494	+6.9%

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2013.

BIRTHS AND DEATHS

❖ **Table 3.3** provides an analysis of birth and death trends in Jefferson County from 2003 to 2010. Throughout this eight year period, deaths have exceeded births by a total net change of -217 persons, or by an annual average of -27.1 persons. The annual average net change between 2013 and 2023 is projected to remain stable through the next 10 years, with an annual average net change of a decrease of 24.3 persons.

TABLE 3.3
BIRTHS AND DEATHS (BY RESIDENCE)
TRENDS AND PROJECTIONS
JEFFERSON COUNTY, NEBRASKA
2003-2023

<u>Year</u>	<u>Births</u>	<u>Deaths</u>	<u>Net Change</u>
2003	75	101	-26
2004	91	97	-6
2005	79	90	-11
2006	76	109	-33
2007	87	128	-41
2008	82	119	-37
2009	69	101	-32
<u>2010</u>	<u>75</u>	<u>106</u>	<u>-31</u>
TOTALS	634	851	-217
Annual Avg.	79.3	106.3	-27.1
2013-2023			
Est. Change	776	1,019	-243
2013-2023	77.6	101.9	-24.3
Annual Avg.			

Source: Nebraska Department of Health & Human Services, Vital Statistics, 2003-2010.
Hanna:Keelan Associates, P.C., 2013.

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 need for public school, recreational areas and short- and long-term health care facilities.

- ❖ **Table 3.4 provides age distribution for Jefferson County, from 2000 to 2023.** The County is projected to experience a decrease in population during the next 10 years of approximately 312 people. By 2023, it is estimated that the “19 and Under,” “35 to 54” and the “55 to 64” age groups will comprise the largest portions of the population. The “85+” age group will remain the smallest category, with an estimated 318 persons by 2023. **The “55 to 64” age category is projected to increase between 2013 and 2023. In 2013, median age in Jefferson County is an estimated 46.2 years. This median age is projected to increase, by 2023, to 47 years.**

**TABLE 3.4
POPULATION AGE DISTRIBUTION
TRENDS & PROJECTIONS
JEFFERSON COUNTY/RURAL JEFFERSON COUNTY, NEBRASKA
2000-2023**

<u>Jefferson County</u>	<u>2000-2010</u>			<u>2013-2023</u>		
<u>age group</u>	<u>2000</u>	<u>2010</u>	<u>Change</u>	<u>2013</u>	<u>2023</u>	<u>Change</u>
19 and Under	2,120	1,755	-365	1,697	1,533	-164
20-34	1,130	1,042	-88	1,035	959	-46
35-54	2,360	1,930	-430	1,891	1,726	-165
55-64	834	1,159	+325	1,198	1,345	+147
65-74	808	752	-56	749	727	-22
75-84	735	586	-149	580	553	-27
85+	346	323	-23	323	318	-5
TOTALS	8,333	7,547	-786	7,473	7,161	-312
Median Age	42.9	46.8	+3.9	46.2	47.0	+0.8

Source: 2000, 2010 Census.

Hanna:Keelan Associates, P.C., 2013.

HOUSEHOLD CHARACTERISTICS/TENURE

❖ **Table 3.5** identifies **specific household characteristics** of Jefferson County, from 2000 to 2023. The number of households in the County is projected to decrease by an estimated 69 during the next 10 years. From 2013 to 2023, the number of persons per household is projected to decrease, slightly, from 2.21 to 2.17 throughout Jefferson County.

Group quarters consist of living quarters that are not considered a household, such as dormitories, nursing care/assisted living centers and correctional facilities. Currently, there are 97 persons residing in group quarters in Jefferson County. Persons living in group quarters are projected to decrease in Jefferson County, over the next 10 years.

**TABLE 3.5
SPECIFIC HOUSEHOLD CHARACTERISTICS
JEFFERSON COUNTY, NEBRASKA
2000-2023**

<u>Year</u>	<u>Population</u>	<u>Group Quarters</u>	<u>Persons in Households</u>	<u>Households</u>	<u>Persons Per Household</u>
2000	8,333	166	8,167	3,527	2.32
2010	7,547	105	7,442	3,348	2.22
2013	7,473	97	7,376	3,330	2.21
2023	7,161	88	7,023	3,261	2.17

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2013.

❖ **Table 3.6** identifies **tenure by household** for Jefferson County, for the period 2000 to 2023. The County is currently (2013) comprised of an estimated 3,330 households, consisting of 2,457 owner and 873 renter households. By 2023, owner households will account for an estimated 72.9 percent of the total households in Jefferson County, resulting in 2,377 owner and 884 renter households.

**TABLE 3.6
TENURE BY HOUSEHOLD
JEFFERSON COUNTY, NEBRASKA
2000-2023**

<u>Year</u>	<u>Total Households</u>	<u>Owner</u>		<u>Renter</u>	
		<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
2000	3,527	2,683	76.1%	844	23.9%
2010	3,348	2,479	74.0%	869	26.0%
2013	3,330	2,457	73.8%	873	26.2%
2023	3,261	2,377	72.9%	884	27.1%

Source: 2000, 2010 Census.
Hanna:Keelan Associates, P.C., 2013.

INCOME TRENDS & PROJECTIONS

MEDIAN HOUSEHOLD INCOME

- ❖ **Table 3.7** identifies **median household income** for Jefferson County, Nebraska, from 2000 to 2023. Currently, median income in Jefferson County is projected at \$44,915. **Median income in the County is projected to increase by an estimated 22.5 percent, to \$55,018, by 2023.**

TABLE 3.7				
MEDIAN INCOME - TRENDS & PROJECTIONS				
JEFFERSON COUNTY, NEBRASKA				
2000-2023				
<u>2000*</u>	<u>2010 Est.*</u>	<u>2013</u>	<u>2023</u>	<u>% Change</u> <u>2013-2023</u>
\$32,686	\$42,665	\$44,915	\$55,018	+22.5%

* Specified Data Used.
Source: 2000 Census, 2006-2010 American Community Survey.
Hanna:Keelan Associates, P.C., 2013.

PER CAPITA INCOME

- ❖ **Table 3.8** identifies **per capita income** for Jefferson County and the State of Nebraska, from 2000 to 2023. 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 2013, per capita income in Jefferson County is an estimated \$38,547. By 2023, per capita income will increase in the County an estimated 22.4 percent, to \$47,203.**

TABLE 3.8
PER CAPITA INCOME
JEFFERSON COUNTY, NEBRASKA / STATE OF NEBRASKA
2000-2023

<u>Year</u>	<u>Jefferson 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>
2000	\$24,076	--	\$28,598	--
2001	\$25,977	+7.9%	\$29,902	+4.6%
2002	\$24,985	-3.8%	\$30,314	+1.4%
2003	\$28,096	+12.5%	\$32,126	+6.0%
2004	\$29,608	+5.4%	\$33,265	+3.5%
2005	\$29,695	+0.3%	\$34,318	+3.2%
2006	\$29,545	-0.5%	\$35,679	+4.0%
2007	\$34,931	+18.2%	\$38,177	+7.0%
2008	\$37,669	+7.8%	\$40,163	+5.2%
2009	\$35,269	-6.4%	\$39,332	-2.1%
2013	\$38,547	+9.2%	\$41,282	+5.0%
2000-2013	\$24,076-\$38,547	+60.1%	\$28,598-\$41,282	+44.3%
2013-2023	\$38,547-\$47,203	+22.4%	\$41,282-\$52,139	+26.3%

Source: Nebraska Department of Economic Development, 2013.
Hanna:Keelan Associates, P.C., 2013.

SOCIAL SECURITY INCOME

❖ **Table 3.9** identifies persons in Jefferson County, Nebraska **receiving social security income** in 2010. A total of 2,010 persons in Jefferson County received social security income. Approximately 74.9 percent, or 1,505 persons were 65+ years of age, of which 625 persons were male and 880 persons were female. There were a total of 17 beneficiaries of Supplemental Security Income in 2010.

**TABLE 3.9
PERSONS RECEIVING SOCIAL SECURITY INCOME
JEFFERSON COUNTY, NEBRASKA
2010**

<u>Social Security Income-2010</u>	<u>Number of Beneficiaries</u>
<u>Retirement Benefits</u>	
Retired Workers	1,330
Wives & Husbands	100
Children	20
<u>Survivor Benefits</u>	
Widows & Widowers	190
Children	45
<u>Disability Benefits</u>	
Disabled Persons	255
Wives & Husbands	5
<u>Children</u>	<u>65</u>
TOTAL	2,010
<u>Aged 65 & Older</u>	
Men	625
<u>Women</u>	<u>880</u>
TOTAL	1,505
<u>Supplemental Security Income-2010</u>	<u>Number of Beneficiaries</u>
Aged 65 or Older	17
<u>Blind and Disabled</u>	<u>N/A</u>
TOTAL	17

Source: Department of Health and Human Services,
Social Security Administration, 2013.
Hanna:Keelan Associates, P.C., 2013.

OWNER AND RENTER HOUSING COSTS

❖ **Table 3.10** identifies **individuals in poverty** in Jefferson County, as of the 2006-2010 American Community Survey estimate. An estimated total of 536 owner and 222 renter households in Jefferson County spent 30 percent or more on housing costs. These 758 total households are considered “cost burdened.”

**TABLE 3.10
ALL OWNER AND RENTER HOUSING COSTS
AS A PERCENTAGE OF HOUSEHOLD INCOME
JEFFERSON COUNTY, NEBRASKA
2010 ESTIMATE**

<u>Income Categories</u>	<u>Owner</u>	<u>Renter</u>	<u>All</u>
Less Than \$10,000	219	98	317
Less Than 30 Percent	62	5	67
30 Percent Or More	157	93	250
\$10,000 to \$19,999	250	132	382
Less Than 30 Percent	131	20	151
30 Percent Or More	119	112	231
\$20,000 to \$34,999	499	175	674
Less Than 30 Percent	385	165	550
30 Percent Or More	114	10	124
\$35,000 to \$49,999	414	141	555
Less Than 30 Percent	362	134	496
30 Percent Or More	52	7	59
\$50,000 Or More	1,243	108	1,351
Less Than 30 Percent	1,149	108	1,257
<u>30 Percent Or More</u>	<u>94</u>	<u>0</u>	<u>94</u>
Total (Specified)	2,625	654	3,279
All Incomes:			
Less Than 30 Percent	2,089	432	2,521
<u>30 Percent Or More</u>	<u>536</u>	<u>222</u>	<u>758</u>
Total (Specified)	2,625	654	3,279
All Income Percentages			
Less Than 30 Percent	79.6%	66.0%	76.9%
<u>30 Percent Or More</u>	<u>20.4%</u>	<u>34.0%</u>	<u>23.1%</u>
Total (Specified)	100.0%	100.0%	100.0%

Source: 2006-2010 American Community Survey.
Hanna:Keelan Associates, P.C., 2013.

EMPLOYMENT & ECONOMIC TRENDS

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

CIVILIAN LABOR FORCE

- ❖ **Table 3.11 identifies civilian labor force and employment trends and projections** for Jefferson County, Nebraska, from 2000 to 2023. In 2013, an estimated 4,329 persons are in the civilian labor force in the County. This number is expected to increase by 95 persons, or 2.2 percent by 2023. Total employment for Jefferson County is also projected to increase, from 4,147 in 2013, to an estimated 4,258 in 2023, representing a 2.7 percent increase.
- ❖ **The unemployment rate in Jefferson County is projected to decrease to an estimated 3.7 percent during the next 10 years.**

**TABLE 3.11
CIVILIAN LABOR FORCE & EMPLOYMENT
TRENDS AND PROJECTIONS
JEFFERSON COUNTY, NEBRASKA
2000-2023**

	<u>2000</u>	<u>2010</u>	<u>2013</u>	<u>2023</u>
Civilian Labor Force	4,395	4,290	4,329	4,424
Unemployment	140	209	182	166
Rate of Unemployment	3.2%	4.9%	4.2%	3.7%
Employment	4,255	4,081	4,147	4,258
<u>Change in Total Employment</u>				
	<u>Number</u>	<u>Annual</u>	<u>% Change</u>	<u>% Annual</u>
2000-2010	-174	-17.4	-4.1%	-0.4%
2013-2023	+111	+11.1	+2.7%	+0.3%

Source: Nebraska Department of Labor, Labor Market Information, 2013.
Hanna:Keelan Associates, P.C., 2013.

CIVILIAN LABOR FORCE

❖ **Table 3.12** identifies **workforce employment by type**, in Jefferson County, Nebraska, from 2009 to 2011. Non-farm employment, in Jefferson County, increased by an estimated 4.5 percent, from 2009 to 2011. The employment sectors experiencing the largest increases in the number of jobs were the Professional & Business, Information and Natural Resources & Construction sectors. The largest decrease was experienced in the Financial Activities sector.

TABLE 3.12
WORKFORCE EMPLOYMENT BY TYPE
JEFFERSON COUNTY, NEBRASKA
2009-2011

<u>Workforce</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>% Change</u> <u>2009-2011</u>
Non-Farm Employment (Wage and Salary)	2,991	2,999	3,127	+4.5%
Goods Producing	647	648	667	+2.6%
Manufacturing	440	433	424	-3.6%
Natural Resources & Const.	207	215	243	+17.4%
Services Providing	2,344	2,351	2,460	+4.9%
Trade, Trans, Ware, Util**	847	811	886	+4.6%
Total Trade	706	681	732	+3.7%
Wholesale Trade	203	206	209	+3.0%
Retail Trade	503	475	523	+4.0%
Trans, Ware & Util.	141	130	154	+9.2%
Information	65	74	75	+15.4%
Financial Activities	120	125	114	-5.0%
Professional & Business	59	64	74	+25.4%
Education & Health	453	475	451	-0.4%
Leisure & Hospitality	192	191	207	+7.8%
Other Services	64	63	66	+3.1%
Total Government	543	550	587	+8.1%
Federal	43	47	41	-4.7%
State	33	36	32	-3.0%
Local	468	466	514	+9.8%

* Data not available because of disclosure suppression.

** Trade, Transportation, Warehousing & Utilities.

Source: Nebraska Department of Labor, Labor Market Information, 2013.

Hanna:Keelan Associates, P.C., 2013.

HOUSING STOCK & CONDITIONS

The **Housing Stock & Conditions Section** of this **Comprehensive Plan-Update** presents information that will assist in the determination of the housing demand for Jefferson County and the rural areas. Included in this analysis is a review of the current housing stock, substandard housing, occupancy and vacancy status and the cost of housing.

UNITS IN STRUCTURE, SUBSTANDARD HOUSING

- ❖ Substandard housing, as defined by HUD, as per the 2000 Census, included 1.) Housing units lacking complete plumbing and 2.) Housing units with 1.01+ persons per room. **Table 3.13** identifies the **units in structure**, in Jefferson County in 2000 and 2010 Estimate, as per this definition. A majority of dwellings in Jefferson County consist of a single unit. Overall, Jefferson has declined by an estimated nine housing units, or by 0.2 percent from 2000 to 2010.

- ❖ As of the 2006-2010 American Community Survey Estimate, in Jefferson County, seven housing units lacked complete plumbing, while 30 housing units were overcrowded.

**TABLE 3.13
HOUSING STOCK PROFILE / UNITS IN STRUCTURE
JEFFERSON COUNTY, NEBRASKA
2000-2010 ESTIMATE**

<u>Year</u>	<u>Number of Units</u>				<u>Total</u>
	<u>1 Unit</u>	<u>2-9 Units</u>	<u>10+ Units</u>	<u>Other*</u>	
2000	3,493	141	180	128	3,942
2010 Est.**	3,641	63	193	36	3,933
% Annual Change	+4.2%	-55.3%	+7.2%	-71.9%	-0.2%

*Includes mobile home or trailer.

**Specified Data Only.

Source: 2000 Census, 2006-2010 American Community Survey.
Hanna:Keelan Associates, P.C., 2013.

HOUSING UNITS BUILT

- ❖ **Table 3.14** profiles the **estimated housing units built** in Jefferson County, as of 2013. Records indicate an estimated 1,174 housing units exist in Jefferson County in 2013. Approximately 38.5 percent of all housing units in the County were constructed on or prior to 1939 and 50.9 percent of all housing units in the County were constructed prior to 1959.

**TABLE 3.14
ESTIMATED YEAR STRUCTURE BUILT*
JEFFERSON COUNTY, NEBRASKA
2013**

<u>Year</u>	<u>Housing Units</u>
April, 2000 to Present	91
1999 to March, 2000	22
1995 to 1998	46
1990 to 1994	34
1980 to 1989	110
1970 to 1979	207
1960 to 1969	67
1950 to 1959	79
1940 to 1949	66
<u>1939 or Before</u>	<u>477</u>
SUBTOTAL	1,199
<u>Units Lost (2000 to Present)</u>	<u>(25)</u>
TOTAL EST. UNITS – 2013	1,174
% 1939 or Before	38.5%
% 1959 or Before	50.9%

*Rural County Only.
N/A – Not Available.
Source: 2000 Census. Rural Jefferson County, 2013.
Hanna:Keelan Associates, P.C., 2013.

- ❖ Zoning permits issued since the adoption of the 2001 Comprehensive Plan indicate a total of 64 rural dwellings were constructed between 2002 and 2013.

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. Jefferson 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.

GROSS RENT & HOUSING VALUE

- ❖ **Table 3.15 identifies owner occupied housing values for Jefferson County, from 2000 to 2023. The median housing value in Jefferson County, estimated to be \$82,200 for 2013, is projected to increase by an estimated 23.8 percent to \$101,800, by 2023.**

**TABLE 3.15
OWNER OCCUPIED HOUSING VALUE
JEFFERSON COUNTY, NEBRASKA
2000-2023**

	<u>Less than \$50,000</u>	<u>\$50,000 to \$99,999</u>	<u>\$100,000 to \$149,999</u>	<u>\$150,000 to \$199,999</u>	<u>\$200,000 or More</u>	<u>Totals</u>
2000*	1,246	631	175	33	12	2,097
2010 Est*	836	901	454	161	273	2,625
<u>Median Value</u>						
2000	\$42,100					
2010 Est*	\$78,500					
2013	\$82,200					
2023	\$101,800					

* Specified Data Used.

Source: 2000 Census.

2006-2010 American Community Survey.

Hanna:Keelan Associates, P.C., 2013.

❖ **Table 3.16** identifies gross rent for rental housing units in Jefferson County. Median rent in Jefferson County increased an estimated 38.7 percent between 2000 and 2013. By 2023, median rent in Jefferson County is projected to increase to \$590, or by 21.9 percent from the current (2013) median rent of \$484.

**TABLE 3.16
GROSS RENT
JEFFERSON COUNTY, NEBRASKA
2000-2023**

	Less than \$300	\$300 to \$399	\$400 to \$499	\$500 to \$599	\$600 to \$699	\$700 or More	Totals
2000*	261	211	156	64	32	2	726
2010 Est*	204	116	99	80	106	49	654
<u>Median Rent</u>							
2000	\$349						
2010 Est*	\$463						
2013	\$484						
2023	\$590						

* Specified Data Used.
Source: 2000 Census.
2006-2010 American Community Survey.
Hanna:Keelan Associates, P.C., 2013.



SECTION 4
LAND USE PROFILE & PLAN

SECTION 4 LAND USE PROFILE & PLAN

INTRODUCTION

The following Section is an update to the **Land Use Plan** presented in the “**Jefferson County Comprehensive Plan 2001.**” Detailed components from the original Plan associated with the natural environment, including soils, watersheds, wetlands and ground water for the Planning Jurisdiction remain in the same configurations. For this reason, this **Update** does not include the examination of these planning components, but focuses on the analysis of existing and future land uses. The original **2001-2011 Comprehensive Plan** is included for reference purposes in the appendix of this document.

DEVELOPMENT ISSUES

The objective of the **2001 Comprehensive Plan** was to protect agricultural lands for agricultural use and, where appropriate, provide for the potential development of intensive agricultural uses, or non-farm rural dwellings. The consensus of the Jefferson County Planning Commission was that the future of the County was reliant on both of these issues for continued economic prosperity. The Challenge was to balance the needs agricultural expansion with those associated with rural residential development.

The Jefferson County Planning Commission wanted to examine the effectiveness of the **2001 Future Land Use Plan**. The methodology was to promote the development of non-farm rural dwellings in close proximity to Jefferson County Communities. This would allow for the potential development of intensive agricultural and livestock confinement facilities in more undeveloped rural portions of the County. By examining development trends between 2001 and 2013, the Planning Commission would be able to determine if revisions were needed to the **2023 Future Land Use Plan**.

The focus of the planning process for this **Comprehensive Plan Update** was to determine if the provisions of the **2001 Future Land Use Plan** were successful in preventing the encroachment of incompatible uses within the agricultural production areas.

The 2013 evaluation of population (**Section 3**) is based upon the 2000 and 2010 Censuses, the 2006-2010 American Community Survey and information obtained from Jefferson County. The total Jefferson County population declined from 8,333 in 2000 to 7,547 as of the 2010 Census, or by 786 persons. The trend of a declining population occurred throughout rural Jefferson County and each community, with the exception of the City of Fairbury. Population estimates for 2013 indicate that the County population continued a slight decline to a total of 7,473 persons, impacting the County and its Communities.

The **2001-2011 Comprehensive Plan** established goals and supported zoning regulations that were intended to guide the development of rural dwellings. The **Future Land Use Plan** and **Zoning Regulations** were also devised to direct non-farm rural dwellings to be in close proximity to the municipalities of the County.

A review of Zoning and Building Permits issued by the Jefferson County Zoning Administrator, between 2002 and 2013, indicate that 64 houses were constructed in rural Jefferson County, during the last 10 years. A total of 18, or 30 percent of the new houses were constructed in planned Agricultural Residential areas. These rural residential areas were established by the previous Comprehensive Plan to extend one-mile beyond the Fairbury Planning Jurisdiction and one-mile beyond the Corporate Limits of the Villages of Jefferson County. Further examination during this **Comprehensive Plan-Update** indicate the majority of the new houses were built in the agricultural areas of the County, and for the most part, on family owned farm land.

Provisions of the **Jefferson County Zoning Regulations** also require all rural dwellings constructed in the “AG General Agricultural” production areas to obtain a Special Use Permit, which requires public hearings by the Planning Commission and County Board. This provision is not required if dwellings are built in the “AGR Agricultural Residential” areas, thus making these areas more attractive for development.

EXISTING LAND USE ANALYSIS

The **Existing Land Use Map, Illustration 4.1**, serves as the basis for establishing the new **Land Use Plan**. The **Existing Land Use Map** highlights the impact of concentrations of rural dwellings and intensive agricultural facilities upon agricultural production areas throughout the County. The impact of residential development on the production of crops and the raising of livestock can be evaluated by the Nebraska Agricultural Census for Jefferson County.

EXISTING LAND USES

As identified in the **Existing Land Use Map**, the most prolific rural land use in Jefferson County is vacant agricultural land. Irrigated crop production is predominantly located to the north and east of the Little Blue River. The largest concentration of irrigated cropland in Jefferson County is situated in the northern third of the County. Dry land crop production occupies the majority of the southern and west-central portions of the County, typically in the areas to the west and southwest of the Little Blue River.

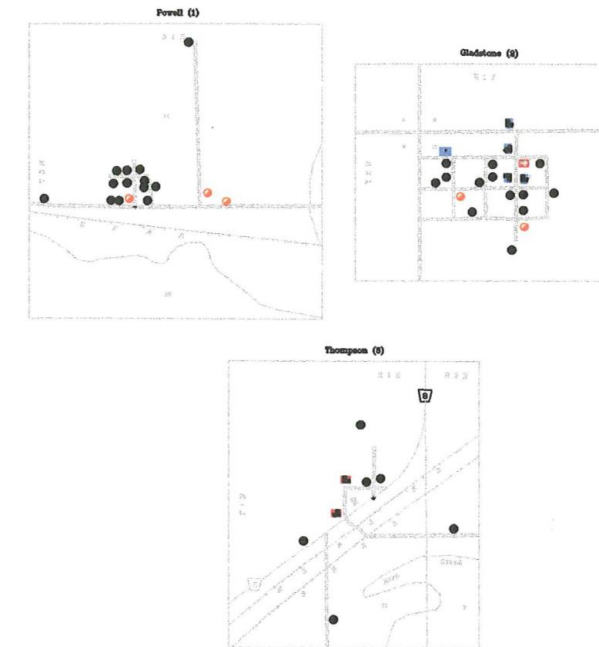
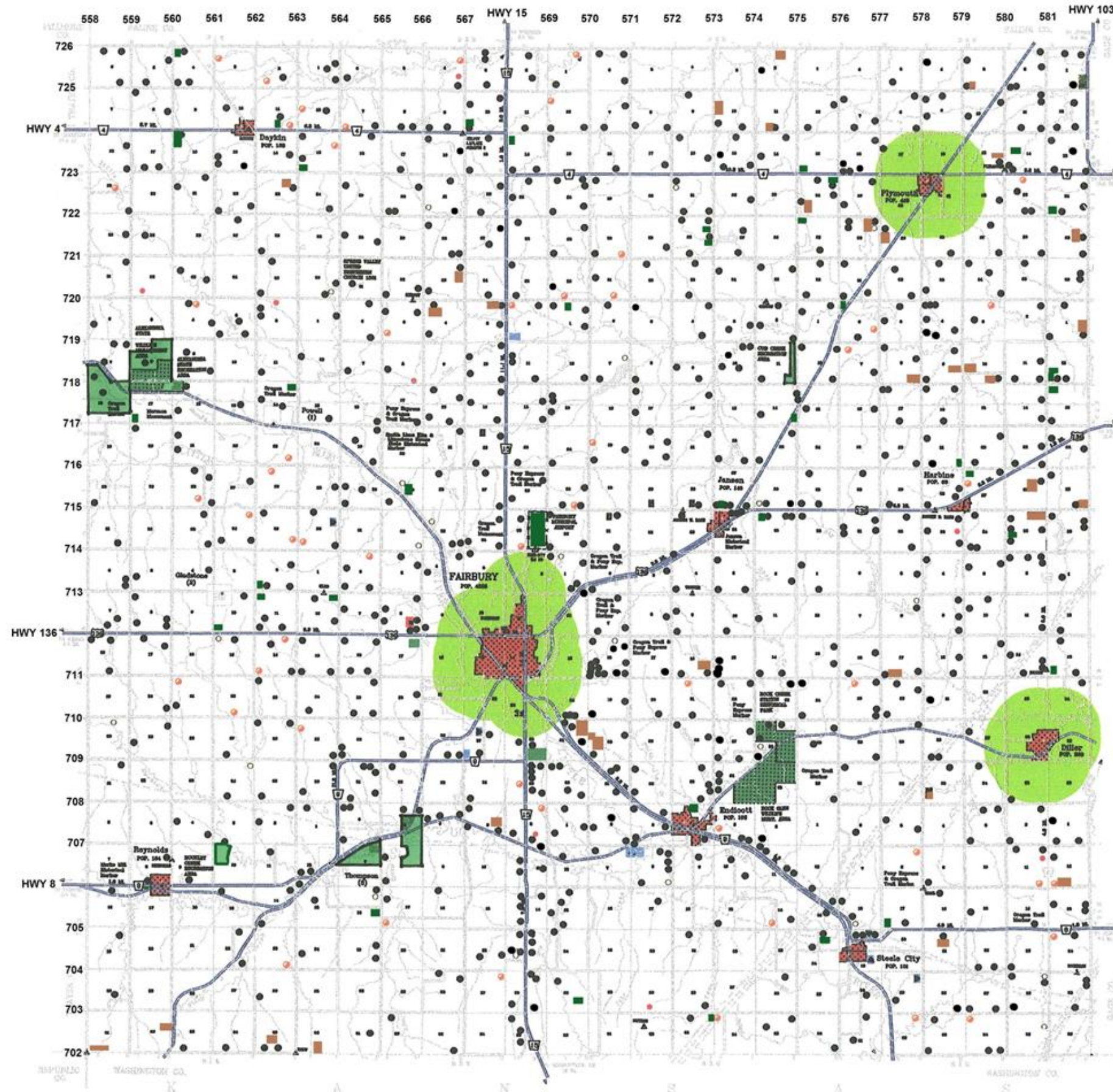
♦ RURAL RESIDENTIAL DEVELOPMENT

The **Existing Land Use Map, Illustration 4.1**, indicates rural dwellings are generally located throughout the County, but are also congregated in larger numbers in close proximity to the municipalities of Jefferson County. Additional groupings exist along hard surfaced highway corridors in the southern portion of the County. Throughout the initial phases of this **Comprehensive Plan-Update**, the Jefferson County Planning Commission was concerned that incentives put in place by the **2001 Comprehensive Plan** were not successful in attracting non-farm single family dwellings to be constructed within close proximity of the municipalities of the County.

The updated **Existing Land Use Map** alleviated some of these concerns when it illustrated that there was a growing trend for non-farm single family dwellings to be attracted to hard surfaced Highway corridors in the southern portion of the County. Additionally, many of the new houses constructed in the agricultural production areas of the County were relatives of farmers in these areas that wanted to build new homes on or near the “family” farming operations.

EXISTING LAND USE MAP

JEFFERSON COUNTY, NEBRASKA



LEGEND

- VACANT/AGRICULTURE
- INTENSIVE AGRICULTURE
- PARKS/RECREATION
- PUBLIC/QUASI-PUBLIC
- RESIDENTIAL - SINGLE FAMILY
- RESIDENTIAL - VACANT ABANDONED POOR
- RESIDENTIAL - MOBILE HOME
- COMMERCIAL
- INDUSTRIAL
- TRANSPORTATION CORRIDOR
- COMMUNITY PLANNING JURISDICTION
- COMMUNITY LIMITS

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

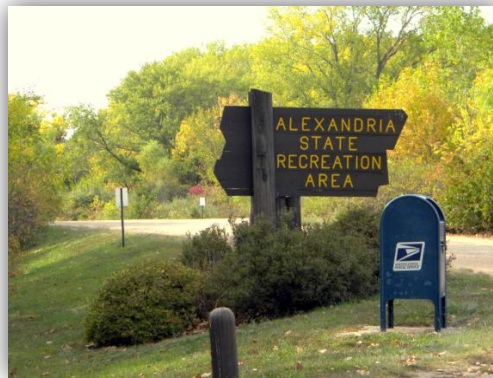
* Lincoln, Nebraska * 402.464.5383 *

ILLUSTRATION 4.1

The updated **Existing Land Use Map** indicates that rural dwellings tend to be concentrated along hard surfaced County Roads and State Highways. Development is more limited in the western portion of the County, where the topography and terrain are much more restrictive to agricultural crop production.

♦ **Public and Recreational Uses.**

Public/quasi-public land uses, such as churches, cemeteries and rural utility substations are scattered throughout Jefferson County. **Parks and recreation land uses** are affiliated with State Recreation and Wildlife Management Areas, which are primarily located along creeks or tributaries of the Little Blue River and Cub Creek.



♦ **Commercial and Industrial Uses.**

Commercial and industrial land uses are generally located in the designated Community Planning Jurisdictions of Fairbury and the Villages of Jefferson County. Rural livestock facilities are identified as “intensive agricultural” uses on the **Existing Land Use Map** and are located throughout the County.

AGRICULTURAL PRODUCTION STATISTICS

NUMBER AND SIZE OF FARMS

The consolidation of farms and existing farms increasing the acres of crop producing lands has been a common activity in Jefferson County during the last 10 years. Statistics included in the Nebraska Census of Agriculture are released every five years; the latest being 2007.

The number and size of farms, identified in **Table 4.1**, indicates that **1,000+ acre farms in Jefferson County increased by 23 percent between 1997 and 2007**. During the same 10-year period, the total number of farms declined by 51, or 9.2 percent. Although the number farms in the “10 to 49”, “50 to 179” and “1,000+” acres increased during the 10 year period, the remaining categories declined by a combined total of 120 farms. The increase in total crop land between 1997 and 2007 in contrast to the overall decline of 51 Total Farms, leads to the conclusion that farms in Jefferson County are consolidating and growing in size.

TABLE 4.1
FARMS BY SIZE
JEFFERSON COUNTY, NEBRASKA
1997-2007

<u>Size</u>	<u>1997</u>	<u>2002</u>	<u>2007</u>	<u>% Change</u> <u>1997 - 2002</u>	<u>% Change</u> <u>1997 - 2007</u>
1 to 9 Acres	22	15	14	-31.8%	-36.4%
10 to 49 Acres	48	67	87	+39.6%	+81.3%
50 to 179 Acres	128	135	162	+5.5%	+26.6%
180 to 499 Acres	195	161	126	-17.4%	-35.4%
500 to 999 Acres	139	136	96	-2.2%	-30.9%
<u>1,000 to Acres or More</u>	<u>94</u>	<u>117</u>	<u>116</u>	<u>+24.5%</u>	<u>+23.4%</u>
Total Farms	556	573	505	+3.1	-9.2%
Total Crop Land	209,699	260,131	232,700	+11.0%	-16.4%

Source: Nebraska Census of Agriculture, 1997, 2002, 2007.
Hanna:Keelan Associates, P.C., 2013.

Between 1997 and 2007, the number of mid-sized farms, those ranging in size from “180 to 499” and “500 to 999” acres, declined by a 112 farms. However, the Total Number of Farms in Jefferson County only decreased by 51 farms. Thus farming operations are becoming larger by consolidating with adjacent farms. **Total cropland accounted for approximately 57 percent of the total acreage in Jefferson County (369,280 acres) in 1997, compared to 63 percent in 2007.**

CROP PRODUCTION TRENDS

Table 4.2 identifies the **status of crop production** in Jefferson County from 1997 to 2007, while **Illustration 4.2** depicts Land Use by Agriculture Production. The total number of farms that harvested crops decreased by 88 farms, or 16.8 percent from 1997 to 2007. During the same period, the number of farms with irrigated cropland increased by 3.9 percent, or by seven farms. Total acres of irrigated cropland increased by 25,976 acres, or 47.2 percent. This trend indicates that farms with irrigated crop lands are increasing in size. Thus, dry land or non-irrigated farms raising crops have been converted to irrigated crop lands.

**TABLE 4.2
STATUS OF CROP PRODUCTION
JEFFERSON COUNTY, NEBRASKA
1997-2007**

	<u>1997</u>	<u>2002</u>	<u>2007</u>	<u>% Change 1997 - 2002</u>	<u>% Change 1997 - 2007</u>
<i>HARVESTED CROPLAND</i>					
Farms	524	499	436	-4.7%	-16.8%
Acres	201,576	231,392	213,731	+14.8%	+6.0%
<i>IRRIGATED CROPLAND</i>					
Farms	179	200	186	+11.7%	+3.9%
<u>Acres</u>	<u>55,003</u>	<u>70,768</u>	<u>80,979</u>	<u>+28.7%</u>	<u>+47.2%</u>
<i>TOTAL CROPLAND</i>					
Farms	556	573	505	+3.1%	-9.2%
Acres	238,431	260,131	232,700	+9.1%	-2.4%

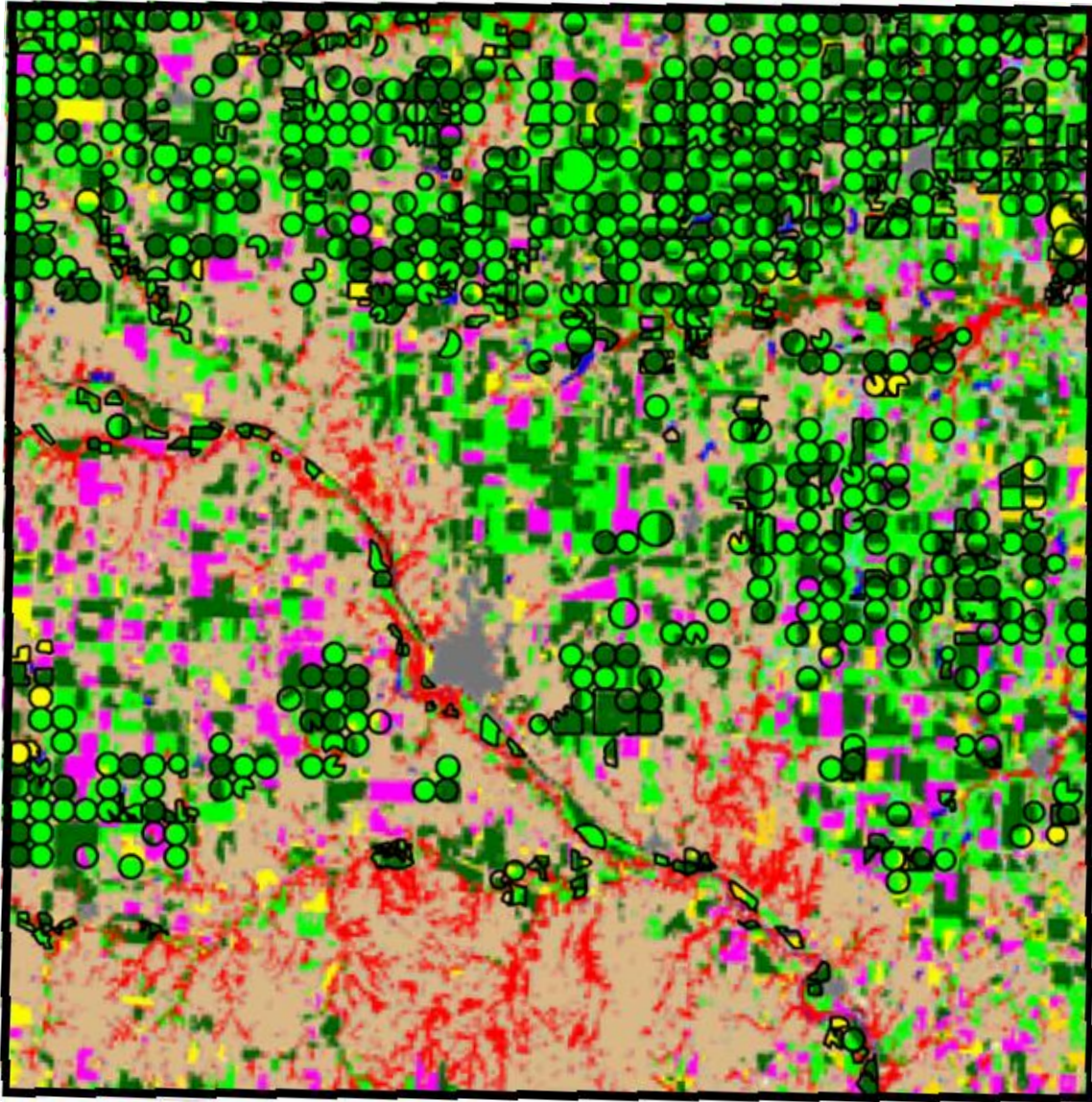
Source: Nebraska Census of Agriculture, 1997, 2002, 2007.
Hanna:Keelan Associates, P.C., 2013.





EXISTING CROP PRODUCTION MAP

JEFFERSON COUNTY, NEBRASKA



LEGEND

- CORN
- SOYBEANS
- SORGHUM (MILO)
- DRY EDIBLE BEANS
- ALFALFA
- SMALL GRAINS (WHITE, OATS, RYE, MILLET)
- FALLOW FIELDS
- SUNFLOWER
- SUGAR BEETS
- POTATOES
- RANGE, PASTURE, GRASSLANDS
- BARREN AREAS
- OPEN WATER
- EMERGENT WETLANDS
- RIPARIAN FOREST AND WOODLANDS
- URBAN AREAS
- OTHER AGRICULTURAL LANDS (FARMSTEADS, FEEDLOTS, ETC.)
- ROADS
- OUTLINE OF IRRIGATED AREAS
- COUNTY BOUNDARIES

HANNA:KEELAN ASSOCIATES, P.C.
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ILLUSTRATION 4.2

The trends highlighted in **Tables 4.1 and 4.2** illustrate that agricultural practices in Jefferson County are becoming more efficient with a gradual increase in the amount of acres in production. Agricultural production figures from 1997 to 2007 indicate the amount of total cropland declined by 2.4 percent, or 5,731 acres. During the same period, the amount of Harvested Cropland increased by six percent, while the percentage of Irrigated Croplands increased by 47 percent.

A variety of crops are produced in Jefferson County. **Table 4.3** identifies **harvested crops by type** in Jefferson County, from 1997 to 2007. As of 2007, “Corn for Grain or Seed” was the primary crop in the County, accounting for 87,144 acres, or approximately 24 percent of the total County area. Production and harvest of “Corn for Grain or Seed” has increased by nearly 60 percent between 1997 and 2007. The production of “Soybeans for Beans” is the second largest crop grown in the County, increasing by 21.5 percent during the same 10-year period. Sorghum grown for grain or seed has declined at the highest amount of any harvested crop in the County, with 32,114 fewer acres harvested in 2007 than in 1997, a decline of 68.2 percent.

**TABLE 4.3
HARVESTED CROPS BY TYPE
JEFFERSON COUNTY, NEBRASKA
1997-2007**

CROP BY TYPE	Production in Acres			% Change	% Change
	<u>1997</u>	<u>2002</u>	<u>2007</u>	<u>1997-2002</u>	<u>1997-2007</u>
Corn for Grain or Seed	54,874	77,060	87,144	+40.4%	+58.8%
Corn for Silage or Green Chop	1,760	5,949	1,927	+238.0%	+9.5%
Sorghum for Grain or Seed	47,067	26,742	14,953	-43.2%	-68.2%
Wheat for Grain	24,082	22,569	25,085	-6.3%	+4.2%
Oats for Grain	1,075	1,342	314	+24.8%	-70.8%
Soybeans for Beans	60,716	82,761	73,760	+36.3%	+21.5%
Hay-alf, Other Wild, Silage	18,009	19,341	13,289	+7.4%	-26.2%

Source: Nebraska Census of Agriculture, 1997, 2002, 2007.
Hanna:Keelan Associates, P.C., 2013.

LIVESTOCK PRODUCTION TRENDS

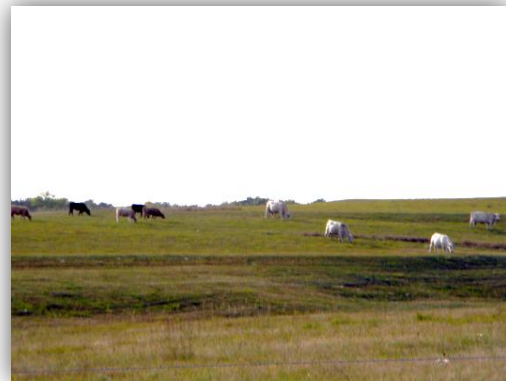
Table 4.4 identifies **livestock production trends** from 1997 through 2007. During this period, the total number of livestock producing farms declined in each of the Livestock categories. However, in spite of fewer livestock facilities, both “Hogs and Pigs” and “Sheep and Lambs” facilities increased the amount of animals raised in Jefferson County by 42 and three percent respectively, during the 10-year period.

The largest decline in livestock production occurred in the number of farms raising Cattle and Calves, which declined by 118 farms, or 33 percent. The total number of Cattle and Calves also declined from 34,093 in 1997 to 29,005 in 2007, a decrease of nearly 15 percent.

**TABLE 4.4
LIVESTOCK PRODUCTION TRENDS
JEFFERSON COUNTY, NEBRASKA
1997-2007**

<u>Size</u>	<u>Total Farms / Total Animals</u>			<u>% Change</u>	
	<u>1997</u>	<u>2002</u>	<u>2007</u>	<u>1997 - 2002</u>	<u>1997 - 2007</u>
Cattle/Calves	357 / 34,093	317 / 35,736	239 / 29,005	-11.2% / +4.8%	-33.1% / -14.9%
Beef Cows	286 / 9,816	277 / 12,547	204 / 8,885	-3.2% / +27.8%	-28.7% / -9.5%
Milk Cows	27 / 3,205	25 / 3,047	19 / 2,952	-7.4% / -4.9%	-96.3% / -7.9%
Hogs and Pigs	45 / 37,472	31 / 41,269	23 / 53,311	-31.1% / +10.1%	-48.9% / +42.3%
Sheep and Lamb	20 / 514	23 / 667	19 / 531	-15% / +29.8%	-5.0% / +3.3%

*Farms less than 180 acres in size were not included in this analysis.
Source: Nebraska Census of Agriculture, 2007; U.S. Department of Agriculture 2010.
Hanna:Keelan Associates, P.C., 2013



SUMMARY OF AGRICULTURAL STATISTICS

The review of agricultural statistics indicated that the total number of acres occupied by crop-producing farms and the numbers of livestock raised in Jefferson County have both declined in nearly all categories between 1997 and 2007.

FUTURE RURAL LAND USE ANALYSIS

Illustration 4.3 identifies the **Future Land Use Map** for Jefferson County. The primary hard-surfaced County Roads and State Highways were reviewed to determine the potential impact of rural development adjacent these Road Corridors. The conclusion of the Planning Commission was that agricultural residential land uses, in addition to being in close proximity to the Communities of the County, should also be promoted along the highway corridors in central and southern Jefferson County.

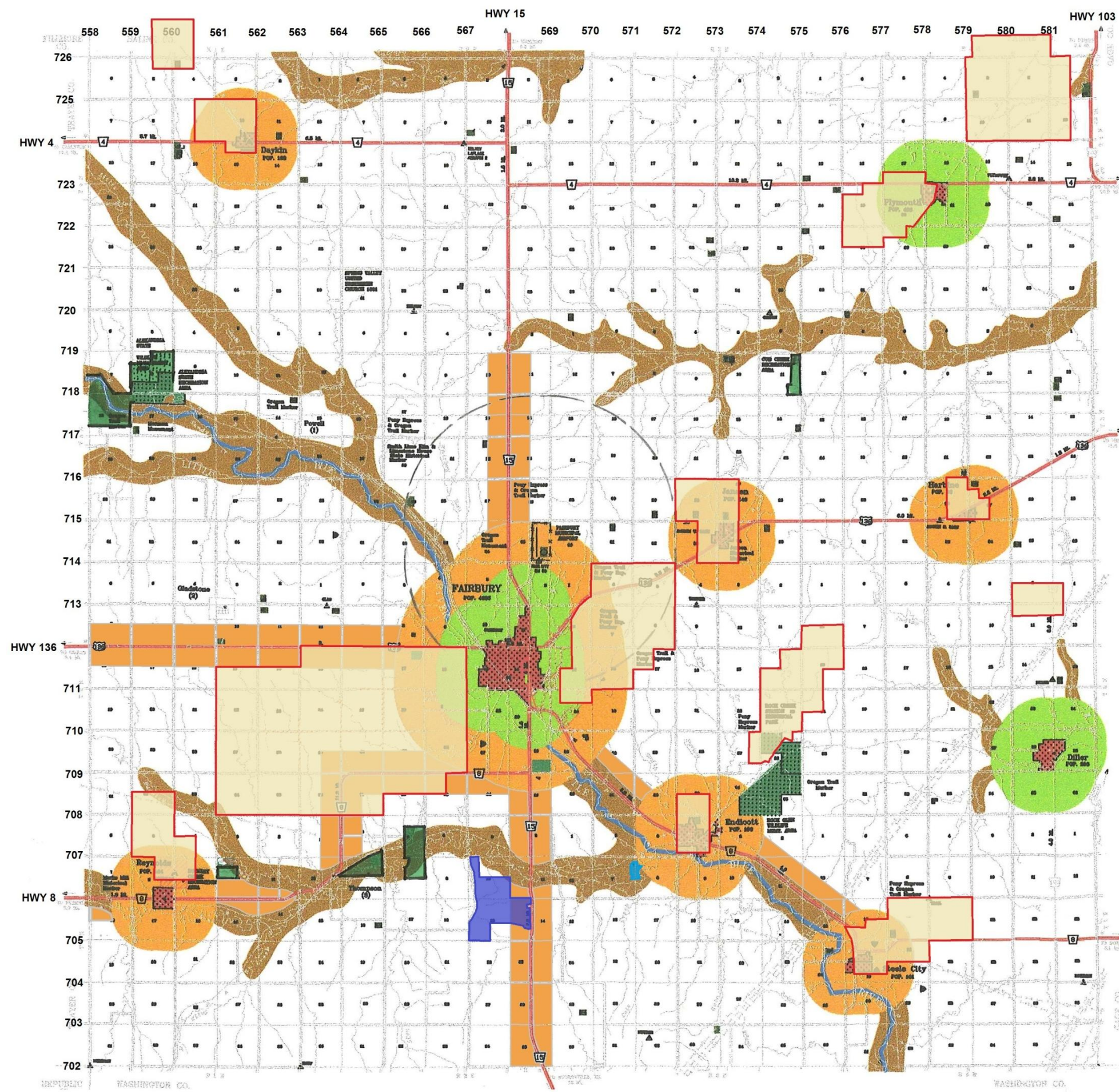
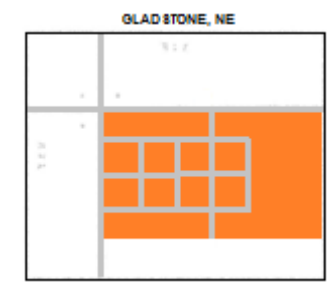
GENERAL AGRICULTURAL AREAS

The **Jefferson County Comprehensive Plan** focused on evaluating the effectiveness of policies that were intended to preserve and protect agricultural production areas by controlling the development of non-farm dwellings.

Significant agricultural production lands are identified in the **Future Land Use Map** as “general agricultural areas.” These areas continue to be preserved and protected from unnecessary encroachment of residential, commercial or industrial development. Irrigated cropland comprises the majority of rural areas in the northern and northeastern portion of the County. Dryland crop production is more prevalent in the southwest and south-central region of Jefferson County and also has a higher concentration of pasture lands or hay fields located on moderate to steep slopes. Dryland or irrigated crop production areas tend to be located in areas having rolling or terraced hills.

FUTURE LAND USE MAP

JEFFERSON COUNTY, NEBRASKA



- LEGEND**
- GENERAL AGRICULTURE
 - AGRICULTURE RESIDENTIAL
 - PARKS AND RECREATION
 - PUBLIC/QUASI-PUBLIC
 - RURAL CONSERVATION
 - MAJOR HIGHWAY CORRIDOR
 - MAJOR RIVERS
 - COMMUNITY PLANNING JURISDICTION
 - COMMUNITY LIMITS
 - WELLHEAD PROTECTION AREA
 - AIRPORT PLANNING JURISDICTION
 - INDUSTRIAL
 - CONSERVATION EASEMENT

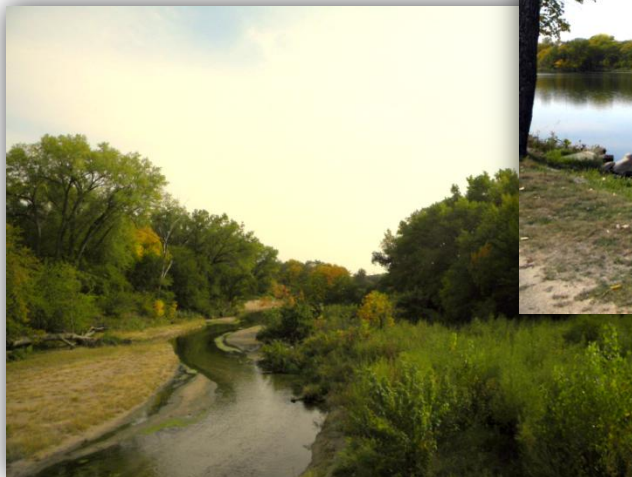
HANNA:KEELAN ASSOCIATES, P.C.
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Commercial scale wind turbines, developed singularly, or as large “Wind Farms,” were also discussed by the Planning Commission. These facilities could potentially be allowed as a Special Use (Zoning) Permit and required to be in compliance with the Jefferson County Zoning Regulations. Primary areas where these facilities are anticipated to be considered for development are the rural (general agricultural) regions of Jefferson County. Large or commercial scale wind turbines are anticipated to be attracted to higher elevations and ridge lines associated with the Little Blue River Valley and upper “plains” in the east and southeastern portions of the County.

AGRICULTURAL CONSERVATION AREAS

Agricultural Conservation Areas (ACAs) are environmentally sensitive areas. In Jefferson County, ACAs are associated with the Little Blue River, Cub and Rose Creeks and their respective tributaries. These ACAs consist of floodplains and flood prone, low-lying lands with shallow depths to the groundwater table. Soil conditions in ACAs severely limit development. ACAs are depicted in the **Jefferson County Official Zoning Map**. The consensus of the Planning Commission is that future development in ACAs should be limited to activities associated with agricultural production, while limiting intensive agricultural uses such as livestock confinement facilities.



OPEN SPACE & PARKS/RECREATION AREAS

State Wildlife Management and Recreation Areas are primarily located along the Little Blue River and the Cub and Rose Creek Corridors. These existing Areas may potentially expand or new Areas may be developed as funding becomes available.

AGRICULTURAL RESIDENTIAL AREAS

The development of non-farm dwellings in Jefferson County is recommended to be concentrated in the areas identified as “Rural Residential,” as shown on the **Future Land Use Map, Illustration 4.3**. Rural residential uses are planned within a mile of the Corporate Limits of the Villages of Daykin, Endicott, Harbine, Steele City and Reynolds, as well as one-mile beyond the Planning Jurisdiction of the City of Fairbury. The Villages of Plymouth and Diller have their own Comprehensive Plans, Zoning and Subdivision Regulations and thus control their own One-Mile Planning Jurisdictions.

Highway corridors are also planned for Rural Residential uses in central and southern portions of Jefferson County. Rural Residential uses extend one-half mile either side of the center-line of Highway Right-of-Way. Highways extending beyond the Planning Jurisdiction of Fairbury along Highway 8 throughout the entire County, along Highway 136 west to the Jefferson County Line and along Highway 15 south to the Nebraska/Kansas State Line and north to County Road 719 are all planned for agricultural residential uses.

The economy of Jefferson County continues to be agriculturally based. However, the Planning Commission expanded the areas targeted for rural residential development, based upon the results of the existing land use analysis and past/current building trends. Since the previous **Comprehensive Plan**, housing development in the unincorporated rural areas has increased. By implementation of the new **Future Land Use Map** and continued enforcement of the **County’s Zoning Regulations**, the County will continue to grow and develop as planned, in an orderly manner, addressing both the agricultural activities and residential needs of rural Jefferson County.

COMMERCIAL AREAS

Existing and planned commercial developments within rural Jefferson County are to be promoted at existing commercial areas along the Highway 4, 8, 15 and 136 corridors within or adjacent the City of Fairbury and the Villages of Jefferson County.



INTENSIVE AGRICULTURAL AREAS

Rural agriculture-oriented industrial uses, such as large scale grain elevators and sand extraction facility that produces specialized sand products are the primary rural industrial uses in the County. Grain elevators, large silos or warehouse buildings remain in a variety of locations near railway corridors, throughout the County. The Comprehensive Plan and Zoning Regulations identify these facilities as either intensive agricultural uses in Agricultural Districts, or specifically as “I – Industrial” Districts in rural Jefferson County.

Future areas of anticipated intensive agricultural development should be considered in locations nearest urbanized and built-up areas within reasonable distance of fire protection and hard surfaced roads.



SECTION 5
ENERGY ELEMENT

SECTION 5 ENERGY ELEMENT

INTRODUCTION

This **Section** of the **Jefferson County Comprehensive Plan - Update** complies with a July 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 – Update** 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 Jefferson County has followed the trends prevalent in the State of Nebraska. Electrical power is distributed across rural Jefferson County by **Norris Public Power District** and **Fairbury Light and Water (FLW)**. The Norris Public Power District is supplied directly by the **Nebraska Public Power District (NPPD)**. Fairbury Light and Water (FLW) is a member of the **Nebraska Municipal Power Pool (NMPP)**, which supplies FLW’s electrical power. The FLW has the ability to produce their own electricity to Jefferson County customers, but uses their generators to supplement peak load demands through NMPP services, or as an emergency backup during power outages.

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 source of NPPD’s generating facilities includes coal, oil, natural gas and nuclear energy. Additionally, NPPD also purchases electricity from the **Western Area Power Administration (WAPA)**, which markets and transmits electricity for federally owned hydropower facilities.

RENEWABLE ENERGY STRATEGIC PLAN

As of July 2011, the NPPD Strategic Plan states:

“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 2011, approximately 57.6 percent of NPPD's energy generation was from coal, 28.2 percent nuclear, 4.9 percent hydro, 0.6 percent gas & oil, **and 3.9 percent from alternative energy sources, primarily wind.** The remaining 4.8 percent of NPPD's energy was supplied through purchases, with over half of these purchases from the WAPA, or hydro-electricity facilities.

In order 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 2011, the entire State of Nebraska had a total wind turbine production of 337 megawatts produced by 196 operational turbines.

NMPP was created in 1975 as 19 municipal electric utilities pooled their resources to better handle escalating fuel prices while still serving their Communities effectively and efficiently. Today, 151 Nebraska Communities, including the **City of Fairbury**, are member Communities of NMPP. Several Communities in the States of Kansas, Colorado, Wyoming and North Dakota are also members of this electric supply organization.

The passage of legislation in 1981 allowed the formation of the **Municipal Energy Agency of Nebraska (MEAN)**, a wholesale electric supply organization. This organization is a program operated by NMPP. Since its inception, MEAN has relied upon member generation as part of its power supply and, with its growth, has secured additional sources of electric generation from other organizations. Today MEAN supplies wholesale electricity to more than 65 Communities in Colorado, Iowa, Wyoming and Nebraska, including the City of Fairbury. Collectively, these Communities subscribe to the core philosophies of local control and working together in providing reliable, low-cost energy and energy-related services to member Communities.

MEAN participated with the Public Power Generation Agency along with four other regional utilities on the construction of the Whelan Energy Center Unit 2, near Hastings, Nebraska. The 220-megawatt coal fired power plant began operation in May 2011, supplying MEAN with 80 megawatts from the plant. MEAN also has a 50-megawatt, long-term participation power agreement with the **Nebraska Public Power District (NPPD)**. The agreement provides MEAN with energy priced at a fixed rate from NPPD through 2023.

RENEWABLE ENERGY PROJECTS

MEAN expanded its renewable energy capabilities with the following projects during 2011:

- 1.) A 20-year power purchase agreement with Waste Management, Inc., for six megawatts of capacity from a landfill gas project near Mitchellville in Central Iowa – it is due online in Spring 2013;
- 2.) The signing of a power purchase agreement for up to eight megawatts from Nebraska Public Power District's Laredo Ridge Wind Facility near Petersburg, Nebraska. The 80-megawatt wind farm began production in 2011;
- 3.) MEAN is seeking additional renewable opportunities, including participating with NPPD on power generated from the Broken Bow Nebraska Wind Facility.

Currently, MEAN's total renewable energy capacity is nearly 50 megawatts, or 9 percent of its total electric generating capacity. By comparison, the mission statement of NPPD includes the goal of producing 10 percent of its energy supply from renewable sources by 2020. This would involve the development of at least 80 megawatts of wind-generated power during every two-year period through 2020 to achieve the 10 percent goal.



Broken Bow Nebraska Wind Facility

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 Laredo Ridge Wind Farm, east of Petersburg in Boone County, for example. This facility consists of 54 individual 1.5 megawatt (MW) turbines.



Laredo Ridge, Petersburg, Nebraska

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, five 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.



Net Metering Small Wind Energy System
Rural Furnas County, Nebraska



Net Metering Small Wind Energy Systems
Winnebago, Nebraska

The Jefferson County Planning Commission 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 potentially permitted as Special Uses in the “AG General Agricultural” and “RC Rural Conservation” Districts.

ENERGY CONSUMPTION

According to the Nebraska Energy Office, the only available energy consumption statistics by Sector is the State totals. As of 2010, the Industrial Sector consumed 41.8 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 17 percent in the Commercial Sector, 19.6 percent for the Residential Sector and 21.6 percent in the Transportation Sector. The Total Energy Consumption, in 2010, was 843.8 trillion British Thermal Units (BTU), which more than doubled, since 1960, when total consumption was 308.3 trillion BTU, a percent change of 173.7 percent.

TRENDS IN ENERGY CONSUMPTION

During the last 48 years, the State of Nebraska, as a whole, has vastly increased energy consumption. The Nebraska Energy Office “Annual Report – 2011,” details the most recent state-wide statistics from 2009. 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 2009, 10 percent was spent on energy usage.**

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 2008, as follows:

- Coal consumption increased from 20 trillion BTUs in 1960 to 249.6 trillion BTUs, as of 2009.
- Natural gas consumption rose and fell during the 48 year period between 1960 and 2009, beginning at 140.4 trillion BTU, peaking in 1973 at 230.7 trillion BTU and by 2009 increasing again back up to 164.4 trillion BTU.
- Gasoline and diesel fuel consumption increased in Nebraska between 1960 and 2008. Gasoline consumption rose by 25 percent, from 78.8 to 99.3 trillion BTU, as of 2009 but peaked in 1978 at 115.9 trillion BTU. However, diesel fuel consumption quadrupled from 24.2 trillion BTU to 85.9 trillion BTU. Petroleum consumption overall peaked in 1978 at 246.1 trillion BTU.

- Nuclear power generation began in Nebraska in 1973 at 6.5 trillion BTU and has increased to 98.6 trillion BTU as of 2009, but peaked in 2007 at 115.7 trillion BTU.
- Hydroelectric consumption has fluctuated, beginning in 1960 at 10.3 and ending at 4.6 trillion in 2009. A record low of 3.4 trillion BTU was recorded in 2008. Consumption peaked at 17.6 trillion BTU in 1999. Drought conditions, which trigger reduced production and maintenance outages, have resulted in significantly reduced reliance on hydroelectric production during the last several years.

INCREASED ENERGY COSTS & CONSERVATION

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. This figure is even more significant when the consolidation of farms is taken into account.

In 1966, just 3.1 million acres of Nebraska crop lands were irrigated, but as of 2009, 8.5 million acres were irrigated, by 92,685 active irrigation wells.

Ethanol production in Nebraska has consumed an increasing amount of corn produced annually and in the process expanding irrigation practices. **In 2010, more than 40 percent of the corn crop was utilized by ethanol facilities across the State.**

ENERGY CONSERVATION POLICIES

The most effective means for Jefferson 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 Jefferson 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 Jefferson County Zoning Regulations to control the placement and operation of alternative energy systems.
 - Require compliance with the Accessory or Conditional 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.”**
 - Utilize the Jefferson County Zoning Regulations to guide the potential use and placement of large scale Commercial Wind Energy Conversion Systems.
- ❖ **As other sources of Alternative Energy Systems are developed or become cost-effective for use in Nebraska, amend Jefferson 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.