Ellsworth County, Kansas

Comprehensive Vision Plan 2022

MARVIN PLANNING CONSULTANTS
Specializing in Municipal, County and Neighborhood Planning

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Chapter 1
Introduction

Location

Ellsworth County is located in central Kansas. The county includes the major roadways of US Highway 14 north to south, Interstate 70 along the north edge of the county, and Highway 4 along the southern portion of the county. Highway 156 also runs the length of the county.

The county is bounded on the north by Lincoln County, on the east by Saline and McPherson Counties, on the south by Rice County, and on the west by Russell and Barton Counties. The county is home to the incorporated communities of Wilson, Holyrood, Kanopolis, Ellsworth, and Lorraine.

Comprehensive Vision Planning

The Ellsworth County Comprehensive Vision Plan is designed to provide a "road map" for the future of Ellsworth County. The "road map" is a combination of tools for orderly growth and development as well as policy guidelines. These are intended to enable citizens and elected officials to make informed decisions about the future of the county.

The Comprehensive Vision Plan will provide a guideline for the location of future developments and uses within the planning jurisdiction of Ellsworth County. The Comprehensive Vision Plan is intended to encourage a solid economic base in conjunction with future uses.

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

The Planning Process

The comprehensive vision plan begins with the exploration of current and future issues faced by the county and its residents. Data are collected to provide a snapshot of the past and present conditions within the county. Analysis of data

provides the basis for developing forecasts for future land use demands, as well as future needs regarding housing and facilities.

The Comprehensive Vision Plan is also a **blueprint for Ellsworth County** designed to identify, assess, and develop actions and policies in the areas of population, land use, transportation, housing, economic development, county facilities, and utilities.

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

Plan Preparation

The Plan was prepared under the direction of the Ellsworth County Board of Commissioners, along with the assistance and participation of county staff, and the citizens of Ellsworth County. The time period for achieving the goals, programs, and developments identified in the Ellsworth County Comprehensive Vision Plan is 20 years. However, the county should review the Plan annually and update the document every 10 years (2032), or when major, unanticipated opportunities arise.

Completing updates every ten years or so will allow the county to incorporate ideas and developments not known at the time of the present comprehensive planning process.

Comprehensive Vision Plan Components

Kansas State Statutes may include certain elements in a Comprehensive Plan. A "Comprehensive Plan," is defined in K.S.A. 19-2958.

The Comprehensive Vision Plan is comprised of the following chapters and sections:

- Introduction Chapter
- Community Engagement Chapter
- Population Statistics Chapter
- Housing Chapter
- Economics/Economic Development Chapter
- County Facilities Chapter
- Parks and Recreation Chapter
- Utilities and Communications Chapter
- Energy Chapter
- Hazards Chapter
- Natural Resources/Environmental Chapter
- Land Use Chapter
- Transportation Chapter
- Implementation Chapter

Analyzing past and existing demographic, housing, economic, and social trends permit the projection of likely conditions in the future. Projections and forecasts are useful tools in planning for the future; however, these tools are not always accurate and may change due to unforeseen factors. Also, past trends may be skewed or the data may be inaccurate, creating a distorted picture of past conditions. Therefore, it is important for Ellsworth County to closely monitor population, housing, and economic conditions that may impact the county. Through periodic monitoring, the county can adapt and adjust to changes at the local level. Having the ability to adapt to socio-economic change allows the county to maintain an effective Comprehensive Vision Plan for the future, to enhance the quality of life, and to raise the standard of living for all residents.

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

The Comprehensive Vision Plan records where Ellsworth county has been, where it is now, and where it likely will be in the future. Having this record in the Comprehensive Vision Plan will serve to inform county officials as much as possible.

The Comprehensive Vision Plan is an information and management tool for county leaders to use in their decision-making process when considering future developments. The Comprehensive Vision Plan is not a static document; it should evolve as changes in the land-use, population, or local economy occur during the planning period. This information is the basis for Ellsworth County's evolution as it achieves its physical, social, and economic goals.

The Comprehensive Vision Plan is a vision presented in text, graphics, and tables representing the desires of the county and its residents for the future.

Jurisdictional Organization

The Ellsworth County Board of Commissioners, which is a board of elected officials, govern and are supported by county staff. Each incorporated community in Ellsworth County also has elected officials and officers overseeing how their community is governed. The planning and zoning jurisdiction of Ellsworth County, pursuant to K.S.A. Statutes 19-2960, would includes all of the unincorporated portions of the county. However, there is currently no zoning, nor a planning commission, in the county as of the writing of this plan.

Data

American Community Survey (ACS) data was used alongside U.S. Census Bureau data during this planning project. ACS data is based upon statistical sampling from the U.S. Census Bureau's data; therefore, there may be variations in the numbers presented based on the source.

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Chapter 2
Community Engagement

Community Engagement

Community engagement is important to a successful planning effort. The use of public participation makes it possible to have a clearer understanding of how the residents feel regarding different parts of the community.

Community Engagement Approach

Community engagement in Ellsworth County was designed as a major component of the project and the process included multiple approaches. It was structured in a manner allowing for stakeholders to be involved in numerous ways throughout the process. Some key elements included:

- Use of a steering committee;
- SurveyMonkey;
- A project website, and;
- An informational town hall meeting

Steering Committee Meetings

With the assistance of Ellsworth County, a steering committee was utilized to review materials and policies for the new plan. In addition, elected officials from all entities were invited to attend. This group also provided the internal assistance the planning effort needed to get more people involved in the process.

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

SurveyMonkey

SurveyMonkey, a web based survey tool, was utilized for gathering specific input on Ellsworth County. The survey process allows individuals to provide input while remaining totally anonymous. The survey was advertised using specially designed cards, announcements on the project website, and on posters hung up throughout the county and communities.

One survey was developed for use within Ellsworth County. The survey contained a total of 33 questions relating to the county. The survey was reopened after the second public input meeting, as the concern was raised that there was not enough input received. In all, the number rose to 207 individuals who chose to answer the survey. The survey was open from May to December of 2021; therefore, some survey responses may have already been addressed. The results of the survey can be found on the following pages.

#1: Where do you live within Ellsworth County?

- Ellsworth: 49.51%
- Kanopolis: 6.86%
- Holyrood: 0.98%
- Lorraine: 1.47%
- Ash Grove: 1.47%
- Wilson: 10.78%
- Rural: 30.39%
- Other:
  - Clear Creek
  - Southern Ellsworth county *[sic]* Geneseo address
  - Near Kanopolis State Park
  - KANOPOLANES *[sic]*
  - Geneseo
  - I work in EW Co. I was an EW Co. resident for 25 years prior to moving last year.
  - Garfield
  - Wilson but building a home outside of Ellsworth
  - WaKeeney

#2: In what Zip Code is your home located? (enter 5-digit ZIP code; for example, 67439, 67454, etc.)

- 67454: 8.33%
- 67439: 60.78%
- 67490: 15.20%
- 67444: 3.92%
- 67464: 2.45%
- 67425: 3.43%
- 77439: 0.49%
- 67450: 1.96%
- 67459: 2.45%
- 67672: 0.49%
- 67539: 0.49%

#3: How long have you lived in Ellsworth County? [years]

- Less than 1: 3.47%
- 1 to 5: 13.37%
- 6 to 10: 10.89%
- 11 to 15: 9.41%
- 16 to 20: 8.42%
- 21 to 30: 11.88%
- 31 to 40: 15.35%
- 41 to 50: 10.40%
- 50+: 16.83%

#4: Please tell us your age range. [years]

- Under 19: 0.99%
- 20 to 24: 2.48%
- 25 to 29: 5.45%
- 30 to 34: 7.43%
- 35 to 39: 13.86%
- 40 to 44: 8.42%
- 45 to 54: 10.89%
- 55 to 64: 25.74%
- 65 to 74: 20.30%
- 75 to 84: 3.96%
- 85 and over: 0.50%

#5: What brought you to Ellsworth County?

- Family: 26.60%
- Work: 30.54%
- Retirement: 2.46%
- Retirement and family: 3.45%
- Always lived here: 28.08%
- Other : 8.87%
  - new house
  - Kanopolis Lake, Scenic Beauty, Acreage Home, Work in Saline Co.
  - marriage
  - KANOPOLIS LAKE
  - The moderate income housing
  - cost of living
  - Kanopolis Lake
  - small town living *[sic]* cost of living here
  - Bought land and built a house
  - Marriage
  - Married a *[sic]* EW county girl
  - Wife found a house she wanted
  - Family and Work (we would not have moved back without jobs in place)
  - operate a business in Ellsworth
  - Lived here all life except for 3 years *[sic]*
  - Married to a lifetime resident from rural Wilson
  - Always lived here, moved away for college. Came back to start my own family. Couldn't imagine raising them anywhere else.
  - Getting married

#6: Agriculture is defined in Kansas as: the use of land for agricultural purposes including dairying, farming, floriculture, horticulture, pasturage, and animal and poultry husbandry and the necessary accessory uses for packing, treating, or storing the produce; provided that the operation of any such accessory use shall be secondary to that of the normal agricultural activities. Is your primary income derived from agriculture?

- Yes: 16.85%
- No: 83.15%

#7: If agriculture is not your primary income source, which of the following industries do you earn a living? The following are based upon US Census categories.

- Forestry, Fishing, and Hunting and Mining: 0.59%
- Construction: 3.55%
- Manufacturing: 5.33%
- Wholesale Trade: 0.00%
- Retail Trade: 5.33%
- Transportation and warehousing and utilities: 1.78%
- Information: 0.59%
- Finance, Insurance, real estate, and rental and leasing: 8.88%
- Professional, scientific, management, administrative, and waste management: 8.28%
- Educational, health, and social services: 15.38%
- Arts, entertainment, recreation, accommodation and food services: 2.37%
- Other services (except public administration): 1.18%
- Public administration: 4.73%
- Retired: 24.26%
- Disabled: 1.18%
- Other: 16.57%
  - Law Enforcement
  - aside from the farm, employment at local grain elevator(again-agriculture based) *[sic]*
  - Personal question to me
  - Corrections
  - Self employed/ Small business owner
  - office person
  - Daycare
  - Government services
  - oil related
  - Ag
  - Power generation
  - Law enforcement
  - Body Shop
  - Unemployed
  - College
  - Grain Hauling:
  - Goverment *[sic]*
  - legal
  - Oil
  - Law enforcement
  - Da *[sic]*
  - Government
  - Electric Utility
  - Ellsworth Correctional Facility
  - self employed
  - Church
  - Crop adjusting
  - Public safety

#8: What do you believe are the biggest economic factors in Ellsworth County?

- diverse employment and vocational-education availability, grocery/fuel/shopping options (most is done in Salina), land use restrictions in city limits (no farm animals including goats or chickens which could contribute to local economy)
- Housing Jobs
- Farming and ranching
- Lack of affordable housing for retirees. Lack of trade services (plumbers ,electricians ,construction workers) *[sic]* in the area.
- Small business opportunities, industry opportunity, *[sic]*
- services
- Agriculture
- Decline in population
- agriculture, manufacturing
- ECF
- Extensive job market availability at all levels.
- tourism and agriculture
- Tourism, Cattle Ranching, Prison Population/ Employment, Scenic Byways, Lakes, Natural Parks, Interstate traffic, Proximity to Salina
- Maintaining businesses and work force
- Farming & Manufacturing
- Agriculture
- Housing
- Lack of businesses
- Farming
- Need for growth
- the biggest deterrent for prospective movement into the county is property taxes and stagnant growth.
- agriculture & manufacturing
- Good land, available space *[sic]* and standing buildings
- Affordable housing and decent wage jobs
- Agriculture. Prison.
- Poor infrastructure planning and maintenance. Inability to draw businesses needed for real growth. I know I spend most of my money in Salina, Wichita *[sic]* or other bigger cities.
- agriculture

- Growing community, several jobs available.
- Agriculture and manufacturing
- agriculture
- Wages, communication - internet, industry, land
- Agriculture, Healthcare
- Ag and Ag related business/industry
- Federal Government taxes
- No jobs and no housing, no small businesses for elderly people to work in. (Without starting your own business and going into debt). No cohesiveness for the smaller towns. No homes in town for families to buy. Many nice homes are weekend homes, or lake homes, so nothing for families. No kids to add to the school system. We need to have every town succeed.
- Shopping locally
- Low prices for agriculture and high prices for supplies to farm. High prices at grocery stores.
- Na *[sic]*
- farming
- Maintaining infrastructure of roads, web connections, local businesses
- Wages/income, education, employment, community safety, social support systems and high tax rates.
- Jobs, housing, economic development
- Manufacturing companies
- Prison, Cashco, and Great Plains
- Agriculture
- Industry
- Good employment
- A great work force with mostly good work ethic.
- agriculture, tourism
- housing and jobs
- Farming, hospital, prison,...
- Lack of affordable housing. Lack of variety of businesses.
- ???
- None
- employment opportunity,
- manufacturing, farming, prisons, some wind
- Farm economy
- Na *[sic]*
- Growth (population) Infrastructure (streets, highways, etc) Jobs/Employment
- Fairly high cost of housing, few mid-level jobs, only one grocery and only one "variety" store
- Agriculture
- Ag, industry
- Agriculture
- Prison *[sic]* cashco *[sic]* implement dealers
- Agriculture, oil and gas
- industry
- Jobs
- The Correctional Facility and agricultural businesses.
- Not sure
- Lack of attractive opportunities for youth to bring people into our community.
- Farming
- Age & population
- Low wages, some high prices, lack of variety in shopping
- Housing
- Progressive, positive welcoming community
- Employment
- Medical center/manufacturing/farm & ranch
- Agriculture, manufacturing, tourism
- Location, resources
- Agriculture, Healthcare, Law enforcement
- Inexpensive housing
- Labor, Tax Rate
- Agriculture
- The prison, ag, food service
- Taxes on property
- N/a
- Agriculture Manufacturing Services
- Low wage jobs
- ECF.
- Low population
- Tourism
- Cattle Ranching
- Decline in younger population, money spent outside the community instead of within it, deteriorating infrastructure.
- I feel like we are doing just fine if the local politicians would quit spending money on [redacted] that some people come up with and is not necessary for our collective quality of life
- Given the rural setting, its economic diversity.
- Couple of large work places.
- Agriculture
- Manufacturing, Agriculture
- A large variety of jobs available, shopping is good without leaving town.
- The housing market to way to high.
- Farming
- Agriculture, State service, Cashco
- Farming
- Manufacturing, housing market, agriculture / crop prices
- jobs, housing, schools
- Tax rates
- Lack of workers and the price to live here is way to expensive for the pay most people in the country receive
- Lack of workers, Price of rent and purchasing

housing.
- ♀
- Housing, Sports/Recreational/Community Building, jobs
- Jobs, Housing, Childcare, Healthcare
- Aging population. Low wages.
- Industry and prison
- Not sure
- Ellsworth County has Highway 156 running through town and close to I70.
- Agriculture, ECF
- Labor
- Land
- Our smaller businesses cannot compete with the stores in Salina and Hays.
- Daycare
- Bringing new jobs and housing
- Agriculture, ECF, and manufacturing
- Taxes
- Agriculture. School system. Health care factories Prison system. *[sic]*
- Agriculture and Manufacturing
- Lack of focus given to other 'smaller' communities in Ellsworth County. Focus includes housing, jobs, childcare, etc.
- access to rail, water, health care, labor, lower cost of living
- Jobs and housing
- Agriculture and Cattle
- Manufacturing and agriculture
- Shopping local
- Uncertain
- Employment Opportunities, Affordable and Available Housing, Supply/Demand of goods and services
- need more retail choices
- Not sure what you are asking....
- Need more fast food restaurants, wish walmart hadn't left
- Ag
- Politicians and taxes
- Ag
- Ranching and Farming. Small business.
- Lack of housing; people can find jobs but no where decent to live.
- Agriculture and the Prison
- Housing/buildings/property, wages, taxes
- Supply/demand, wages
- Don't know
- population, education, interstate highway
- Not welcoming to new members of the community. Funding for current and new businesses Higher paying jobs
- Affordable
- manufacturing and agriculture
- good people who care about each other and most who shop mostly in the county understand it is important and vital to the economics of our area
- Jobs, taxes
- Agriculture, manufacturing
- Available work force, utility infrastructure, solid and diverse employers.
- Infrastructure, quality of life for younger people

#9: How far is your commute to work?

- Work from home (telecommute): 0.54%
- Work at home: 5.95%
- Less than 10 minutes: 40.54%
- 10 to 14 minutes: 5.41%
- 15 to 19 minutes: 4.86%
- 20 to 29 minutes: 4.32%
- 30 to 44 minutes: 4.86%
- 45 to 59 minutes: 2.16%
- 60 minutes or more: 1.08%
- Retired: 24.86%
- Other: 5.41%
  - farm/ranch
  - 2 minutes
  - I commute to different locations. 20 minutes, 45 minutes, 60 minutes
  - Statewide to less than 2 miles
  - Depends on the job location
  - Husband works *[sic]* I am a stay at home mom
  - Disabled
  - I work for a healthcare company that requires me to travel to Hays, Salina, and Manhatran *[sic]*
  - I farm/ranch within the community, but travel daily 35 miles for college.
  - Construction sites vary

#10: If there is a need for more opportunities for the agricultural economy of Ellsworth County, what are the strategies needing to be focused on in the future?

Question	Not Important	Moderately Important	Important	Very Important	Extremely Important	N/A
More livestock for feeding grain	9.62%	17.31%	38.46%	5.13%	12.18%	17.31%
New industries using grain in their manufacturing process (bio-plastics)	6.33%	10.76%	35.44%	15.19%	17.72%	14.56%
Greater effort towards exporting local grain to outside markets	0.00%	7.01%	38.22%	14.01%	29.30%	11.46%
Crop diversity (hemp, etc.)	5.73%	12.10%	33.76%	12.10%	24.84%	11.46%
Diversification of livestock types	8.28%	16.56%	40.76%	8.92%	12.10%	13.38%
Create farm to home operations (farmer's markets, Community-supported agriculture, On-farm stores)	3.16%	8.23%	39.24%	8.86%	31.01%	9.49%
Vineyards and wine making	31.25%	21.88%	22.50%	4.38%	8.13%	11.88%

- Other:
  - Regional Specialities *[sic]*, Branding, and Marketing
  - I have no opinion on this
  - encourgement *[sic]* of sustainable farming/ranching practices focused on long term land management
  - medical grade marijuana crops
  - Ethanol
  - Return to smaller family farms instead
  - I don't know what the Ellsworth County ag economy needs
  - I am not a farmer rancher so I have no opinion

#11: Which of these are a threat to agriculture in Ellsworth County?

Question	Not a Threat	Moderate Threat	Threat	Considerable Threat	Extreme Threat	N/A
County or city zoning	26.75%	16.56%	28.03%	5.73%	8.92%	14.01%
Commodity prices	1.27%	3.82%	37.58%	12.74%	33.12%	11.46%
Large corporate agriculture becoming more vertically integrated (owning the land, commodity all the way to the final product)	5.63%	11.25%	28.13%	12.50%	33.13%	9.38%
Foreign producers (Brazil, Mexico, China, etc.)	3.77%	5.03%	30.82%	15.09%	35.85%	9.43%
Political policies and actions	1.90%	5.70%	24.05%	13.92%	46.20%	8.23%
Eating practices changing (vegetarian, low carb, etc.)	24.36%	21.79%	33.33%	3.85%	8.33%	8.33%

- Other:
  - I am not qualified to answer this.
  - Climate change and its effects on growing seasons. Dwindlng *[sic]* water resources.
  - land management practices focused on short term gain vs long term
  - Environmental Changes
  - I am not involved much with this so my answer would not relate
  - These are are *[sic]* all too general to really effect us at a county level. Commodity and livestock markets are too broad and diverse to be effected much by a county size level. What I mean is this, wheat for example, the market is influenced from all kinds of factors that are generally speaking, worldwide issues. We could have a disaster on wheat in Ellsworth, and it wouldn't move the needle on the grain markets, because all our grain is just part of the conglomerate grain as a whole of the United Stated. Same for all commodity markets. Now, if we had a local ethanol plant that spurred demand at a local level for Sorghrum *[sic]* or corn, we as farmers could explore that market and maybe capitalize on a premium in less margin than the local Coop is taking. Same would be true if you had a local beef processing plant that was shopping more beef to slaughter, however, very few cattleman in this county finish their own beef. 99%+ of the cattle are shipped to feedyards *[sic]* out of county, or out of state to be finished, and then sold to packing plants. Most of those packing plants are owned and operated by huge corporations, some of which are own by foreign nations like Brazil. The level of in fair economics at play in the situation are way past control at a county level however, as our own federal government can not seem to be able to correct the manipulation in these markets due to monopolized market shares in the livestock industry. While it unfortunately effects *[sic]* so many citizens of this county, it is so far past our control. That is unless free to ranch in Ellsworth county is over road by poor economics of manipulated markets, and ranchers decide to not do it anymore.
  - I don't know. I'm not in agriculture.
  - Processing wheat to leave the goodness in it would be important. It is stripped of most of its nutrients
  - no opinion
  - Property tax increases; bonds should be sales tax funded vs. property -- farmers naturally own more than others, so not right to have them pay for things everyone is using. Would also capture tourism and people coming through -- i.e. Lake traffic in Wilson.
  - Not enough competition Example: To few meat packers control the market
  - Rising prices of fuel, equipment, chemical/fertilizer, young folks not

farming.

#12: Preserving existing agricultural land should be a planning priority for Ellsworth County.

- Yes: 75.15%
- No: 5.45%
- Not sure: 18.18%
- N/A 1.21%

#13: Should the County be more proactive in supporting existing industries and businesses in Ellsworth County?

- Yes: 82.63%
- No: 2.40%
- Not sure: 14.97%

#14: Should the County be more proactive in recruiting new industries and businesses to Ellsworth County?

- Yes: 82.63%
- No: 4.19%
- Not sure: 13.17%

#15: Which of the following services and/or businesses should be the focus of economic development activities in the future?

Service or Business	Not Important	Moderately Important	Important	Considerably Important	Very Important
Daycare - children	1.21%	8.48%	43.64%	13.33%	34.55%
Daycare - adults	9.32%	21.12%	48.45%	7.45%	14.91%
Grocery store	6.79%	9.26%	34.57%	8.64%	41.98%
Banking	18.01%	22.36%	34.78%	5.59%	19.25%
Tech support - computers	11.11%	12.35%	47.53%	13.58%	15.43%
Tourism	14.20%	20.37%	34.57%	12.35%	19.14%
Arts and culture	15.43%	24.07%	36.42%	10.49%	13.58%
Assisted living facilities	1.86%	10.56%	50.93%	18.01%	19.25%
Main Street retail	4.27%	4.27%	42.07%	17.07%	32.32%
Restaurants	1.22%	3.05%	37.20%	23.17%	35.37%
Medical facilities	3.07%	3.07%	26.99%	20.25%	47.24%
Recreational facilities	4.32%	9.88%	40.12%	20.99%	25.31%
Better broadband service	1.21%	6.06%	26.67%	17.58%	48.48%

- Other
  - rv park with accompanying facilities and amenities. vocational education center
  - More Townhouse Living For People Who Can Afford Quality Homes Without The Maintenance Tasks
  - Keeping schools open
  - City wide free wifi
  - Vyve can give residential as well as business has 2 government subsidized utilities in the county as in H&B and Wilson Telephone to the rural areas.
  - Attracting young families, diversity, opportunity for growth
  - New Build Moderate Priced Housing 90,000 - 160,000
  - Plumbers/HVAC, electricians, general construction. Travel plaza along busy 156 highway. Newer, modern hotel.

#16: Please rate the following governmental entities.

Entity	Poor	Improvement Needed	Average	Good	Excellent
County Board of Commissioners	5.66%	29.56%	44.03%	21.38%	2.52%
Local Fire Department	1.26%	5.66%	11.32%	38.99%	47.17%
Emergency Management	1.89%	6.92%	30.19%	49.06%	15.72%
Emergency Medical Services (EMS)	1.26%	6.29%	26.42%	54.09%	15.09%
Law Enforcement	2.48%	11.80%	31.68%	43.48%	13.04%
Education and Secondary Education	1.91%	8.92%	22.29%	51.59%	17.83%
Highways and roads	3.73%	16.77%	35.40%	45.34%	3.11%
County-wide economic development	4.38%	16.25%	35.63%	35.63%	11.25%

- Other
  - have not lived here long enough to observe fully
  - We need the City/County to be willing to give more incentives etc for Economic Development to use to attract new businesses/industries. We are lacking behind other communities.
  - Ellsworth is a Township county, but there does not seem to be much coordination between the county and townships.

#17: Please prioritize the following governmental entities and how important they are to Ellsworth County.

Entity	Not Important	Moderately Important	Important	Considerably Important	Very Important
Local Fire Department	0.61%	1.23%	13.50%	15.95%	71.78%
Emergency Management	1.23%	3.09%	35.19%	17.28%	45.68%
Emergency Medical Services (EMS)	0.62%	0.62%	13.58%	16.67%	71.60%
Law Enforcement	0.62%	1.24%	14.29%%	16.15%	70.81%
Elementary and Secondary Education	0.61%	0.61%	9.82%	18.40%	73.62%
Highways and roads	1.23%	1.23%	27.78%	21.60%	50.62%
County-wide economic development	2.48%	4.97%	31.68%	14.29%	49.07%

- Other
  - Communication between these entities is extremely important based on the 2020 happenings.

#18: County-wide Zoning: Are you aware that agriculture is exempt from zoning under the Statutes of the State of Kansas?

- Yes: 43.75%
- No: 56.25%
- Other
  - Believe this is false look at Lyon county zoning debacle
  - Now I am.

#19: Taxes

Question	Poor	Improvement Needed	Average	Good	Excellent	N/A
What value do you feel you get tor the property taxes you pay?	14.11%	19.63%	50.92%	9.20%	2.45%	3.68%
What value do you feel you get for the sales tax you pay?	16.67%	17.28%	53.09%	2.47%	9.26%	1.23%

#20: While the Comprehensive Plan does not incorporate zoning regulations, if a new plan is adopted, should Ellsworth County continue this process and eventually develop a new county-wide zoning regulation?

- Yes 8.59%
- No 22.09%
- Depends on the comprehensive plan comes out 46.63%
- Not sure 22.70%

#21: Please rate the following general services.

Services	Poor	Improvement Needed	Average	Good	Excellent
Daycare facilities - availability	2.56%	33.33%	41.67%	23.72%	1.28%
Medical facilities	1.86%	11.18%	28.57%	45.96%	15.53%
Senior living	2.52%	31.45%	39.62%	27.04%	1.89%
Nursing care facilities	6.33%	33.45%	37.97%	22.15%	2.53%

#22: Please prioritize the following general services by how important they are to Ellsworth County.

Service	Not Important	Moderately Important	Important	Considerably Important	Very Important
Daycare facilities	1.25%	2.50%	32.50%	12.50%	53.75%
Senior living	0.62%	3.73%	37.27%	19.25%	41.61%
Nursing care facilities	0.62%	1.24%	37.27%	18.63%	45.96%
Medical facilities	0.63%	0.63%	15.00%	16.88%	69.38%

- Other
  - Delivery services
  - We need to keep residents in Ellsworth County
  - Obgyn *[sic]* services with labor and delivery would be highly beneficial to young and growing families.
  - For jobs

#23: Please rate the following housing characteristics.

Question	Poor	Improvement Needed	Average	Good	Excellent
Housing affordability	9.68%	32.26%	41.29%	16.77%	2.58%
Available rental properties	19.35%	43.23%	32.90%	5.81%	1.94%
Units available for purchase	9.74%	33.21%	52.60%	6.49%	0.65%
Housing quality	8.39%	28.39%	58.71%	8.39%	0.65%
Utility affordability	4.43%	27.22%	53.80%	16.46%	0.63%
Quality of Internet and Broadband - rural areas	26.45%	32.26%	27.10%	10.97%	6.45%
Quality of Internet and Broadband - communities	9.55%	22.29%	35.03%	25.48%	10.19%
Water quality in rural areas	10.26%	19.23%	47.44%	22.44%	3.21%
Water availability in rural areas	6.54%	16.99%	49.67%	27.45%	2.61%

- Other
  - Ellsworth city water is extremely expensive compared to other towns within 100 miles.
  - Every question needs answered but if it does not apply to me my answe *[sic]* skews the answers of those that know. There needs to be an n/a option.
  - When we were looking for houses, we were shocked at the prices were higher than where we moved from, which was a highly desired area. Then we also were hit with double the property tax.
  - You can get it but will cost an arm and a leg.
  - Quality of rental properties needs improvement
  - The need for quality affordable housing has been in Ellsworth County for many years.

#24: Please prioritize (by how important) the following housing characteristics by how important they are to Ellsworth County.

Service or Business	Not Important	Moderately Important	Important	Considerably Important	Very Important
Housing affordability	0.63%	1.90%	42.41%	18.35%	39.24%
Housing quality	1.91%	1.91%	39.49%	22.93%	36.31%
Add more rental housing in the county	6.49%	16.88%	35.71%	16.88%	26.62%
Build more owner-occupied housing	5.92%	13.16%	42.76%	19.08%	22.37%
Build more Workforce Housing - either rental or owner-occupied	6.54%	16.34%	45.75%	14.38%	20.26%
Quality of Internet and Broadband	1.92%	2.56%	31.41%	19.87%	46.79%
Water quality in rural areas	0.64%	4.55%	35.26%	16.67%	46.79%
Water availability in rural areas	1.30%	4.55%	33.77%	15.58%	48.05%

- Other
  - The water is gross and always smells like bleach
  - We need more nice rentals that are not income based.

#25: In your vision for Ellsworth County, should the county regulate/control the amount of new housing/acreages in the rural parts of the county?

- Yes 16.25%
- No 63.75%
- Not sure 20.00%

#26: Does Ellsworth County need to develop specific policies to protect natural resources and open spaces of the county?

- Yes 49.28%
- No 29.38%
- Not sure 21.25%

#27: Which natural resources need the most attention in order to improve or maintain quality of life in Ellsworth County?

Natural Resource	Not important	Moderately Important	Important	Considerably Important	Very Important	N/A
Woodlands	12.18%	15.38%	38.46%	7.69%	19.23%	7.05%
Wetlands	8.44%	12.34%	41.56%	7.79%	23.38%	6.49%
Smoky Hills	7.28%	12.58%	37.75%	9.27%	21.19%	11.92%
Prairie	4.52%	5.81%	41.29%	11.61%	32.26%	4.52%
Open space	7.05%	7.05%	40.38%	10.26%	30.77%	4.49%
Park land	5.10%	8.28%	40.13%	14.65%	26.75%	5.10%
Rivers/streams	2.58%	3.87%	29.68%	8.39%	50.32%	5.16%
Lakes	1.92%	5.13%	26.28%	8.33%	53.21%	5.13%
Soils	3.21%	5.13%	28.21%	13.46%	42.95%	7.05%
Other	3.85%	5.13%	23.08%	5.13%	14.10%	48.72%

#28: How beneficial/important will the following be in the future to Ellsworth County? Rank them by how important they are to Ellsworth County.

Natural Resource	Not important	Moderately Important	Important	Very Important	Extremely Important
Agriculture - crops	0.67%	1.33%	22.67%	16.00%	62.00%
Agriculture - livestock (at current levels)	1.34%	1.34%	29.53%	19.46%	51.68%
Agriculture - livestock (increased number of animals and concentration)	11.72%	14.48%	35.86%	18.62%	22.07%
Diversifying crop production	2.05%	10.27%	39.04%	20.55%	31.51%
Oil and gas	5.48%	13.01%	40.41%	17.81%	26.71%
Medical facilities in and around Ellsworth County	0.68%	2.04%	17.01%	22.45%	61.22%
Recreational opportunities in and around Ellsworth County	4.05%	6.76%	38.51%	20.27%	33.11%
Supporting Main Street businesses and industries	1.35%	4.05%	30.41%	25.00%	41.89%
The natural environment	2.04%	8.84%	35.37%	14.97%	41.50%
Local education	1.34%	0.67%	16.11%	25.50%	59.06%
Renewable energy resources - wind	14.86%	16.22%	34.46%	15.54%	21.62%
Renewable energy - solar	13.51%	18.24%	32.43%	13.51%	25.00%
Youth returning to the county in the future	2.03%	2.03%	18.24%	27.03%	54.05%
Daycare	0.68%	3.38%	32.43%	25.68%	41.22%
Workforce housing	3.38%	7.43%	37.84%	23.65%	31.76%
Market rate housing	2.04%	9.52%	41.50%	21.77%	27.89%
Nursing home facilities	1.36%	2.72%	37.41%	25.17%	36.73%
Economic development	1.38%	4.83%	32.41%	26.21%	37.93%
Entrepreneurial programs	1.37%	13.70%	35.62%	25.34%	26.71%
Development of speculative buildings for future economic development opportunities	10.96%	19.18%	31.51%	17.81%	23.29%
Tourism	7.53%	17.12%	35.62%	19.86%	22.60%
Arts and cultural activities	10.96%	21.23%	37.67%	17.12%	15.75%
Addressing future drought conditions	2.04%	7.48%	36.73%	19.05%	37.41%
Skilled labor force	0.68%	1.36%	32.65%	31.29%	36.73%
Volunteers	0.69%	6.94%	41.67%	23.61%	29.86%
Protecting groundwater from pollution and/or depletion	0.68%	5.48%	26.03%	19.18%	51.37%
Long-term economic sustainability	0.68%	4.11%	26.03%	26.71%	45.89%
Long-term environmental sustainability	1.39%	8.33%	33.33%	15.28%	45.14%
Maintaining a high level of readiness toward hazards (tornadoes, blizzards, flooding, hazardous waste spills, etc.)	1.36%	6.12%	40.82%	18.37%	36.05%
Developing better leadership for the future	1.39%	5.56%	30.56%	24.31%	41.67%

- Other
  - We need residential recycling services!
  - Where I grew up in Missouri our rivers had canoeing and fishing and they were just as important as the lakes. Here all there is *[sic]* is the lake and nothing happens with the rivers. We have a decent river that could be utilized for canoeing and camping and family fun. Have shaded areas where people can take family

#29: When relation or friends come to visit you, where are the first 3 places you take them in order to show-off Ellsworth County?

- Kanopolis Lake, highway 140, cemeteries
- Restaurants Parks Golf course
- Czech Egg Library Midland Hotel
- Golf course, schools and swimming pool/splash pad
- not much to show in Ellsworth county. We show outside of ellsworth *[sic]*, Wilson lake, Lucas, Mushroom rock, Czech egg and Paden's.
- Downtown Ellsworth Rural Ellsworth county, ranch country Kanopolis Lake area
- a restaurant, shopping, beautiful rural sights
- My farms
- Downtown Main Street, museums and lakes
- Museum, downtown businesses, mushroom rock
- natural resources, museum, restaurants
- ECF, Downtown, Schools
- Downtown Prison Mushroom Park
- kanopolis *[sic]* state park, mushroom rock, and ft harker *[sic]*.
- Kanopolis Lake, Mushroom Rock, Downtown Ellsworth
- Lakes, Farris *[sic]* Caves, Ellsworth City
- mushroom park kanopolis lake
- Historical areas, Medical facilities, Downtown
- Museum Golf Course Downtown
- Wilson Lake Smoky Hill River Wilson Czech Egg
- Midland Hotel, Chec *[sic]* Egg, Wilson Res.
- Kanopolis lake, downtown stores, gambinos *[sic]*
- NA
- Kanopolis Lake, Ellsworth Main Street, Events such as Czech Fest, Cowtown Days, etc.
- Downtown Ellsworth, Mushroom Rock State Park, Kanapolis *[sic]* Lake
- Fort Harker, The flinthills *[sic]*, downtown
- There really isn't anything to "show-off". We usually go to another town or county for entertainment and restaurants.
- restaurants, down town...
- Park, restaurant, art gallery
- Gambinos - Italian Cheesesticks! Lake Ferris Caves or Mushroom Rock
- Farris *[sic]* caves, main street, rural areas
- Mushroom Rock, Krizek Park, N. Douglas Ave.
- Downtown, Prison, John Deere/Great Plains
- My property
- Midland Hotel and Barn, Eggs around town, Kansas Originals Market
- Downtown, fire station memorial, hospital
- Na *[sic]*
- pastures and creeks
- Mushroom Rocks, Ellsworth Museum, Ft Harker Museum
- Downtown Ellsworth, Wilson Lake, Robson's Card & Gift
- Prison, Downtown, Schools
- Downtown shops, museum, Ft. Harker
- Czech egg, Wilson State Lake, Made from Scratch
- The food establishments. The museum Wilson Lake
- Ellsworth County Museums Mushroom Rocks Ellsworth downtown
- Kanopolis Lake and wildlife area, restaurants, stores
- Kanopolis Lake and surrounding area
- Lakes, playgrounds and country side
- the lake
- chech *[sic]* egg, wilson *[sic]* lake
- The two lakes, local restaurants.
- Lakes and Parks, County Museums,
- open prairie, historical society. They mostly enjoy the "openness" of the area.
- Wilson Czech egg, Wilson Lake, Ellsworth City
- Downtown Farms Kanopolis/Wilson Lake
- Ellsworth County Museums Mushroom State Park Wilson State Park
- Sugar Shack (in season) Hattie Jo's Coffee Mushroom Rock
- Downtown parks
- Wilson lake, big egg, cemeteries
- to eat
- Ball fields, gymnasium, Wilson lake
- Mushroom Rock, Kannapolis *[sic]* Lake, Sugar Shack
- Annual festival around the county, Gambino's, stay home
- Mushroom Rocks Museum Lake drives
- Swimming pool, splash pad museum
- Mexican restaurant, Robson's Gifts, Antique shops

- Rock Town
- Midland hotel/coffee shop/golf course
- Down town local shops, and the quality of the store fronts In Ellsworth. Locally owned restaurants and the Kanopolis lake.
- Downtown Ellsworth
- Munchkinz, petal place, Hattie joes
- Gambino, Padens, and museum
- Museum, Soda shop in Wilson, Lake
- Mushroom rocks, Lake, Downtown
- Kanopolis lake Wilson lake Padens
- The lake
- Drive in, padens, Kanapolis lake
- They all live here
- Wind farm; Dirt roads tour: Fort Harker
- Bowling Alley Lake Wilson Lake Kanopolis
- It will be Hattie Jos and Munchkinz. Other than that, we go out of county to Fly Boys
- Cow town
- Main Street, Local Industries, lakes.
- Museums, lake, downtown area.
- Ferris *[sic]* Caves, Mushroom Rock and Kanopolis Lake
- Lake, restaraunts *[sic]*, golf course
- Main Street, Wilson Lake, not the school facilities (they are terrible)
- Mushroom Rock, Wilson Czech Egg, Back Country Roads (we have ALOT *[sic]* of beautiful countryside... a hidden treasure)
- Lakes Museum Parks
- Downtown Ellsworth, Mexican restaurant
- Downtown Ellsworth, Wilson Lake, Wind Tower Farms
- Wilson Lake, Midland Hotel, Ellsworth Co Museum
- I don't take them anywhere
- Big Egg. Wilson Lake
- Lakes, Restaurant or park
- Kanopolis Lake, Gambinos, local parks
- Wilson lake, Czech egg, Main Street
- Chech *[sic]* egg, wilson *[sic]* lake, farm grounds
- Largest Egg, Wilson Lake, Wilson Spray Park
- Wilson splash pad, Grandmas Soda Shop, Ellsworth pool or Park
- The midland hotel, the ellsworth *[sic]* golf course, the smoky hill river
- Kanopolis Lake, Mushroom Rock, Wilson lake
- The Egg. Midland. Opera House
- Wilson Lake, Midland Hotel and ?
- Downtown, Lake Kanopolis
- Museum Faris Caves Ellsworth swimming pool
- Main Street
- Restaurants Country side drive Mushroom rock
- None
- Mushroom Rock, Wilson Lake, Pretty Boy Floyd's (no longer open)
- Wilson Lake Kanopolis Lake
- Lakes, countryside, used to be restaurants
- Not much here to show, usually go out of town
- Church CSBank Kanopolis lake
- I don't *[sic]*
- ?
- Restaurants and Wilson Lake.
- Pretty boy Floyd's Golf course Drive in
- Czech Egg, Lake, River, school, parks
- Wilson Lake, Wilson Splash Pad, Czech Egg
- Mushroom Rock, Fort Harker, Museum stuff by railroad tracks
- I don't
- Church, resturants *[sic]*, shopping
- Splash pads restaurant towns
- Downtown, mushroom rocks and historical society buildings
- Museum complex, downtown shops, Kanopolis Lake
- A few shops down town That's about it.
- City of Wilson, Countryside, Ellsworth
- Lakes, Outdoor recreation,
- Mushroom Rock, Drive in the country and look at crop land and pasture, Kansas originals
- We mostly entertain at our house. Pretty Boy Floyd's was a unique and entertaining venue. It was a big loss.
- Lake "wilson" *[sic]* El dos de Ade Not much else to show off!

#30: What is the one thing you would change about Ellsworth County?

- educational and consumer opportunities
- Better jobs at Wilson
- Not sure
- Change is a scary thing if not done to the benefit of all its residents. Unfortunately the effects *[sic]* of change is generally not known until its to late.
- More dining choices.. .bar & grill, lunch spots
- the amount of chemical pesticide & herbicide that's used
- Less government intrusions like this on private citizens who just want to be left alone to do as they please on their own property without some government dogooder *[sic]* telling themyoure *[sic]* doing it wrong!
- More forward thinking in terms of the future of the city and surrounding areas
- Entertainment

- To have a better enforcement of properties in need of clean up, trash, codes being enforced such as vehicles parked in yards, etc.
- Not close to my kids.
- rural broadband internet is sorely missing
- Tourism Industry, Arts & Culture Improvements
- The ability to draw a stronger work force
- Stop dwelling on past history and develop a more modern approach. The signs recently put up on highway to denote downtown are new but look victorian *[sic]* and they should be modern in design.
- LESS government regulation. STOP trying to introduce more regulation such as county wide zoning, 30 by 30 plan ,etc.
- Apartment complexes
- Create more job opportunities in a wider range of career fields
- ?
- More restaurants
- road maintainance *[sic]* program
- Put COVID behind us and get back to normal. We have lost a number of our eating establishments along with a significant portion of our workforce. Now we need to move forward.
- Not sure.
- Not enough job diversity
- The "good old boy" mindset.
- ?
- More affordable housing
- More amenities...restaurant, recreation, shopping
- Too many people ignoring the danger of covid-19 *[sic]*.
- County Commission
- Property Taxes are to *[sic]* high
- I think the smaller towns are forgotten when it comes to any economic help regarding jobs and housing. We still exist, and pay our fair share of taxes too.
- Keep cleaning up run down property.
- Na *[sic]*
- Unk *[sic]*
- encourage a positive attitude
- Discord between Wilson people and Ellsworth people.
- We need a Recreation Center for kids with a gym
- Young volunteers who will step up!
- More restaurants
- Housing units
- Better broadband/internet service in rural areas
- reduce the push for economic growth, it needs to be sustainable, but growth will hinder the beauty of EW county's landscape.
- better broadband in the rural areas
- how money from economic development is distributed to all the towns
- Consolidate schools
- Everything that Saline County offers people to live in their County/town! Ellsworth Co. employees lots of of *[sic]* those folks but also wish to drive back to Salina to live.
- Better rural internet
- Create local higher education opportunities to improve local work force to improve employment pool.
- One county wide school
- Better capitalize on the cowtown *[sic]* history of Ellsworth.
- Nothing
- Let a younger group of open minded people begin to be heard and take leadership roles
- nothing
- Sports complex to host tournaments, which in turn bring people and revenue to Ellsworth. Also would provide the community a place to gather for events and exercise.
- Better Restaurants
- Prices keep going up due to buying power which is understandable but wages aren't going up
- More housing
- More variety of events and activities.
- Good sidewalks in the whole town
- Imperative that Ellsworth County has the courage to not rely on it's own echo chamber. Opening the door to competing ideas which challenge leadership to think, will impact Ellsworth County's future for the good.
- Need to work on attracting more youth into the county the average citizens age demographic is rising and youth bring in new ideas as well as growth for the one starting families.
- More restaurants and more jobs
- Speed limit needs lowered on E 3rd street
- Update the facilities
- Jobs
- Lower Taxes
- Indoor swimming pool facility that is affordable
- More activities for younger adults.
- Opportunity for young families to move here and want to be active here
- Affordable housing and make where the average family that have jobs and get into and not

- people that are the government supports
- The cliche and small minded attitude of a lot of the population here. Anti Covid, Rapid Trump supporting, confederate *[sic]* flag flying, in your face - everyone is stupid if they don't think exactly think like me and my friends does absolutely no good in attracting the right kind of people to this community. When leaders at the local bank gossip and attack the character of people who do business at said bank, just because they are competition with their husband and because their son is less athletic, and that bank employee is on the school board, head of PTO, etc, etc....it drives people from the community. If this community wants to thrive, it needs a more diverse population.
- I would leave it just the way it is
- Compared to other Kansas rural counties I think we are in fairly decent shape. But affordable child care and affordable housing would be a major consideration.
- Lack of recreational and sports facilities
- Taxes are to *[sic]* high
- Need more options in the grocery store
- Ellsworth county is a great place to live. Continue to promote new jobs and Recreation opportunities
- More Senior activities.
- Would like to see a new modern hotel
- Better school building facilities
- Lower taxes
- WE NEED MORE RESTAURANTS/EATERIES THAT HAVE SET HOURS OF OPERATION. TOO MANY WE HAVE NOW, HAVE HOURS THAT CHANGE SO MUCH, WE JUST QUIT USING THEM. AND...WHERE DOES A PERSON GET A REAL SIT-DOWN BREAKFAST, OTHER THAN OROZCOS? KUDOS TO OROZCOS, THEY DO A GREAT JOB!
- The division of people
- Housing
- Add County Administrator or increase professionalism by all 3 county commissioners. Need to run our county like a well-run large business.
- Too many chiefs and not enough Indians. Not a very strong volunteer base. Always the same folks volunteering. Transparency is needed when pursuing economic development rather than the secretive process such as the pursuit of the NHA.
- Less wind towers
- County wide relationship.
- entertainment for youth, although I cannot think of an appropriate solution
- Too many people on drugs
- Better recreation commission for youth activities
- Better roads, better support of small town law enforcement, and competitive wages
- Ellsworth residents think they are better then the remainder of the county. They have to be the boss and leaders. They will not work with the remainder of the county
- More jobs
- The school system is not as good as it used to be.
- Better mid level medical providers
- More skilled jobs
- Priority of Leadership classes
- More encouragement of shopping local
- More eating establishments and definitely more housing
- More diverse or specialized businesses bringing in more higher wage employment opportunities.
- Law enforcement are not on top of drug enforcement need to have more information to public they seem very secreteve *[sic]*
- Diversify age of leadership
- More places to eat, add stop lights on 156 between 14 and 40
- Better patrolling of state highway
- Nor *[sic]* as friendly and open as advertised
- Broadband service to rural parts of the county.
- Lack of quality housing. There are also programs for people in town to help them build, etc., but nothing for rural.
- School districts boarders *[sic]*
- Lack of available housing
- Lower taxes. Pay EMS staff better wages. (I am not involved just embarrassed how low wage they receive for what they do and know)
- economics
- Embrace and capitalize on our colorful history.
- More housing and jobs
- Try involving different people in position of volunteering and not going back to the same people all the time.
- Capitalize on tourism better - find a niche
- Need more choices of restaurants. We do not have a nice restaurant to take guests to have a nice set down meal. Food quality is poor and not dependable or service is very poor.
- needs breakfast place like I-Hop and another home made cooking restaurant that is in a
- reasonable price range; get more people to shop the Co businesses instead of go to Salina, GBend *[sic]*, and Wichita for products they need

- Commissioners
- More cooperation between government entities to combine services in order to decrease taxes and provide better services. Make leaders be more progressive in their thinking to change for the better.
- Our community parks are in need of updating.
- Housing. I've lived here for almost 5 years and was stuck in a rental we hated for 4 years. All rentals are over priced and not taken care of. Need more 3 bed 1-2 bath rentals that are not $900 per month. Both rental and purchased housing is too expensive. You get way more bang for your nick *[sic]* in Salina and Great Bend as far as housing.

#31: How important are the following cultural resources to you?

Natural Resource	Not important	Moderately Important	Important	Considerably Important	Very Important	N/A
Historic preservation, historic structures and museums	4.79%	11.64%	34.25%	10.96%	40.41%	1.37%
Libraries	4.11%	3.42%	44.52%	10.27%	36.99%	0.68%
Community events and festivals	2.05%	6.16%	40.41%	15.07%	35.62%	0.68%
Performing arts facilities	8.39%	20.98%	33.57%	12.59%	21.68%	2.80%
Art galleries, studios and related facilities	11.81%	25.00%	35.42%	12.50%	13.89%	1.39%
Community centers	2.05%	6.85%	41.10%	15.75%	32.88%	2.05%
Welcoming atmosphere for diverse cultures	4.86%	9.03%	31.94%	13.89%	36.81%	3.47%
Places of faith	6.85%	6.85%	23.97%	14.38%	43.84%	4.11%
Sports facilities and events	3.45%	12.41%	34.48%	17.93%	28.97%	2.76%

#32: As the county continues to change, maintaining Ellsworth County's rural character and small town feel is important to the future of Ellsworth County.

- Strongly agree: 49.32%
- Agree: 32.88%
- Neither agree nor disagree: 12.33%
- Disagree: 4.11%
- Strongly disagree: 1.37%
- N/A: 0.00%

#33: In your vision of Ellsworth County, should the county encourage more renewable energy sources such as solar and/or wind? (check math)

Energy Source	Do not encourage or allow	Allow but do not encourage	Allow in Ellsworth County	Encourage growth of these industries in Ellsworth County	Promote this type of energy
Wind turbines - commercial grade	13.61%	29.25%	25.17%	16.33%	19.73%
Wind turbines - individual use	7.53%	30.82%	31.51%	18.49%	15.75%
Solar panels - commercial grade	10.27%	20.55%	32.88%	21.23%	18.49%
Solar panels - individual use	2.76%	22.76%	35.17%	20.69%	23.45%
Geothermal energy	2.78%	24.31%	34.03%	22.92%	18.75%

Project Website

A special project website was established for the Ellsworth County comprehensive vision plan. The project website served as a means to notify people about the survey and to provide another medium for people to ask questions. In addition, the project website provided a location to upload links to parts of the comprehensive vision plan as they were completed and reviewed.

Town Hall Meetings

The town hall meetings, all held at the JH Robbins Memorial Library in Ellsworth, were a large part of the county-wide engagement process undertaken during the project timeline. The public meetings were held on:

- June 9, 2021 at 7:00 PM
- August 30, 2021 at 6:00 PM
- November 16th, 2021 at 6:00 PM

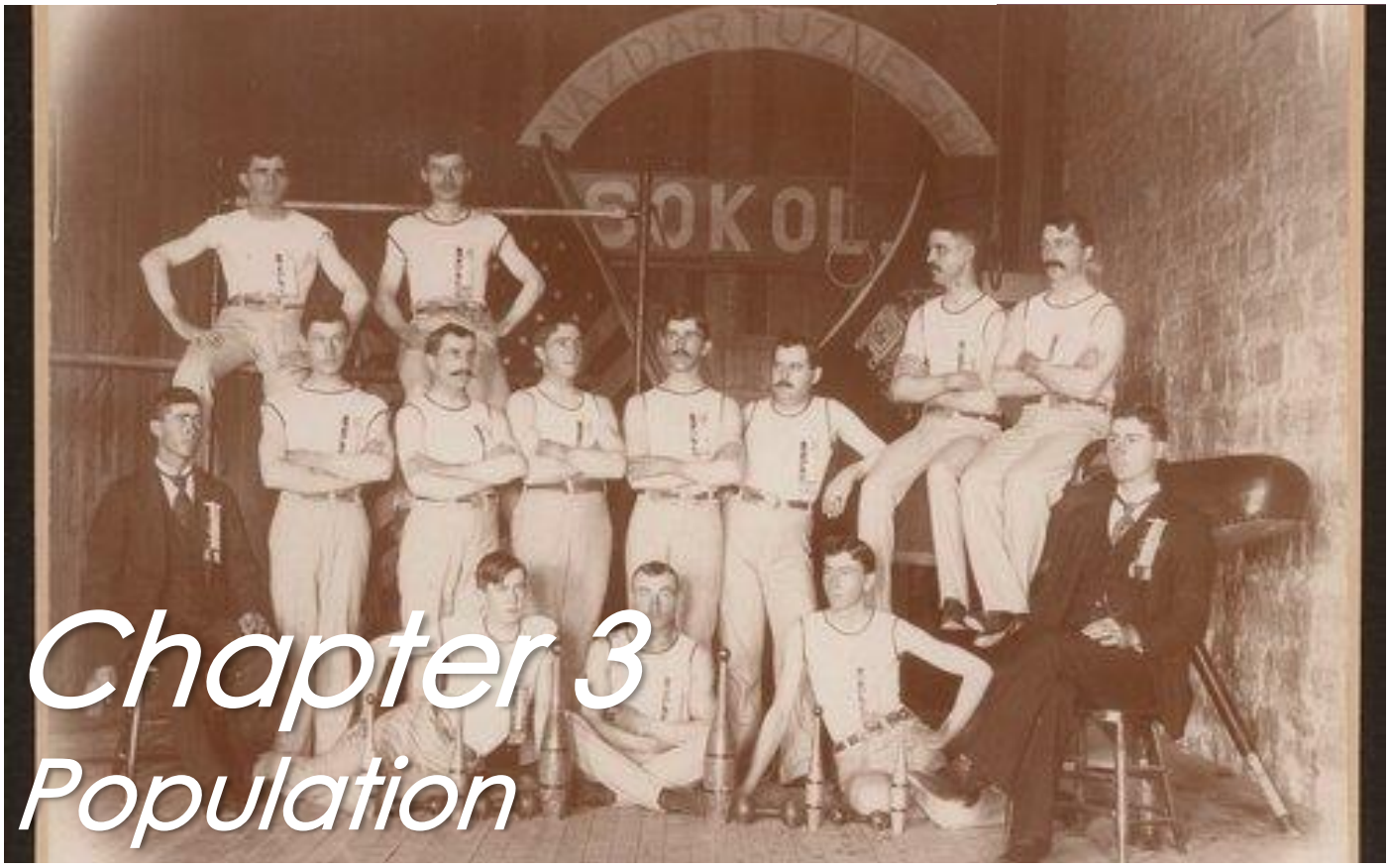
First Town Hall Meeting Results

The first town hall meeting was formatted so the planning team may gather strengths, weaknesses, opportunities, and threats identified by attendees. The following list describes what was discussed by attendees.

- Strengths
  - Location on two major highways (I-70 and KS-14)
  - Hospital in Ellsworth
  - Large number of non-profits
  - Rural quality of life
  - People returning or retiring to the county
  - Available, ample land and resources
  - Schools, education
  - Newspaper
  - Pride in communities and county
  - Available jobs
  - Abundance of old, historical housing
  - Correctional facility in Ellsworth
  - Stable employment opportunities
  - Two local communication companies
  - Ag land
  - Post rock, limestone (architecture, landscape/outcroppings)
  - History
  - Recreation (Wilson and Kanopolis Lake)
  - Childcare center
  - Splash pads
  - Airports/airport runway improvements
  - Active/engaged church community
  - Vibrant downtown (Ellsworth)
  - Comfort dog at the Lutheran Church in Ellsworth
  - Ellsworth County Economic

Development
- North Central Regional Planning Commission
- Influx of new businesses opening
- Low crime rate
- Law enforcement

- Weaknesses
  - Lack of willing sellers
  - Infrastructure gaps
  - "Help Wanted"
  - Small workforce
  - Housing (lack of upper, middle class housing)
  - Lack of accessible housing
  - High property taxes
  - Rural broadband in parts of county, especially AT&T
  - Male dominated workforce and industry
  - Lack of skilled trades such as plumbers and electricians
  - Not enough daycare services
  - There are busy highways, but no travel plazas to keep or attract truckers
  - No hotels
  - Not supporting local businesses
  - There are no youth activities outside of the summer months
  - Lack of specialized shopping such as shoes or sewing
  - Aging population
  - Lack of succession planning
  - Lack of elderly care resources and nursing homes
  - Homeschooling
  - Educator turnover
  - Not welcoming to newcomers
  - Business retention
- Opportunities
  - Travel plaza on the highways
  - Need for hotels, investors
  - Promoting local businesses and shop local programs
  - Businesses opportunities
  - Nursing home could be improved
  - Utilizing federal money/grants
  - Improve downtowns other than Ellsworth
  - Homeschooling
  - Influx of retirees
  - Highway access
  - Available land for growth
  - Utilities for growth
  - Growing employment
  - Housing assistance for rehab and investment
  - Post-pandemic economy
  - Smoky Hill River (expand usage)
  - Welcoming new residents
  - Sharing emergency services
- Threats
  - 30x30
  - Need workers, especially skilled professionals
  - Commodity prices
  - Brain drain and lack of professionals
  - Amazon and e-commerce
  - Other regional retail centers
  - Federal overreach (policy and regulations)
  - Homeschooling
  - Educator turnover
  - School consolidation
  - Correctional facility wages not keeping up with cost of living



Chapter 3
Population

Population

Population is the major catalyst driving everything in a municipality or a county including housing, local employment, economies, and fiscal stability. It is critical to understand how past population trends when applied to the future impact the overall area. Ellsworth County needs to understand where the county has been, where it is currently, and where it appears to be going.

Understanding the historic populations aids in identifying where the population may go in the future as well as determining potential impacts on future housing, retail, medical services/needs, employment, and educational needs within Ellsworth County. In addition, when future populations appear to be declining, it provides a benchmark from which to direct and gauge economic development activities.

Projections provide an estimate for the county to base future land use and development decisions. However, population projections are only estimates and unforeseen factors may affect projections significantly.

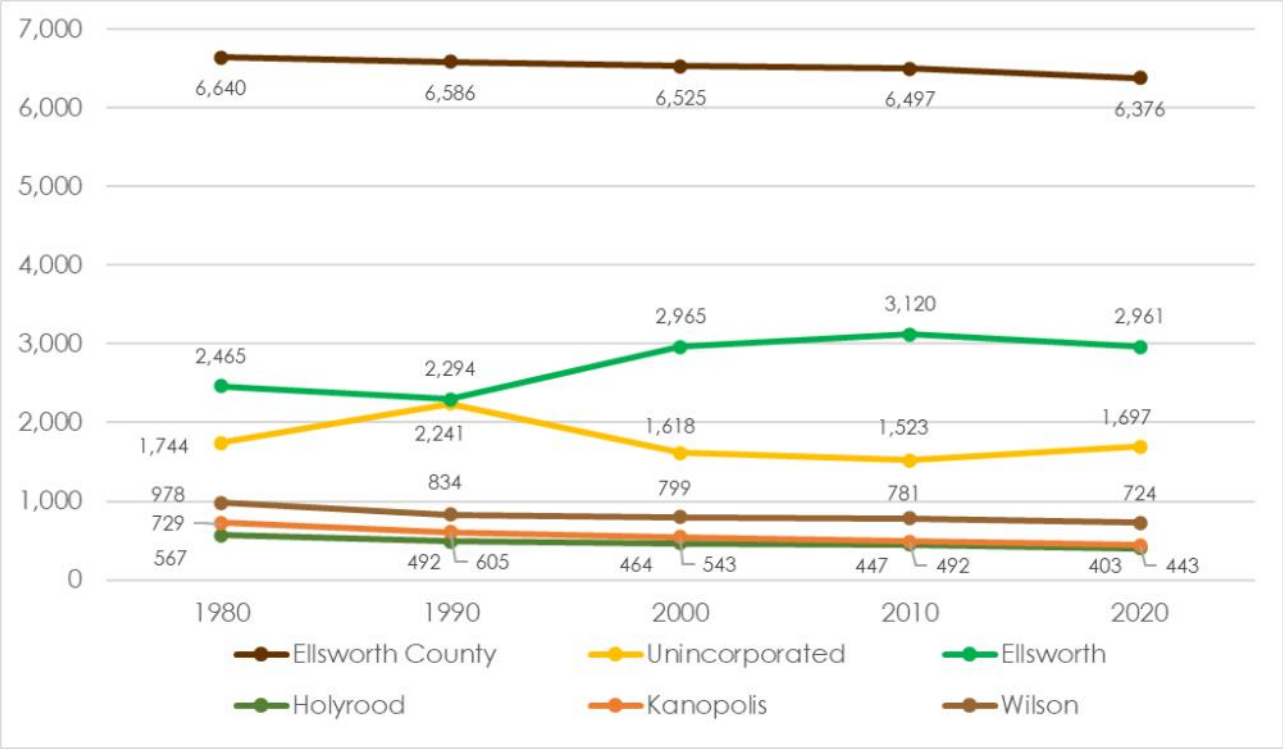
Population Trends and Analysis

Since 1980, Ellsworth County has seen very little population decline. Between then and 2020, the county's population has only decreased by 264 persons, or 3.9%. This is due in large part to an *increase* in population in its largest community, Ellsworth, between 1990 and 2020. This can likely be contributed to the completion of the Ellsworth Correctional Facility in 1990. The inmate population, as well as those who work at the correctional facility, are accounted for by the US Census in their total population numbers. The inmates being accounted for in the Census has helped keep the county population incredibly stable.

The county saw losses in the remainder of its communities and the unincorporated areas, though the declines were minimal. The largest decline seen in the county was with the community of Kanopolis. Kanopolis lost 286 people, or 39.2%, of its population over the 40-year time period. But overall, despite these losses and the ones in the other communities and unincorporated areas, the county saw a population that stayed relatively stable.

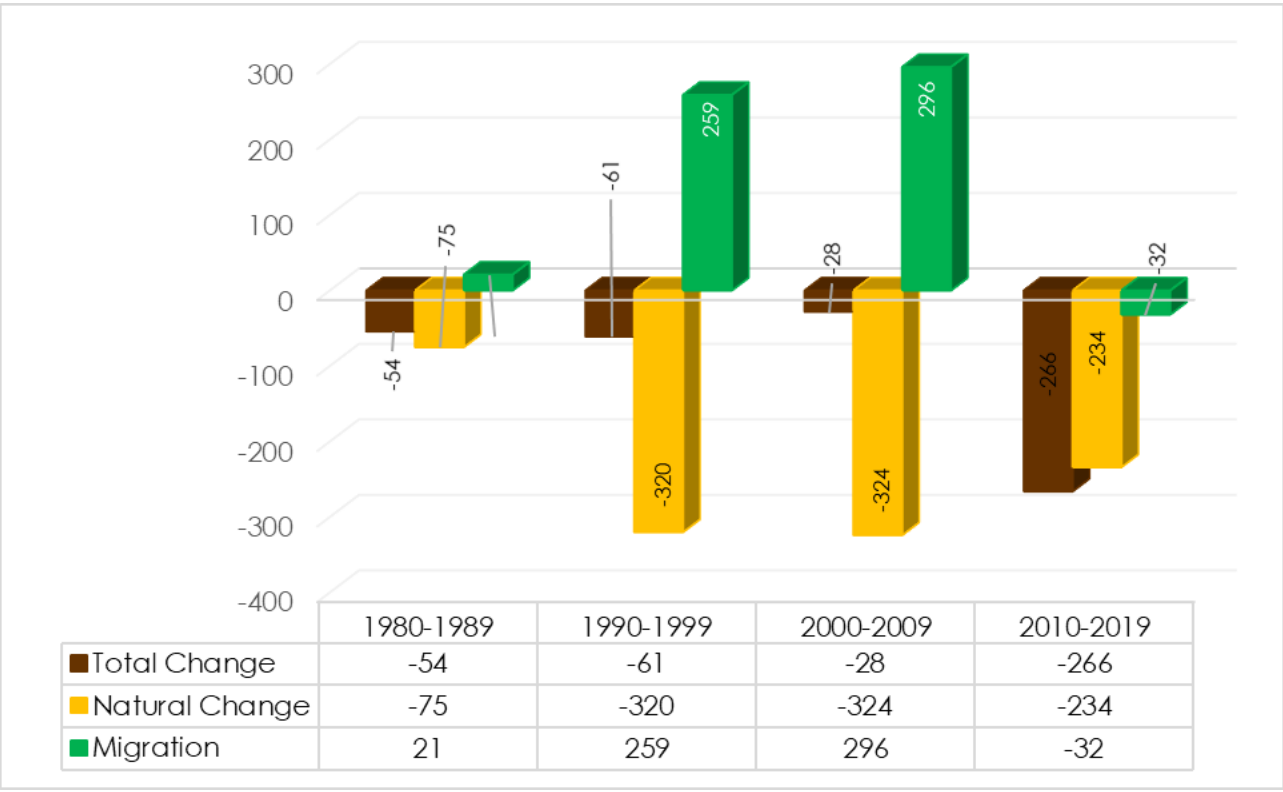
Population

FIGURE 3.1: POPULATION TRENDS AND ANALYSIS



Source: U.S. Census Bureau 1980-2020

FIGURE 3.2: MIGRATION ANALYSIS



	1980-1989	1990-1999	2000-2009	2010-2019
Total Change	-54	-61	-28	-266
Natural Change	-75	-320	-324	-234
Migration	21	259	296	-32

Source: U.S. Census Bureau 2000-2010, Kansas Vital Statistics

Migration Analysis is a tool which allows the county to understand critical dynamics of the population shifts. Total Migration indicates the population size migrating in or out of the county over a given period of time. Figure 3.2 indicates the overall population change countywide, as well as the two key components of population change - migration and natural change.

Figure 3.2 reflects data shown in Figure 3.1; the total change and natural changes were both negatives numbers throughout the time period. Significant migration into the county grew significantly over the 1990's and 2000's, which can likely be contributed to the correctional facility being constructed. The total change being negative in every decade can be contributed to more deaths than births occurring in the county. By the 2010's, the county began to experience negative migration along with a significant number of deaths; in every previous decade, Ellsworth County at least saw a positive number in the migration category.

Age Structure Analysis

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

Table 3.1 contains age groups by structure for Ellsworth County in 2010 and 2020. The examination of age structure provides an understanding of where some of the population shifts are occurring. These data allow for a better understanding of what could occur in the future regarding population shifts. Reviewing population in this manner permits a detailed analysis of which specific groups are moving in and out of the county, or passing away. Negative changes in a group indicate out-migration or a combination of out-migration and deaths.

Ellsworth County saw growth in five age groups. Both the 0-4 and 5-9 groups are usually an increase since these individuals were not alive for the 2010 Census. Other than these groups, the age groups that saw an increase were the 20-24, 30-34, and 45-54 year age groups. There was an increase of 795 persons in these five age groups; removing the 0-4 and 5-9 age groups makes the increase only 164 persons.

There were nine age groups from 2010 that declined by 2020. The group with the greatest loss was the 85 & older age group, which lost 442 persons. These losses can be attributed to two causes: 1) people moving on after 75 years to other communities and senior care facilities, or 2) a dying population base. The latter is likely the largest reason since between 2010 and 2020 there was a natural change in the county of –234 persons. The second largest loss came in the 55-64 age group; this age group is considered part of the senior population, thus it is fair to assume that these people also moved on to other communities to be closer to family or to downsize in their homes. Overall, Ellsworth County needs to determine what is driving the out-migration and focus some, not all, of its economic development activities and efforts on reversing this trend.

Median Age

Ellsworth County did not see a significant change in median age between 2000 and 2019; the median age stayed steadily in the low 40's, only going up from 41.8 to 42.1 over the time period. This increase equaled 0.71% in total, which is a marginal increase. The median increased steadily between 2000 and 2014, rising by 3.1 years. This number then declined over the next five years to the current number of 42.1.

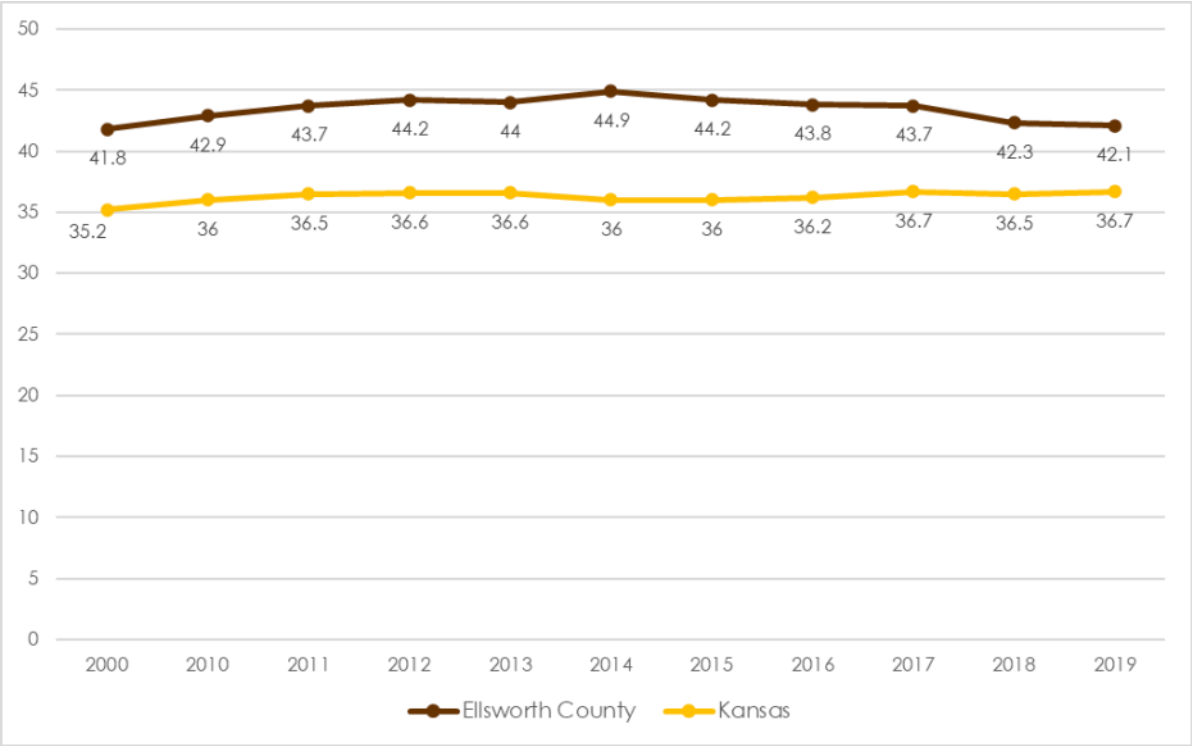
During the same period, Kansas also saw a marginal increase in median age, rising from 35.2 to 36.7, a minute increase of 0.42%. Kansas' median age is nearly six years lower than Ellsworth County's current rate. Comparatively, both the state and the county both saw nearly no change in the median age of its residents.

TABLE 3.1: AGE AND SEX CHARACTERISTICS

Age in 2010	Male and Female Populations			2010-2020	
	2010 population	Age in 2020	2019	Cohort Change	% Change
		0-4	325	325	
		5-9	306	306	
0-4	317	*10-14*	307	-10	-3.2%
5-9	324	*15-19*	311	-13	-4.0%
10-14	337	*20-24*	461	124	36.8%
15-19	421	*25-29*	404	-17	-4.0%
20-24	401	*30-34*	422	21	5.2%
25-29	440	*35-39*	394	-46	-10.5%
30-34	369	*40-44*	337	-32	-8.7%
35-44	778	*45-54*	797	19	2.4%
45-54	1,056	*55-64*	883	-173	-16.4%
55-64	829	*65-74*	675	-154	-18.6%
65-74	569	*75-84*	416	-153	-26.9%
75 & older	635	*85 & older*	193	-442	-69.6%
Total	6,476		6,231	-245	-3.8%

Source: U.S. Census Bureau 2010; ESRI Business Analyst 2020

FIGURE 3.3: MEDIAN AGE - 2000 TO 2019



Source: U.S. Census Bureau2000; American Community Survey 2010-2019

Dependency Ratio

Dependency ratios examine the portion of Ellsworth County's age groups historically dependent upon others for survival (those under 18 years and those 65 years and older) against the individuals in between. See the box below for details on calculating the ratio. The importance of this ratio focuses on the number of dependent persons and if there has there been enough employed persons in the county to support these populations as well as themselves.

Dependency Ratio

The dependency ratio examines the portion of a community's earnings that is spent supporting age groups typically and historically dependent on the incomes of others.

< 1: 1 Independent resident is able to support more than 1 Dependent resident

=1: 1 Independent resident able to support 1 Dependent resident

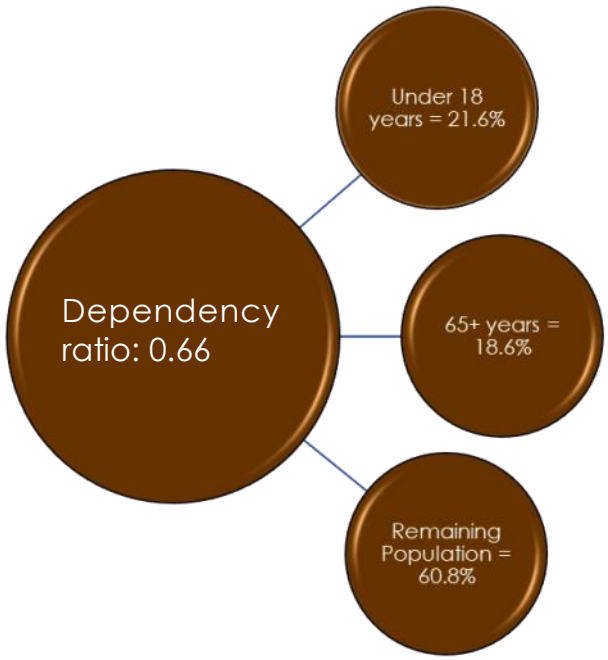
>1: 1 Independent resident able to support less than 1 Dependent resident

$$\frac{\%\text{18 years and younger} + \%\text{65 years and older}}{\%\text{ of remaining population}}$$

Figures 3.4 and 3.5 indicate the dependency ratios for 2010 and 2020 in Ellsworth County. The portion of persons less than 18 years of age decreased slightly by 1.6% between 2010 and 2020; while those aged 65 years and older increased by 2.0% between 2010 and 2020.

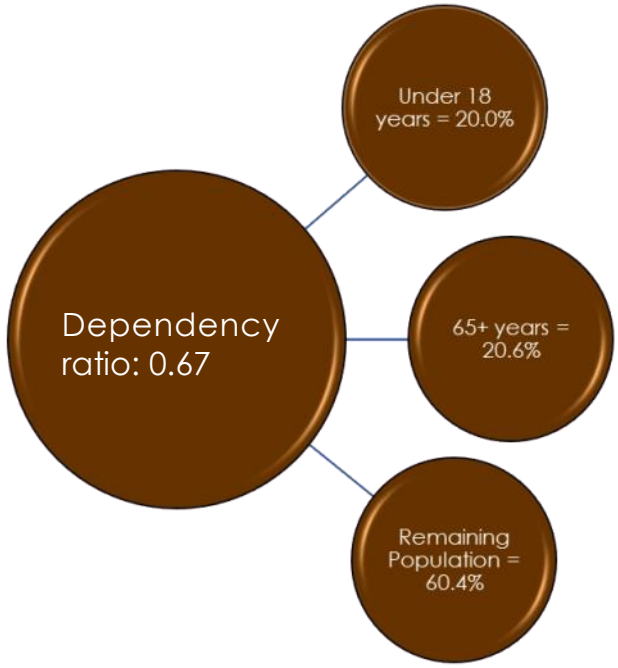
In 2010, Ellsworth County had a Dependency Ratio of 0.66; however, by 2020 the Ratio had increased minutely to 0.67. This is supported by the slight increase in the 65 years and older age group, plus the slight decrease in the under 18 years age group. However, both time periods saw a nearly identical dependency ratio. As both numbers are below 1, that means that a single independent resident in Ellsworth County is able to support more than one dependent resident.

FIGURE 3.4: DEPENDENCY RATIO - 2010



Source: American Community Survey - 2010

FIGURE 3.5: DEPENDENCY RATIO – 2020



Source: ESRI Business Analyst 2020

Population

TABLE 3.2: POPULATION BY ETHNICITY

	2010		2020		2010-2020	
Race	Number	% of total	Number	% of total	Net Change	% change
White Alone	5,733	88.2%	5,455	85.6%	278	4.8%
Black Alone	299	4.6%	254	4.0%	45	15.1%
American Indian Alone	32	0.5%	39	0.6%	-7	-21.9%
Asian Alone	24	0.4%	23	0.4%	1	4.2%
Pacific Islander Alone	0	0.0%	0	0.0%	0	-
Some other Race Alone	4	0.1%	8	0.1%	-4	-100.0%
Two or More Race	83	1.3%	232	3.6%	-149	-179.5%
Hispanic	322	5.0%	365	5.7%	-43	-13.4%

Source: U.S. Census 2010; ESRI Business Analyst 2020

ETHNICITY

Analyzing the ethnicities provide more detail as to the changes being seen in the county. Ethnicity is more than additional people living in the county since these new residents bring their own cultures and beliefs to the area; some of these may not mesh well with those already in place.

During the past decade, Ellsworth County has not seen a significant shift in the ethnicity within the county; some ethnic populations groups grew, but their population is significantly lower than the White population. Ellsworth County is predominantly White. The populations other than "White Alone" that grew were the "Black Alone" (15.1%) and the "Asian Alone" (4.2%).

POPULATION PROJECTIONS

Population projections are estimates based upon past and present circumstances. The use of population projections allows Ellsworth County to estimate the potential population in future years by looking at past trends. By scrutinizing population changes in this manner, the county will be able to develop a baseline of change from which future scenarios can be generated. A number of factors may affect projections positively or negatively.

At the present time, these projections are the best crystal ball Ellsworth County has for predicting future population changes. There are many methods to project the future population trends; the projection techniques used are intended to give Ellsworth County a broad overview of the possible population changes that could occur in the future.

TREND LINE ANALYSIS

Trend Line Analysis is a process of projecting future populations based upon changes during a specified period of time. In the analysis of Ellsworth County, four different trend lines were reviewed: 2010 to 2020, 2000 to 2020, 1990 to 2020, and 1970 to 2020. A review of these trend lines indicates Ellsworth County will see varied levels of population changes between now and 2050. The following projections summarize the decennial population for Ellsworth County through 2050.

SUMMARY OF POPULATION PROJECTIONS

Three population projection scenarios were selected and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series.

LOW = 2010 TO 2020

2020	6,376 persons
2030	6,257 persons
2040	6,141 persons
2050	6,026 persons

MEDIUM = 1990 TO 2020

2020	6,376 persons
2030	6,307 persons
2040	6,240 persons
2050	6,173 persons

HIGH = 1970 TO 2020

2020	6,376 persons
2030	6,423 persons
2040	6,470 persons
2050	6,518 persons

ELLSWORTH COUNTY TREND ANALYSIS

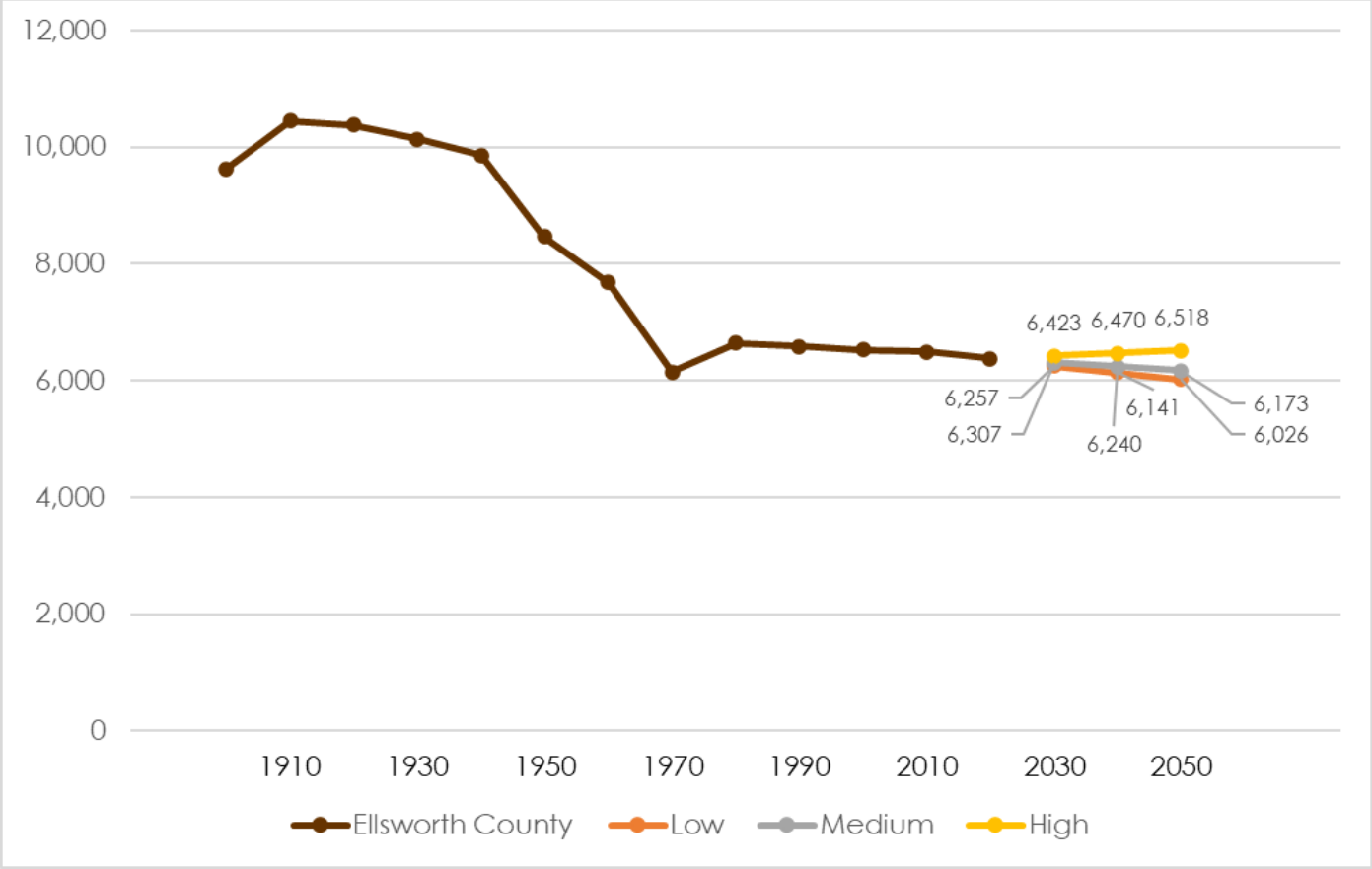
YEAR	2010 TO 2020
2020	6,376 persons
2030	6,257 persons
2040	6,141 persons
2050	6,026 persons

YEAR	1990 TO 2020
2020	6,376 persons
2030	6,307 persons
2040	6,240 persons
2050	6,173 persons

YEAR	2000 TO 2020
2020	6,376 persons
2030	6,303 persons
2040	6,230 persons
2050	6,159 persons

YEAR	1970 TO 2020
2020	6,376 persons
2030	6,423 persons
2040	6,470 persons
2050	6,518 persons

FIGURE 3.6: POPULATION AND PROJECTIONS



Source: US Census 1900 to 2010; ESRI Business Analyst 2020; Marvin Planning Consultants

Figure 3.6 reviews the population history of Ellsworth County between 1900 and 2020, and identifies the three population projection scenarios into the years 2030, 2040, and 2050. The low and medium series predict a decrease in population for Ellsworth County. The high series projects a slight increase by 2050.

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Chapter 4
Housing

Housing Profile

The Housing Profile identifies basic housing characteristics and conditions for Ellsworth County as of 2021. The primary goal of the housing profile is to allow the county to examine past and present conditions while identifying potential needs including provisions for safe, decent, sanitary, and affordable housing for every family and individual residing within the county. In the county, a large portion of the housing stock is located within the major community of Ellsworth.

Projecting future housing needs requires several factors to be considered. These factors include population change, household income, employment rates, land use patterns, and residents' attitudes.

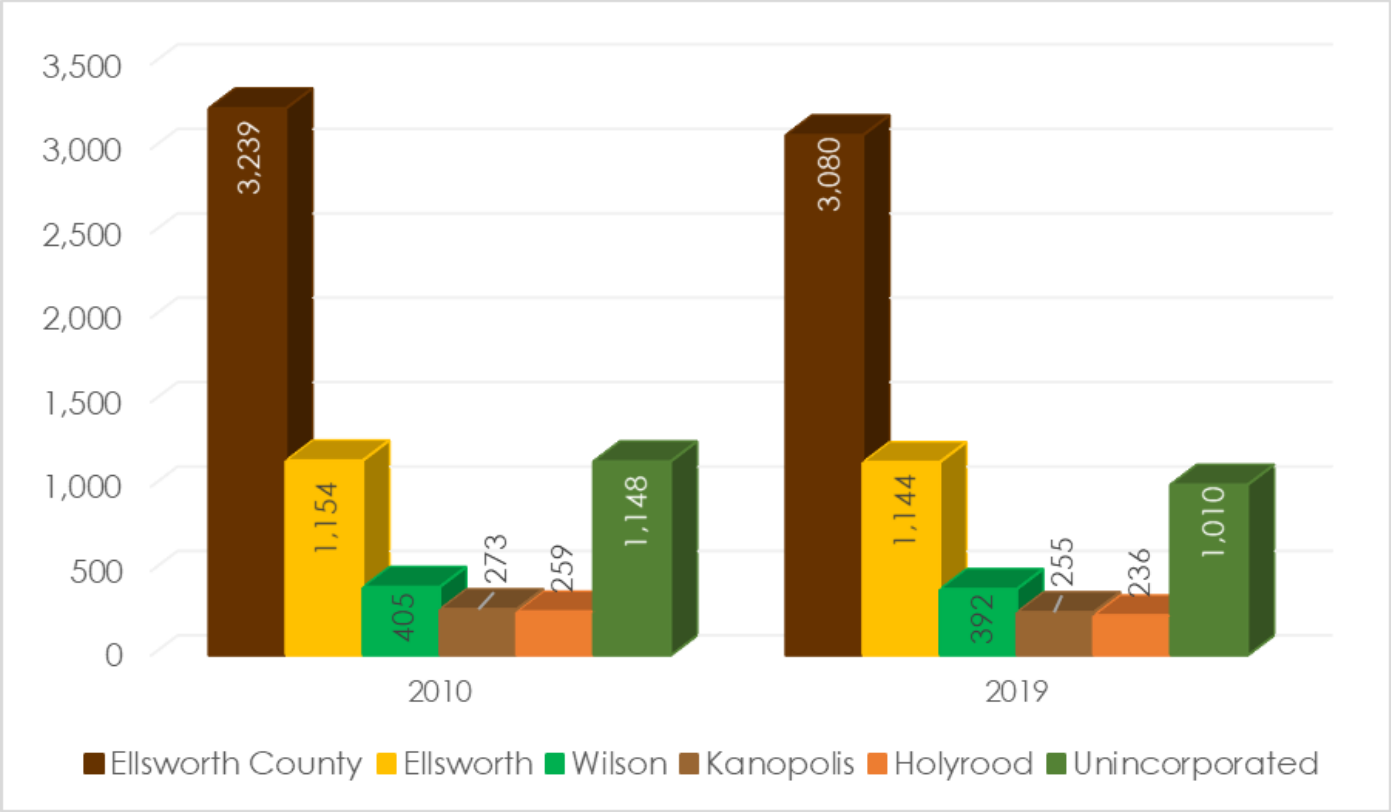
The following tables and figures provide the information to aid in determining future housing needs and develop policies designed to accomplish the housing goals for Ellsworth County.

Housing Stock Distribution

Figure 4.1 indicates the housing stock distribution of the communities and the unincorporated areas of Ellsworth County between 2010 and 2019.

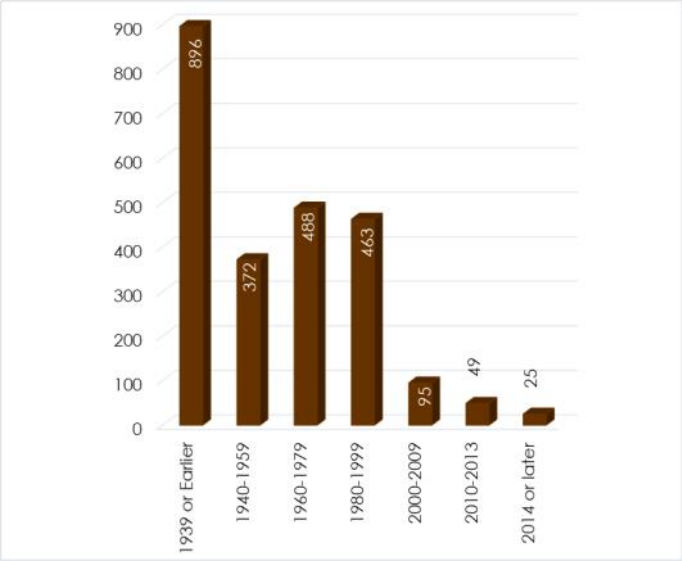
In 2010 there were a total of 3,239 housing units. Over one third of the housing stock, 35.6%, was located within Ellsworth, while another third of houses were located in the unincorporated areas of the unincorporated parts of the county. By 2019, the total number of housing units in Ellsworth County decreased slightly to 3,080. The unincorporated area and the City of Ellsworth both had approximately a third of the county houses. The number of houses in Ellsworth declined slightly, but not as much in comparison to the other communities in the county. The number of houses in the unincorporated areas decreased considerably over a nine year span.

FIGURE 4.1: HOUSING STOCK DISTRIBUTION 2019



Sources: American Community Survey 2010 and 2019

FIGURE 4.2: AGE OF EXISTING HOUSING STOCK ELLSWORTH COUNTY 2019



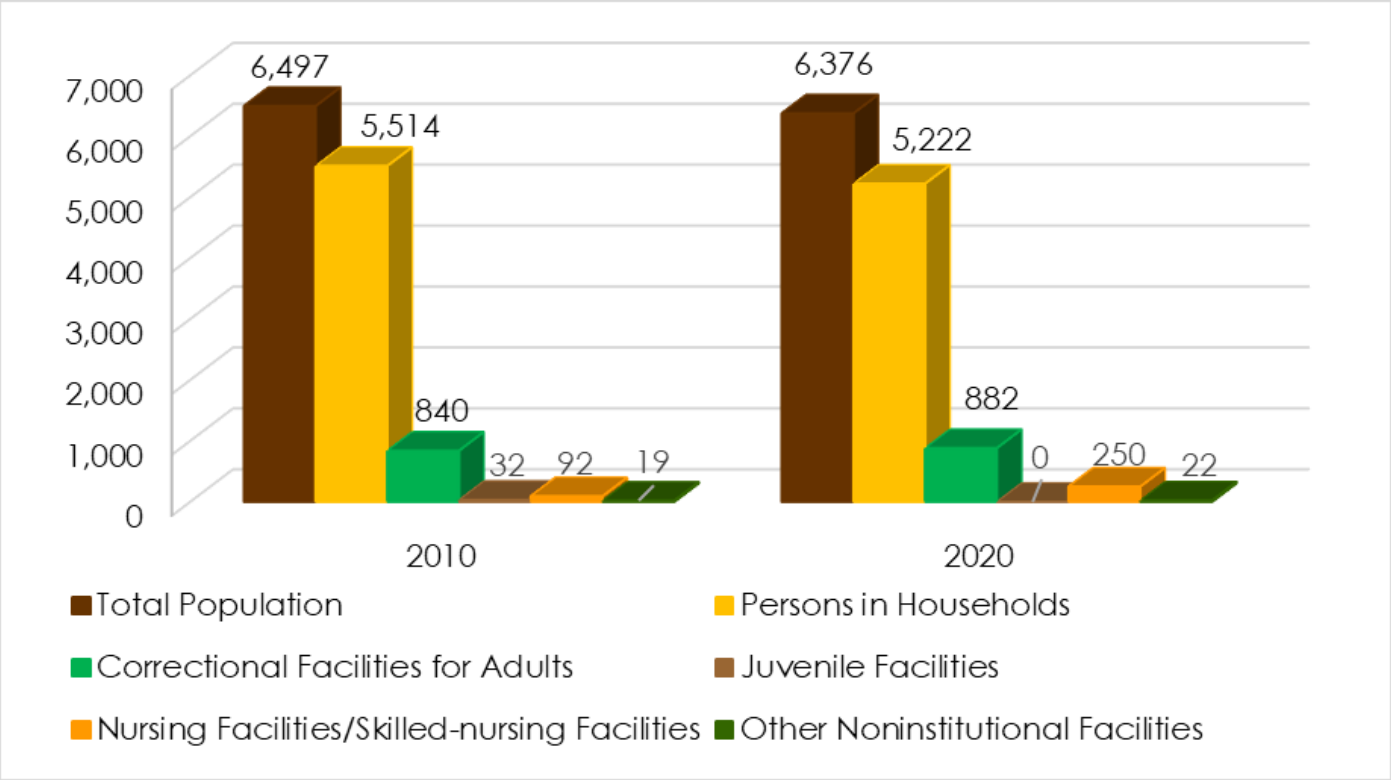
Sources: American Community Survey 2019

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

Figure 4.2 indicates over 800 homes, or roughly 30% of Ellsworth County's total housing units, were constructed prior to 1940. This statistic is county-wide, including each community (the vast majority are located in Ellsworth), and consists of older well-kept homes as well as homes likely in need of repair or demolition.

Ellsworth County saw significant construction activity after 1940 until 2000. The greatest number of homes constructed post 1940 was in the 20 years between 1980-1999, when 951 homes were constructed (31% of the total housing stock). There have been very little to no homes constructed post 2010. These data reflect the losses in population, seen earlier in chapter 3.

FIGURE 4.3: HOUSING POPULATIONS

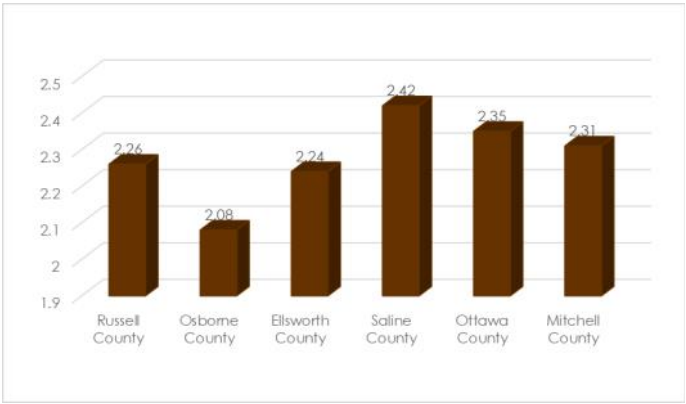


Sources: U.S. Census Bureau 2010-2020

PERSONS IN HOUSEHOLDS/GROUP QUARTERS

Persons living in households went from 5,514 in 2010 to 5,222 in 2020, a decrease of 292 persons. This is consistent with the decrease in population over that time. Figure 4.3 also examines the population in group quarters. These include the correctional facility, nursing homes, and what the Census defines as "Other Noninstitutional Facilities". The population in the correctional facility increased by 42 persons from 2010 to 2020, though the largest increase in the group quarter population came in the nursing home facility population (158 persons or an increase of 171.7%).

FIGURE 4.4: PERSONS PER HOUSEHOLD - 2019



Sources: American Community Survey 2019

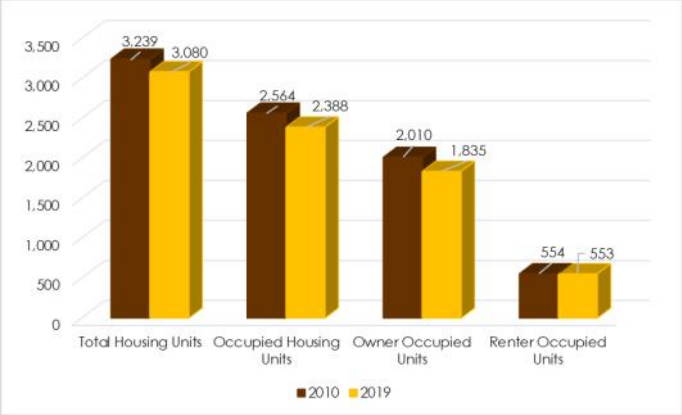
PERSONS PER HOUSEHOLD

Figure 4.4 examines the number of persons per household in Ellsworth County and the six surrounding counties. The persons per household in Ellsworth County in 2019 was 2.24. Ellsworth County had a lower person per household than all of the surrounding counties excluding Osborne County. As Osborne County has a lower population than Ellsworth County, this is not surprising.

The persons per household in the surrounding counties, in 2019, were:

- Russell County with 2.26 persons/household
- Osborne County with 2.08 persons/household
- Ellsworth county with 2.24 persons/household
- Saline County with 2.42 persons/household
- Ottawa County with 2.35 persons/household
- Mitchell County with 2.31 persons/household

Figure 4.5: Occupied vs. Renter Housing

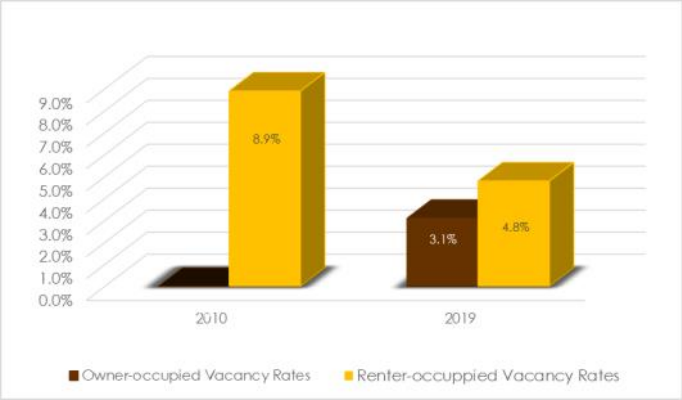


Sources: American Community Survey 2010-2019

Owner, Renter, and Vacancy Charaterstics

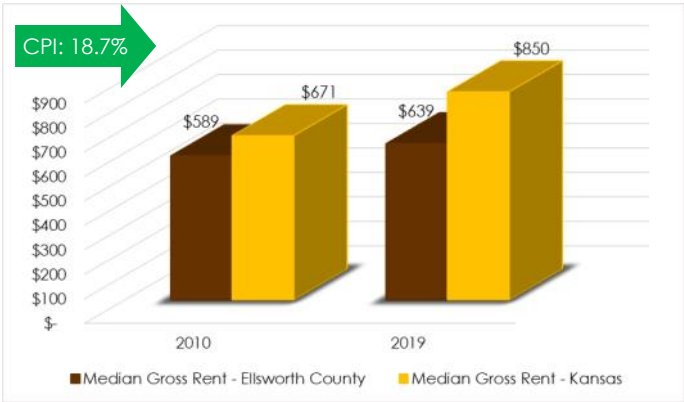
Total housing units did not decrease by many. Across each category, Ellsworth County saw decreases from 2010 to 2020. The most dramatic decrease was seen in owner occupied units, which decreased by 175 units or 8.7%. Figure 4.6 indicates vacancies, during the same time frame, increased for owner-occupied units by 3.1% while renter-occupied vacancy rates decreased by 4.1%.

Figure 4.6: Vacancy Rates by Type of Unit



Sources: American Community Survey 2010-2019

Figure 4.7: Median Gross Rent, Ellsworth County and Kansas



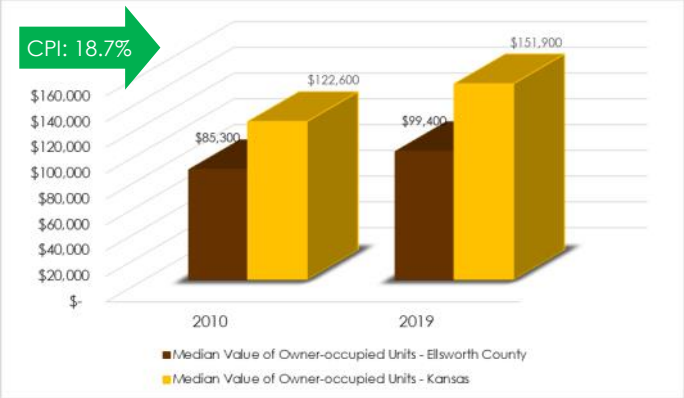
Sources: American Community Survey 2010-2019

Median Gross Rent

Median gross rent in Ellsworth County increased from $589 per month in 2010 to $639 per month in 2019 (8.5%), while during the same time period the state's median monthly gross rent increased by $179 or 26.7%. This indicates that the state has seen a gross rent increase at a rate of over three times higher than Ellsworth County's did over that same time period. Further, the county's median gross rent was around 87.8% of the state median gross rent in 2010 and 75.2% of the state median gross rent in 2019. Ellsworth County renters on average have had and continue to have a lower median gross rent than the state as a whole.

Comparing changes in monthly rents between 2010 and 2019 with the Consumer Price Index (CPI) enables the local housing market to be compared to national economic conditions. Inflation between 2010 and 2019 increased by 18.7%, indicating Ellsworth County's rents increased by less than half of the rate of inflation for the 9-year period. Thus on average, Ellsworth County tenants were paying considerably less in monthly rents in 2019, in terms of real dollars, than they were in 2010. Landlords were however making less on their investments by 2019.

FIGURE 4.8: MEDIAN VALUE OF OWNER-OCCUPIED UNITS, ELLSWORTH COUNTY AND KANSAS 2010-2019



Sources: American Community Survey 2010-2019

MEDIAN VALUE OF OWNER-OCCUPIED UNITS

The median value of owner-occupied housing units in Ellsworth County increased from $85,300 in 2010 to $99,400 in 2019 (16.5%). Over the same time period, the median value for owner-occupied housing units in Kansas increased from $122,600 to $151,900, a noticeable increase of 23.9%. In both 2010 and 2019, the median owner-occupied value of housing units was significantly less than the state of Kansas. Median values of owner-occupied units in Ellsworth County grew at a lesser rate than the rate of the state's median value of owner-occupied units. In comparison to the CPI, the median value of owner-occupied units in Ellsworth County increased at a rate of 88.2%. This indicates housing values in the county were worth slightly more in 2010 compared to 2019 in real dollars.

PERSONS PER HOUSEHOLD

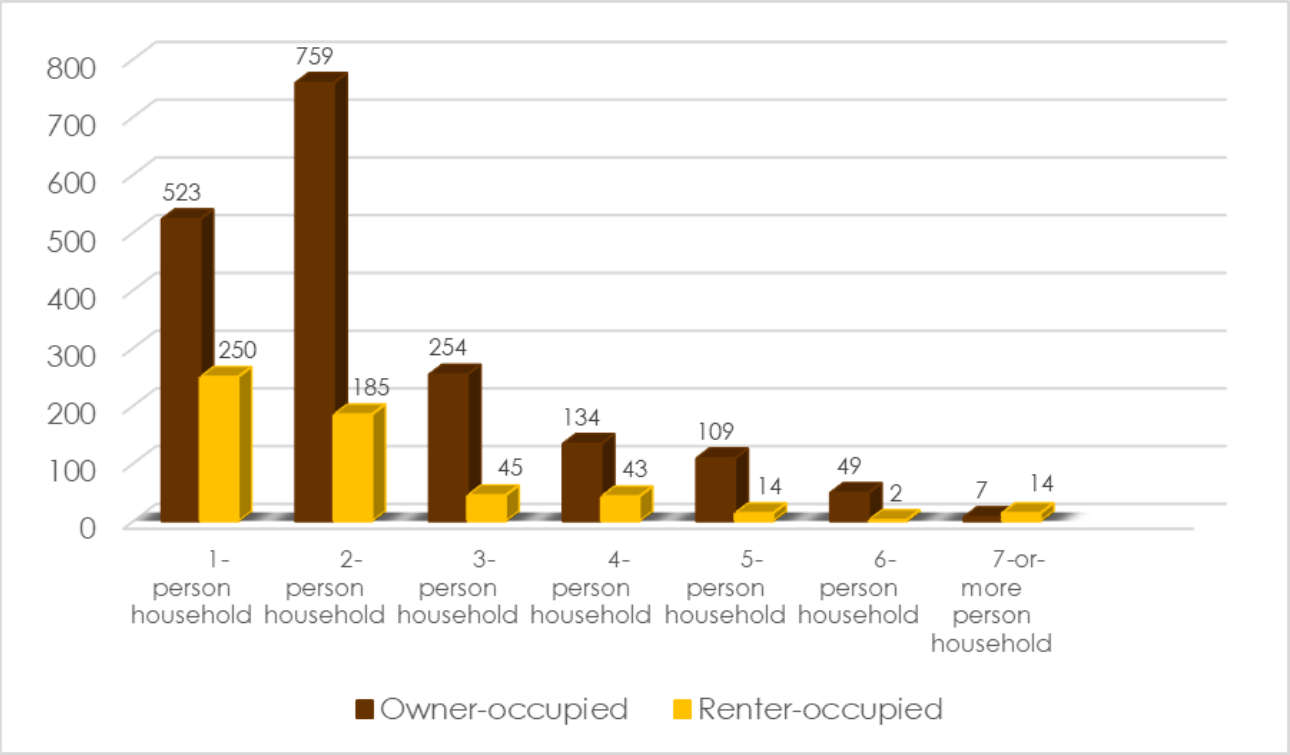
Figure 4.9 and 4.10 show tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Analyzing these data gives Ellsworth County the opportunity to determine where there may be a need for additional housing.

The largest group of owner-occupied housing in Ellsworth County was in the two-person household, with over 759 units or over 40% of the total owner-occupied units. By comparison, the largest household size for rentals was the single-person household with approximately 250 renter-occupied housing units, or 45.0% of the total renter-occupied units.

The age groups representing the largest home ownership group were those 65 to 74 years. This is consistent with the aging of the population in the county. 18.7% of residents living in owner-occupied housing units were between 65 to 74 years old in 2019. Householders 45 to 54 years old were second, with 17.8% living in owner-occupied households. Householders 15 to 24 and 25 to 34 were considerably lower than other categories, which is consistent with those data showing families are leaving and not coming back to the county.

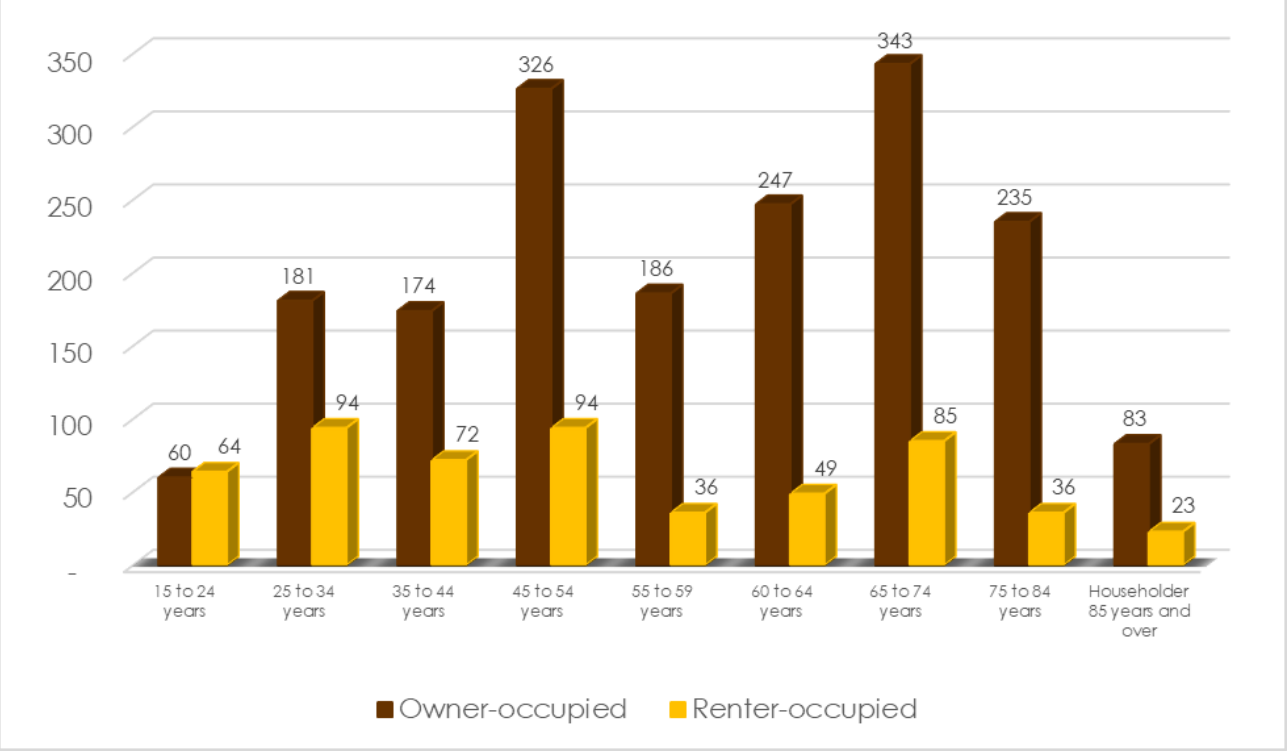
With regard to renter-occupied housing in Ellsworth County the largest renting age groups were 25 to 34 and 45 to 54, or 34.0% of all rental units. After that, 15.4% of rentals were lived in by householders age 65 to 74.

FIGURE 4.9: PERSONS BY HOUSEHOLD TYPE 2019



Sources: American Community Survey 2019

FIGURE 4.10: AGE BY HOUSEHOLD TYPE 2019



Sources: American Community Survey 2019

Substandard Housing

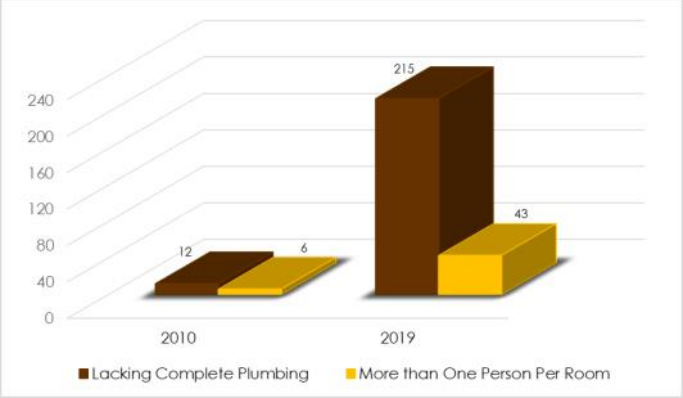
According to the U.S. Department of Housing and Urban Development (HUD) guidelines, housing units lacking complete plumbing or are overcrowded (more than one person per room) are considered substandard housing units. HUD defines a complete plumbing facility as hot and cold-piped water, a bathtub or shower, and a flush toilet; overcrowding is more than one person per room.

These criteria, when applied to Ellsworth County, show that only 18 units were substandard in 2010. This figure was reached by adding the number of housing units meeting one criterion to the number of housing units meeting the other criterion. In 2019, the total number of substandard housing units increased to 258 units. The primary contributing factor was units lacking complete plumbing, vastly outnumbering those units that were overcrowded.

As discussed earlier in this chapter, most of the housing stock in the county is located in Ellsworth. However, the county should still find a means to work with its other communities to identify these units and encourage their rehabilitation or demolition.

A comprehensive survey of the entire housing stock should be completed every five years to determine and identify the housing units that would benefit from remodeling or rehabilitation work. This process will help ensure that a county maintains a high quality of life for its residents through protecting the quality and quantity of its housing stock.

Figure 4.11: Substandard Housing Conditions



Sources: American Community Survey 2010-2019

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Chapter 5
Economy and Economic Development

Economic Profile

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

Income Statistics

Income statistics for households are important in determining the earning power of households in a county. The data shows household income levels for Ellsworth County in comparison to the state. These data were reviewed to determine whether households experienced income increases at a rate comparable to the State of Kansas and the Consumer Price Index (CPI).

Figure 5.1 indicates the number of households in each income range (from less than $10,000 and more than $200,000), for Ellsworth County in 2010 and 2019. In 2010, the greatest number of household income ranges reported in Ellsworth County was $50,000 to $74,999. This range accounted for 21.0% of all households. By 2019, the income range most reported stayed consistent at $50,000 to $74,999, or 19.0% of households

Typically, households earning less than $25,000 are the poorest of the poor in any community or county. In 2010, households earning less than $25,000 (a number than is more than half of the county's median household income) made up 27.7% of the county's households. By 2019, those households earning less than $25,000 decreased to 22.0%. This percentage is still too high, but is working in the proper direction. The level of change was based upon more households moving into the upper middle to higher income ranges; the ranges of $100,000 to $149,000 and $150,000 to $199,999 increased significantly from 2010 to 2019.

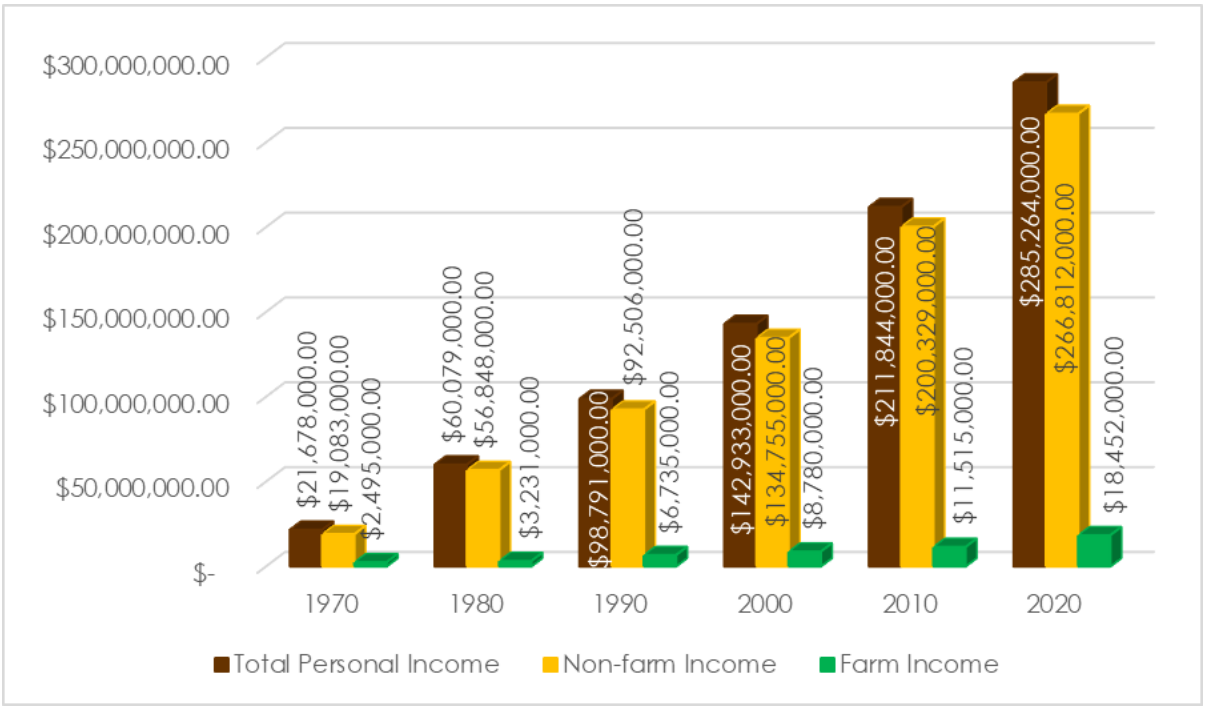
The median household income for Ellsworth County was $42,200 in 2010, which is (85.4%) of the state's median income of $49,424. By 2019, the median household income in Ellsworth County increased to $54,902, or an increase of 11.1%. As the Kansas median household income rose by $10,173 over the time period, the county's median household income rose at a rate three times higher than the state.

The CPI for this time period was 18.7%, which indicates median household incomes in Ellsworth County did exceed inflation. Therefore, households were earning more in real dollars in 2019 than they were in 2010.

FIGURE 5.1: HOUSEHOLD INCOME

Source: American Community Survey 2010-2019

FIGURE 5.2: INCOME BY SOURCE 1980 TO 2019



Source: BEA, Regional Economic Information System 1970-2020

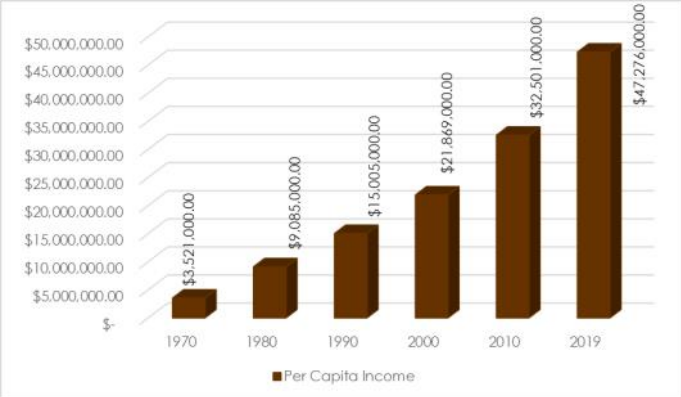
Income Source/Public Assistance

Figure 5.2 shows personal income by source for Ellsworth County. These data are compared to the CPI, in order to determine if increases are consistent with inflation and in terms of real dollars. Between 1970 and 2019, the CPI rose over 200%. Total Personal Income in Ellsworth County went up substantially by 2019. Total personal income for the county increased at over six times the rate of inflation over the 49 year period.

Non-farm and Farm Income

Non-farm income increased drastically from 2000 to 2019, an increase considerably higher than the CPI increase. Farm income increased by almost 1,298.2%, which was a rate six times higher than the CPI.

Figure 5.3: Per Capita Income



Source: BEA, Regional Economic Information System 1970-2020

Per Capita Income

Per Capita Income is basically all income earned divided by all residents. The per capita income in Ellsworth County increased at an incredibly high rate, six times higher than the CPI increased.

Another income source deserving examination is the amount of Transfer Payments to individuals in Ellsworth County from 1970 to 2020, which is provided in Table 5.1. In 1970, Total Transfer Payments to Ellsworth County added up to $2,743,000. By 2020, Total Transfer Payments to Ellsworth County showed an exorbitant increase to $75,878,000.

Transfer Payments

Government transfer payments span a wide range of uses and organizations. The funds for these payments also come from many different sources. However, the most common form of transfer payment is retirement and disability insurance benefits. These payments are made to those who qualify for OASDI benefits, railroad retirement and disability benefits, workers compensation programs and others.

Medical benefits are the second most common form of transfer payments. These types of benefits are government payments made through intermediaries to beneficiaries of medical care. Specifically, medical benefits come from either public assistance medical care or military medical insurance benefits. Public assistance is received by low-income individuals and payments come through the federally assisted, state-run Medicaid program and the Children's Health Insurance Program (CHIP). Military insurance is provided to military personnel through the TriCare Management Program.

Unemployment insurance is perhaps the third most common type of government transfer payments. This insurance includes state unemployment, federal unemployment and other organizations of unemployment compensation. Veterans' benefits are also a fairly common form of transfer payment. Transfer payments that surround these types of benefits are made up of veterans' pension and disability benefits, veterans' life insurance benefits and other types of veteran assistance.

Finally, education and training assistance is considered a type of government transfer payment. This government assistance consists of higher education student assistance, interest payments on student loans and state educational assistance. The combination of these benefits help individuals at all levels of education afford school. They also help people from all types of backgrounds. From individuals who may only need a loan to people who need more assistance, all people can be helped with these transfer payments.

The largest increase in transfer payments was in "Other transfer receipts of individuals from governments" with a total amount increasing annually. This may have been a skewed increase due to the fact it did not show up until 1990 and only had a total of $7,000 in its initial year. Many categories saw exorbitant increases that were not as skewed. The highest increase of non-skewed categories came in the "Medical Benefits". This category saw a major increase of 6,066% over the time period.

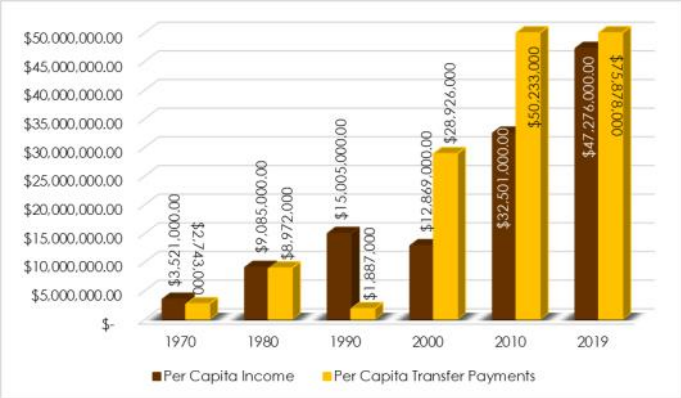
Actual expenditures in 2020 in some categories began showing a decrease from previous years. Overall, five of the categories shown had higher expenditures in 2010 versus 2020, while one category saw higher expenditures in 2000 versus 2020.

TABLE 5.1: TRANSFER PAYMENTS 1970-2020

Description	1970	1980	1990	2000	2010	2020	Change	Change/ Year
Personal current transfer receipts	2,743,000	8,972,000	18,887,000	28,926,000	50,233,000	75,878,000	2666.2%	53.3%
Current transfer receipts of individuals from governments	2,605,000	8,544,000	18,195,000	27,785,000	49,055,000	73,094,000	2705.9%	35.7%
Retirement and disability insurance benefits	1,636,000	5,659,000	10,122,000	13,721,000	19,699,000	25,693,000	1470.5%	22.1%
Social Security benefits	1,555,000	5,419,000	9,742,000	13,301,000	19,088,000	25,063,000	1511.8%	22.6%
Excluding Social Security benefits	81,000	240,000	380,000	420,000	611,000	630,000	677.8%	13.6%
Medical benefits	527,000	2,045,000	6,783,000	11,977,000	22,362,000	32,495,000	6066.0%	121.3%
Medicare benefits	478,000	1,803,000	47,391,000	7,101,000	16,090,000	22,718,000	4652.7%	93.1%
Public assistance medical care benefits	38,000	228,000	1,976,000	4,821,000	6,024,000	9,558,000	25052.6%	501.1%
Military medical insurance benefits	11,000	14,000	68,000	75,000	248,000	219,000	1890.9%	37.8%
Income maintenance benefits	108,000	278,000	507,000	970,000	2,850,000	3,001,000	2678.7%	53.6%
Supplemental Security Income (SSI) benefits	71,000	59,000	86,000	231,000	430,000	351,000	394.4%	7.9%
Earned Income Tax Credit (EITC)	(NA	65,000	156,000	379,000	849,000	781,000	1101.5%	22.0%
Supplemental Nutrition Assistance Program (SNAP)	3,000	38,000	113,000	106,000	420,000	569,000	18866.7%	377.3%
Other income maintenance benefits	34,000	116,000	152,000	236,000	1,151,000	1,300,000	3723.5%	74.5%
Unemployment insurance compensation	60,000	142,000	223,000	283,000	1,274,000	2,534,000	4123.3%	82.5%
State unemployment insurance compensation	50,000	118,000	220,000	280,000	1,256,000	2,526,000	4952.0%	99.0%
Excluding state unemployment insurance compensation	10,000	24,000	3,000	3,000	18,000	8,000	-20.0%	-0.4%
Veterans' benefits	245,000	333,000	401,000	427,000	1,036,000	2,839,000	1058.8%	21.2%
Education and training assistance	29,000	87,000	152,000	366,000	327,000	312,000	975.9%	19.5%
Other transfer receipts of individuals from governments	0	0	7,000	21,000	1,507,000	6,220,000	88757.1%	1775.1%
Current transfer receipts of nonprofit institutions	73,000	244,000	278,000	481,000	686,000	2,233,000	2958.9%	59.2%
Current transfer receipts of individuals from businesses	0	65,000	156,000	412,000	2,509,000	551,000	747.7%	15.0%

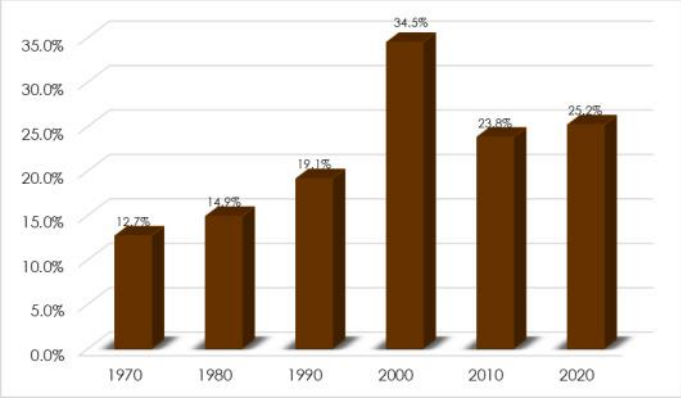
Source: BEA, Regional Economic Information System 1970-2020

FIGURE 5.4: TRANSFER PAYMENTS VS PER CAPITA



Source: BEA, Regional Economic Information System, 2019

FIGURE 5.5: TRANSFER PAYMENTS PER CAPITA/PER CAPITA INCOME

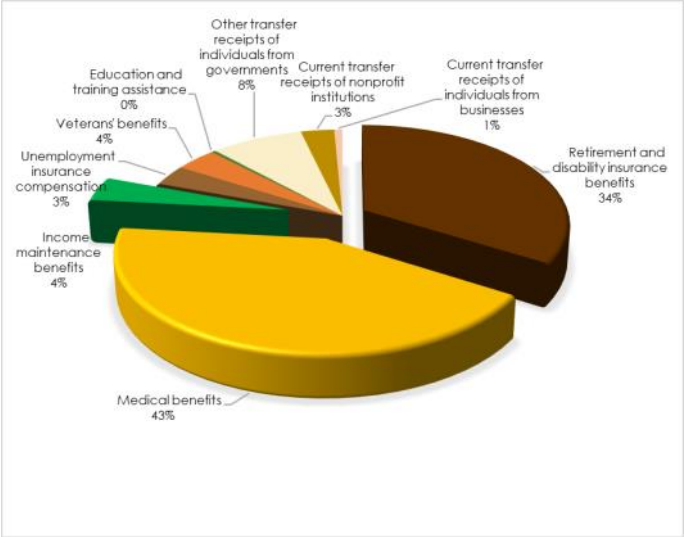


BEA, Regional Economic Information System, 2019

The rise in transfer payments per capita between 1970 and 2020 indicates payments increased significantly to individuals in Ellsworth County, by over 2,666.2% in 50 years. Transfer payments, as a proportion of per capita income, increased at a much lower rate between 1970 and 2020, though they did rise a considerable amount. There was a major spike in 2000, at which point the proportion of transfer payments out of per capita income rose to 34.5%. In 1970, transfer payments comprised 12.7% of total per capita income, and in 2020, transfer payments were 25.2% of total per capita income, which is an annual increase of .25%.

As seen in Figure 5.6, the majority of the transfer payments are in the form of Medical (mostly in Public Assistance Medial Care Benefits) and Retirement Benefits; therefore, the aging population is having a major impact on the economic stability of Ellsworth County. Economic development efforts should work on a dual approach to the future. One direction should focus on retiree retention, attraction, and the necessary amenities; while the second needs to focus on youth retention and in-migration.

FIGURE 5.6: TRANSFER PAYMENTS BREAKDOWN



BEA, Regional Economic Information System, 2019

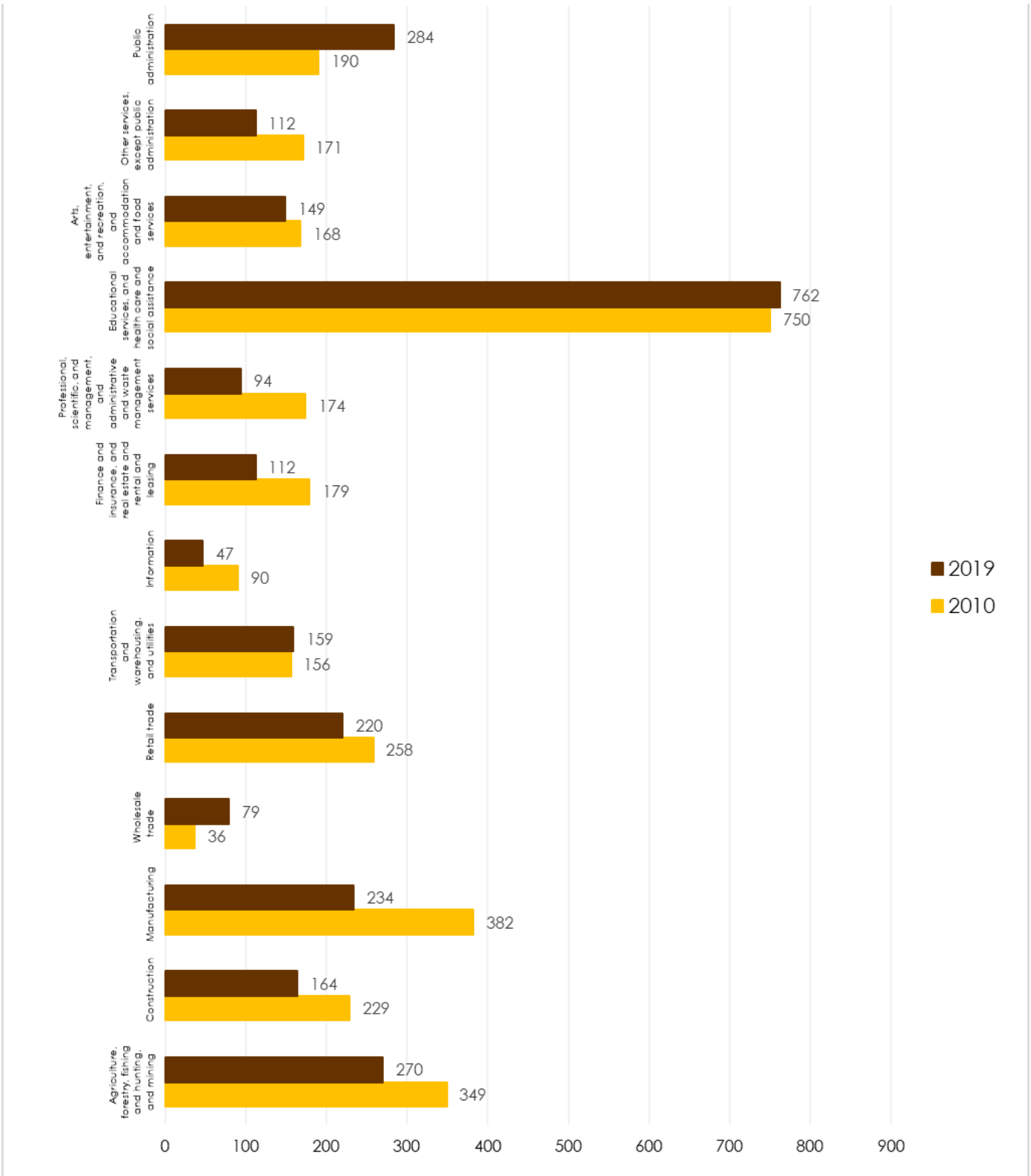
INDUSTRY EMPLOYMENT

Employment by industry data assists a county in understanding the key components of their labor force. This section indicates the type of industries, as well as an identification of particular occupations employing residents. Figure 5.7 indicates employment size by industry for Ellsworth County for 2010 and 2019 (these data indicate the types of jobs residents have, not the number of jobs locally).

The employment sector with the most employees in 2010 was education, health, and social services. This sector employed around 750 people (23.9%) of the total employed residents in 2010. In 2019, the largest employment sector was still educational, health, and social services with about 762 employees or 28.4% of the total. By 2019, the overall top five industries in Ellsworth County were as follows:

INDUSTRY	*PEOPLE*
•Educational, health, and social services	762
•Public Administration	284
•Agriculture, forestry, fishing and hunting, and mining	270
•Manufacturing	234
•Retail Trade	220
•Construction	164

FIGURE 5.7: EMPLOYMENT BY INDUSTRY (NUMBERS)



Source: American Community Survey 2010-2019

Regional Basic/Non-Basic Analysis

The following data examine five occupational areas established by the U.S. Census Bureau to evaluate trends in employment and the area economy. Basic employment and non-basic employment are defined as follows:

Basic employment

Basic employment is business activity providing services primarily outside the area through the sale of goods and services, the revenues of which are directed to the local area in the form of wages

Non-Basic employment

Non-Basic employment is business activity providing services primarily within the local area through the sale of goods and services, and the revenues of such sales re-circulate within the community in the form of wages and expenditures

In order to establish a number of basic jobs, a comparative segment or entity must be selected. For purposes of this analysis, the state of Kansas will be used. This allows the analysis to establish where Ellsworth County is seeing exports from the state as a whole.

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

- Managerial business, science, and arts occupations;
- Service occupations;
- Sales and office occupations;
- Natural resources, construction, and maintenance occupations, and;
- Production, transportation, and material moving occupations

A concept directly related to the basic/non-basic analysis is the base multiplier. The base multiplier is a number which represents how many non-basic jobs are supported by each basic job. A high base multiplier means that the loss of one basic job will have a large potential impact on the local economy if changes in employment occur. The rationale behind this analysis is that if basic jobs bring new money into a local economy, that money becomes the wages for other workers in the economy. Therefore, as more money is brought in by basic jobs, more non-basic jobs are created.

Basic Employment

The occupation categories are compared to the same categories for the state to find where Ellsworth County's percentage exceeds the state's percentage. When the percentage exceeds the state's, there is basic employment. Table 5.2 indicates Ellsworth County has exports in two of the occupational categories, these are:

- Service occupations, and;
- Natural resources, construction and maintenance occupations.

Having basic employment in two of the five categories represents a very unbalanced economy in Ellsworth County. Both should be stronger. In addition, if the county were to bring the other two categories up to being basic, the local economy would begin to be balanced and would be able to weather smaller to average economic swings. As it stands, Ellsworth is not able to weather smaller or average economic swings.

Overall, 2.7% of the employment base in Ellsworth County is tied to the exportation of goods or services. The county needs to continually work on their business retention and expansion process in order to make these employers stay in Ellsworth County, and also to increase the other three categories.

Base Multiplier

The information in Table 5.2 shows Ellsworth County has a base multiplier of 2.7, which means for every job considered to be basic, 2.7 other jobs in the county are supported and/or impacted. This is illustrated by comparing the basic and non-basic percentages against each other.

This indicates for every job tied to exportation of goods or services, there are 2.7 jobs created/ supported by the dollars coming into the community. Therefore, if Ellsworth County lost just one of the jobs tied to exports then there is the potential to lose approximately 2.7 jobs from the non-basic employment side.

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

to different employers. It is critical for a county to determine their future vision for business and industry and work towards that end. As previously mentioned it is also critical to diligently work towards a successful business retention and expansion program to support those employers already located in the county. Some counties become too focused on attracting the next big catch and forget about the opportunities existing employers can offer through expansion of their operations.

TABLE 5.2: BASIC/NON-BASIC BY OCCUPATIONS - 2019

County	Management business, science, and arts occupations	Service occupations	Sales and office occupations	Natural Resources, construction and maintenance occupations	Production, transportation, and material moving occupations	Base Multiplier
Lincoln	35.6%	15.0%	20.8%	11.3%	17.3%	8.6
Russell	31.5%	21.4%	19.7%	8.1%	19.4%	3.2
McPherson	35.5%	18.0%	17.6%	9.4%	19.6%	4.3
Ellsworth	32.1%	24.6%	18.2%	10.9%	14.2%	2.7
Saline	35.1%	17.1%	21.1%	7.6%	19.0%	8.9
Barton	31.3%	19.0%	21.6%	12.6%	15.5%	8.0
Rice	37.4%	17.0%	15.5%	15.7%	14.4%	3.4
Kansas	38.6%	16.6%	20.7%	9.5%	14.6%	NA

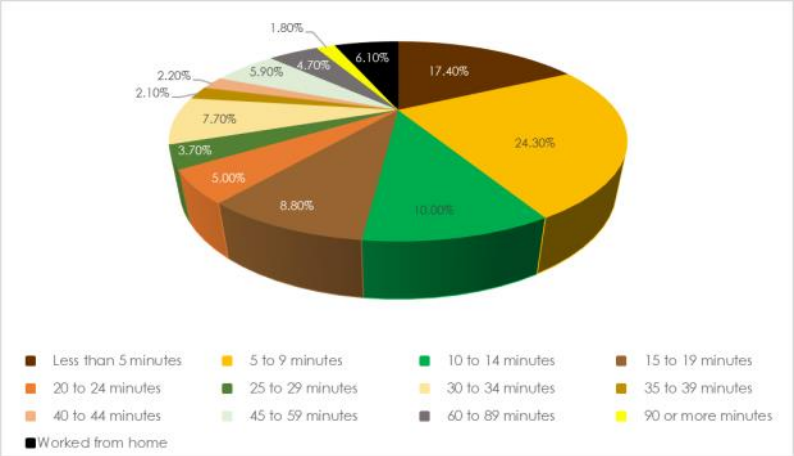
Source: American Community Survey 2019

COMMUTER TRENDS

Figure 5.8 show the commuter characteristics for Ellsworth County in 2019. Travel time to work is another factor used to gauge where Ellsworth County's workforce is employed. Figure 5.9 shows how many residents of Ellsworth County travel to work, or work from home, in each of several time categories.

Figure 5.8 indicates over 40% of the commuters were traveling 10 minutes or less to work. In addition or 6.1% of people worked from home. Those traveling 20 minutes or more to work totaled people or 33.1%. Those traveling more than an hour totaled or 6.5%.

FIGURE 5.8: TRAVEL TIME TO WORK - 2019



Source: American Community Survey 2019

TABLE 5.3 AGRICULTURAL CHARACTERISTICS

Agricultural Characteristics	1997	2002	2007	2012	2017	% Change 1997-
Number of farms	444	478	408	435	384	-13.5%
Land in Farms (acres)	371,777	412,986	365,046	381,185	390,042	4.9%
Average size of farms (acres)	837	864	895	876	1,016	21.4%
Total area for Ellsworth County (acres)	458,180	458,180	458,180	458,180	458,180	0.0%
Percentage of land in farms	81.1%	90.1%	79.7%	83.2%	85.1%	4.9%
Total cropland (acres)	236,968	219,016	180,278	182,724	200,028	-15.6%
Harvested cropland (acres)	145,915	149,317	130,160	132,524	143,156	-1.9%
Estimated Market Value of Land & Bldg (avg./farm)	$480,933	$444,923	$718,894	$1,377,180	$1,695,466	252.5%
Estimated Market Value of Land & Bldg (avg./acre)	$514	$439	$786	$1,494	$1,727	236.0%

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007, 2012, 2017

AGRICULTURAL PROFILE

Table 5.3 identifies key components affecting Ellsworth County's agricultural profile. This Table examines the number of farms, size of these farms, cropland data, and certain value criteria for these farms. The data are for 1997 through 2017.

NUMBER OF FARMS

Table 5.3 indicates the number of farms within Ellsworth County decreased by 60 farms between 1997 and 2017, which has been normal throughout the Great Plains Region. The total number of farms went from 444 in 1997 to 384 in 2017, a change of –13.5%.

LAND IN FARMS/AVERAGE SIZE OF FARMS/ CROPLAND

Also included in Table 5.3 is the total land in farms within Ellsworth County. From 1997 to 2017, Ellsworth County saw a growth in farmland by 4.9% by 2017. The total land in farms accounted for 85.1% of the total acres in Ellsworth County, which was an increase from 1997 of 81.1%.

The average size of each farm increased from 837 acres in 1997 to 1,016 in 2017. This trend has been the norm across Kansas and the United States for the last several decades. The overall increase was 21.4%. The total cropland in Ellsworth County decreased from 236,968 acres in 1997 to 200,028 acres in 2017 which was a change of –15.6%.

In 1997, the harvested cropland in Ellsworth County was 145,915 (61.6%) of total cropland and only 39.2% of the total land in farms. By 2017 the harvested cropland decreased slightly to 143,156 acres, or 71.6% of total cropland (total cropland decreased as well) and remained at nearly the same level of the total land in farms at 36.7%.

ESTIMATED MARKET VALUE

Table 5.3 also shows the estimated market values of land and buildings, both by average per farm and average per acre. In 1997 the average value per farm was $480,933. The average value increased in every Census of Agriculture (aside from 2002) until it reached an average per farm of $1,695,466 in 2017; an increase of 252.5%. The CPI for this same period was approximately 47.0%; therefore the average value per farm increased at over five times the rate of the CPI. The average per farm, statewide, was $417,704 in 1997 and $1,443,891 in 2017, an increase of 245.7%. Therefore, the average farm value in Ellsworth County has also been growing at a slightly greater rate than the state of Kansas.

The increase in the average per acre also translates into an increase in the average per acre. The average value per acre in 1997 was $514 and increased to $1,727 in 2017, an overall increase of 236.0%. Again, this increase exceeded the CPI and the rate of inflation for the period.

Table 5.4 indicates the number of farms by size from 1997 to 2017. The category with the greatest decreases were in the farms averaging 1 to 9 acres, decreasing by 23 farms, or 74.2%. The only farm size that saw an increase were those over 1,000 acres. Those farms saw an increase of 43 farms or 64.2%. Overall, Ellsworth County went from 807 farms in 1997 to 384 farms in 2017, or a change of –52.4% for the period.

TABLE 5.4: NUMBER OF FARMS BY SIZE ELLSWORTH COUNTY 1992 TO 2017

Farm Size (acres)	1997	2002	2007	2012	2017	% Change
1 to 9	31	18	10	7	8	-74.2%
10 to 49	114	105	40	41	33	-71.1%
50 to 179	276	294	108	111	117	-57.6%
180 to 499	216	232	85	101	79	-63.4%
500 to 999	103	110	67	43	37	-64.1%
1,000 or more	67	79	98	109	110	64.2%
Total	807	838	408	412	384	-52.4%

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007, 2012, 2017

Table 5.5 indicates the number of farms and livestock by type for Ellsworth County between 1997 and 2017. The predominant livestock raised in Ellsworth County have been cattle and calves, though they have decreased in number since 1997. Every other category of animals decreased since 1997 aside from Beef Cows. Cattle and calves have seen a change of –2.2%;, though the largest decrease was seen in milk cows, which decreased by -96.4%. Beef Cows increased by 18.6%.

As far as real numbers for these animal types, the following numbers are the total numbers lost between 1997 and 2017:

- Cattle and calves -757 animals
- Beef Cows +1,537 animals
- Milk Cows -214 animals
- Hogs and pigs N/A
- Sheep and lambs -758 animals
- Chickens (layers and pullets) -480 animals
- Chickens (broilers) N/A

TABLE 5.5: FARMS AND LIVESTOCK BY TYPE

Type of	1997	2002	2007	2012	2017	% Change
Cattle and Calves						
farms	298	255	189	200	192	-35.6%
animals	33,972	37,322	25,566	24,747	33,215	-2.2%
average per farm	114	146.4	135.3	123.7	173	51.7%
Beef Cows						
farms	271	226	172	184	177	-34.7%
animals	16,445	18,420	13,380	(D)	17,982	18.6%
average per farm	60.7	81.5	77.8	-	-	28.2%
Milk Cows						
farms	12	0	2	2	4	-66.7%
animals	222	(D)	(D)	(D)	8	-96.4%
average per farm	19	-	-	-	-	-100.0%
Hogs and Pigs						
farms	12	10	7	3	4	-66.7%
animals	2,531	374	(D)	(D)	(D)	-85.2%
average per farm	210.9	37.4	-	-	-	-82.3%
Sheep and lambs						
farms	6	7	6	9	6	0.0%
animals	1,036	595	840	1,104	278	-73.2%
average per farm	172.7	85	140	122.7	46.3	-73.2%
Chickens (layers and pullets)						
farms	38	16	17	28	14	-63.2%
animals	891	373	274	943	411	-10.2%
average per farm	23.4	23.3	16.1	33.7	29.4	25.9%
Chickens (broilers)						
farms	2	7	3	2	3	-
animals	-	158	43	(D)	51	-
average per farm	-	22.6	14.3	-	17	-

Source: U.S. Census of Agriculture, 1997, 2002, 2007, 2012 and 2017
(D) Information Disclosure - Information Withheld

Photo 5.1: Cattle ranch east of Ellsworth
Source: Marvin Planning Consultants

TABLE 5.6: NUMBER OF FARMS AND CROPS BY TYPE

Type of Crop	1997	2002	2007	2012	2017	% Change over time
Corn for Grain						
farms	8	14	3	14	41	412.5%
acres	340	1,332	-	2,284	8,704	2460.0%
average per farm	42.5	95.1	-	163.1	212.3	399.5%
Corn for Silage						
farms	14	4	1	2	5	-64.30%
acres	520	83	-	-	540	3.80%
average per farm	37	21	-	-	108	190.80%
Sorghum for Grain						
farms	222	174	116	133	113	-49.1%
acres	26,964	28,323	25,270	26,172	24,430	-9.4%
average per farm	121.5	162.8	217.8	196.8	216.2	78.0%
Wheat for Grain						
farms	286	237	194	196	172	-39.9%
acres	90,401	88,505	79,059	730,473	75,254	-16.8%
average per farm	316.1	373.4	407.5	3,726.9	437.5	38.4%
Oats						
farms	24	11	2	3	4	-91.7%
acres	673	308	-	-	468	-30.5%
average per farm	28.0	28.0	-	-	117.0	317.2%
Soybeans for Beans						
farms	22	23	39	90	80	263.6%
acres	2,115	2,749	5,217	18,584	13,065	517.7%
average per farm	96.1	119.5	133.8	206.5	163.3	69.9%
Forage						
farms	274	232	192	168	203	-25.9%
acres	26,970	31,362	22,643	17,922	27,105	0.5%
average per farm	98.4	135.2	117.9	106.7	133.5	35.7%

Source: U.S. Census of Agriculture, 1997, 2002, 2007, 2012 and 2017
(D) Information Disclosure - Information Withheld

Table 5.6 indicates the number of farms and crop by type for the period from 1997 to 2017. The table shows the prominent crops grown in the county. In addition, the table indicates the total number of farms producing the specific crop and finally an average per farm.

Ellsworth County has a mixture of crops grown throughout the county. These data are found in Table 5.6. The top crop in Kansas, wheat, has seen declines in production between 1997 and 2017; going from 90,401 acres planted in 1997 to 75,254 acres in 2017 or a change of –16.8%. Even with the decrease in acres planted in wheat, Ellsworth County saw several crops increase in the total acres planted for the 1997 to 2017 time period. These were:

- Corn for Grain + 8,364 acres
- Corn for Silage + 20 acres
- Soybeans for Beans +10,950 acres

Agriculture, historically, has been a major part of the Ellsworth County economy. It appears there is considerable indecision regarding the type of crops to plant in the future. The main crop Kansas is known for (wheat is on a declining trend regarding acres planted in Ellsworth County. Corn and soybeans, on the other hand, have been on the rise for some time in Ellsworth County. Some livestock appears to have a solid place in the local economy, such as cattle and calves or beef cows, though others such as hogs and pigs do not.

ENERGY INDUSTRIES

Energy production plays a major role in the Ellsworth County economy. However, the economics of energy production will not be addressed in this chapter but in Chapter 10: Energy.

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Chapter 6
County Facilities

County Facilities

State and local governments provide a number of services and facilities to the citizens. Public facilities represent a wide range of buildings and services built and maintained by the different levels of government. These facilities and services provide residents with legal services, educational opportunities, and health care services designed to meet area needs,

Typically, and in the case of Ellsworth County, many of the facilities serving the county are located within the major communities. The following information is in regard to the facilities owned and operated by Ellsworth County as well as other governmental entities in the county.

County Facilities Plan

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

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

- County Buildings and Services;
- Education;
- Health Facilities;
- Health Care Services, and;
- The Ellsworth Correctional Facility

County Buildings and Services

County Courthouse

Ellsworth County has one facility making up the courthouse system. The courthouse is located at 210 North Kansas Ave in Ellsworth. The courthouse was listed on the National Historical Registry in 1976 for its significance in local politics, government, and its architecture.

This facility houses the offices of Midway Extension, the County Attorney, the County Appraiser, Emergency Management, the Ellsworth District Court, Treasurer's Office, County Clerk, Register of Deeds, Commissioners, and the Probation Officer.
Source: http://ellsworthcounty.org/residents/county_information/index.php

Emergency Medical Services

Located at 1107 Evans St in Ellsworth, Emergency Medical Services are responsible for providing the best possible emergency care to the public in order to protect and save lives. The EMS department stays up-to-date on all training requirements. The Ellsworth County Ambulance Service accepts assignment on all Medicare and Medicaid claims and is responsible for submitting all insurance claims.
Source: http://www.ellsworthcounty.org/County_departments/ems/index.php

Highway Department

The Highway Department is located at 408 West 15th Street on Old Highway 40 in Ellsworth. The Highway Department is responsible for 80 miles of paved roads, 160 miles of gravel roads, and 762 bridges within Ellsworth County. The department handles the operation and maintenance of roads, bridges, and intersections to ensure safe passage through the county.
Source: http://ellsworthcounty.org/County_departments/road_and_bridge/index.php

Education

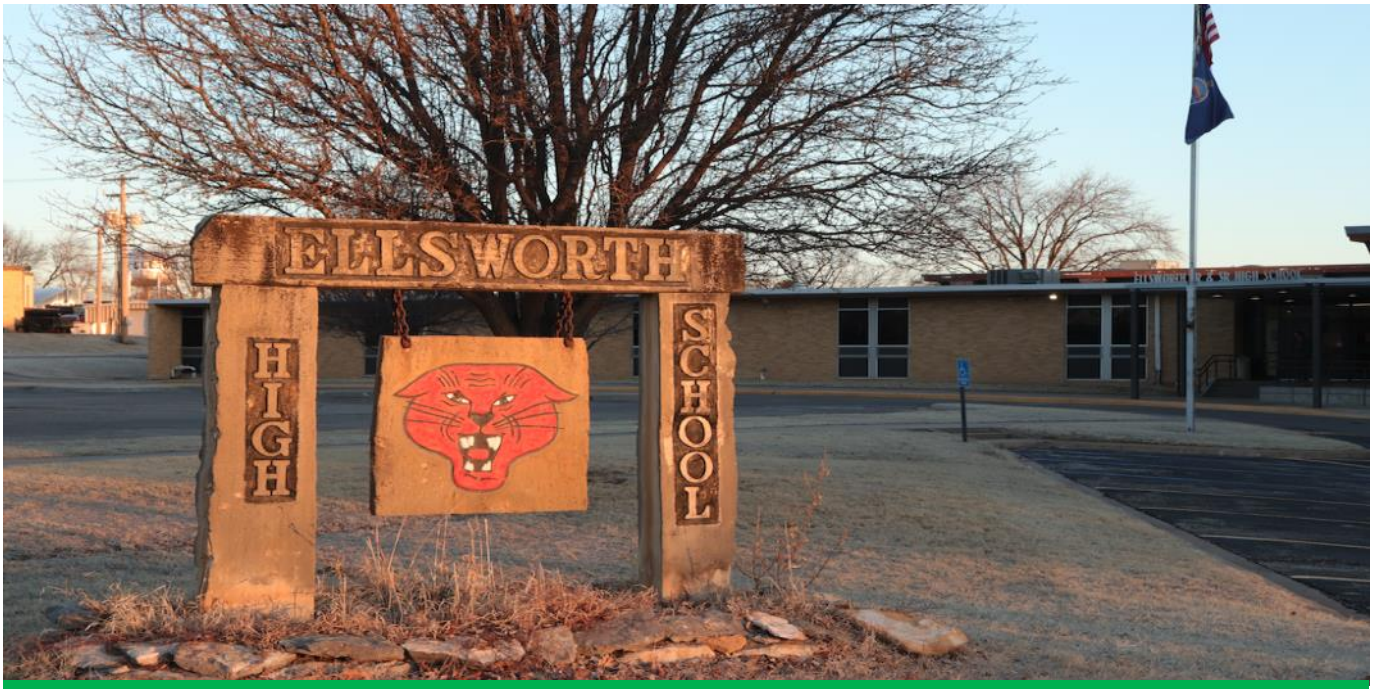

Photo 6.1: Ellsworth High School
Source: USD 327

Public Schools

Ellsworth County is served by two Pre-K through grade 12 public school districts:

- Ellsworth USD 327, and;
- Central Plains USD 112

Ellsworth (USD 327)

Ellsworth USD 327, "Home of the Bearcats", serves the eastern half of Ellsworth County and a portion of southern Mitchell County. The communities of Ellsworth, Kanopolis, and Geneseo are served by Ellsworth USD 327.

The Jr/Sr. High School has an enrollment of approximately 280 students with a 20-1 ratio of students to staff. The school offers AP and dual credit college courses for students and provides career tech education pathways for students as well.

The three districts facilities include:

- Ellsworth Elementary (grades K-4);
- Kanopolis Middle (grades 5-6), and;
- Ellsworth Jr/Sr High School (grades 7-12)

Source: https://www.usd327.org/

Central Plains (USD 112)

Central Plains USD 112 serves the western half of Ellsworth County and portions of northeastern Barton County and northwestern Rice County. Home of the Dragons and Oilers, USD 112 has a strong presence in the District's communities.

The district facilities include:

- Central Plains Jr/Sr High School (Claflin);
- Central Plains Elementary School (Holyrood);
- Wilson Jr/Sr High School (Wilson);
- Wilson Elementary School (Wilson), and;
- Lakeside Learning (Wilson)

Source: https://www.usd112.org/

Health Facilities

Hospital

Ellsworth County has a major hospital in Ellsworth, located at 1604 Aylward Ave, with four rural health clinics in Ellsworth, Lucas, Holyrood, and Wilson. The rural health clinic in Ellsworth is located in the Ellsworth County Hospital complex.

The hospital has a long history, with Ellsworth Hospital Company initially opening its doors in 1897. The hospital upgraded and moved to its current location in 2000. Since then it has undergone various additions and renovations to continue growing and improving care for residents in the area.

Ellsworth County Medical Center is a 18-bed Critical Access Hospital that provides the following services:

Inpatient Care

Inpatient Care consists of providers, nurses, nurse aides, physical, occupational, and speech therapists, pharmacists, dieticians, and a discharge planner working together to provide the most comprehensive care possible in a community setting.

Outpatient Care

Services provided for outpatient includes IV therapy, injection services, cardiac monitoring/ mobile telemetry, and wound care therapy.

For those that don't receive primary care from Ellsworth County Hospital, services can still be scheduled at the Hospital.

Emergency Department

EMCM provides nursing services for emergency, basic short-term acute, skilled, and intermediate stays as well as 24-hour observation care. The emergency department is covered by an on-call medical care provider and nurses who are trained and experienced in Emergency Trauma.

Radiology

Trained radiologists are available by appointment at the Ellsworth County Medical Center. They assist with CT scans, X-rays, and mobile services. The Diagnostic Imaging Department offers high-tech, fully digital technology, as well as same-day/next-day services in some cases. Other services provided include digital mammography, MRI scans, ultrasounds, bone density scans, nuclear medicine, and echocardiograms.

Photo 6.2: Ellsworth County Medical Center
Source: Marvin Planning Consultants

Laboratory

The laboratory offers a full menu of laboratory tests at the facility. With on-site laboratory and through collaboration with Lab Corporation, WPM Pathology Laboratory, and Salina Regional Health Center, Ellsworth County Medical Center is able to facilitate any and every test needed. Test results are available for viewing by a patient's physician immediately upon completion.

Rehabilitation Services

Rehabilitation services include physical, occupational, and speech therapists. Therapists are able to see patients on an inpatient and outpatient basis.

Rural Health Clinics

Services offered by the Rural Health Clinics, Ellsworth Medical Clinic include general medical services for adults, children, and newborns, allergy injections, minor surgeries, school physicals, general medical physicals and annual wellness visits for men, women, children, and infants, sleep studies, and cardiology care.
(Note: text slightly modified from website.)
Source: http://www.ewmed.com/

Health Care Services

Health care services include both inpatient and outpatient services local to Ellsworth County as well regional inpatient and outpatient services.

Central Kansas Mental Health Center

Central Kansas Mental Health Center, located in Salina at 809 Elmhurst Blvd, serves residents of the five county region of Dickinson, Ellsworth, Lincoln, Ottawa, and Saline. The Center's vision is to ensure all residents know that mental health problems are real and treatable, the Center's services are affordable, available, and accessible, and that if needed, those who need help should seek intervention and treatment at the earliest sign of mental health problems.
(Note: text slightly modified from website.)
Source: https://www.ckmhc.org/

Ellsworth County Public Health Department

The Ellsworth County Public Health Department, located at 1603 Aylward Ave in Ellsworth, provides quality, cost-effective preventative services to Ellsworth County residents. Programs are offered within the limits of available funding, emphasizing wellness education over illness treatment.

Services included are communicable disease control, tuberculin skin tests, follow-up and treatment immunizations, child health assessment at school entry, maternal and infant programs, healthy start home visitor program, and community education programs.
(Note: text slightly modified from website.)
Source: http://www.ellsworthcounty.org/County_departments/health_department/index.php

Good Samaritan Society Ellsworth Village

Good Samaritan Society - Ellsworth Village is nestled in the peaceful Smoky Hills. Residents experience an unparalleled combination of community spirit and surrounding natural beauty.

They are committed to providing an unprecedented level of quality service, compassionate care and range of amenities to ensure residents enjoy a care-free, fulfilling lifestyle that is tailored to their needs. They offer apartments, cottages, and fourplexes for residents.
Source: https://www.good-sam.com/locations/ellsworth-village

Ellsworth Correctional Facility

Located on a 68.6-acre site, the Ellsworth Correctional Facility (ECF) Central Unit currently provides housing for 832 multi-custody adult male inmates, while the East Unit provides housing for 95 minimum custody inmates. ECF's mission is to safely and effectively contain and supervise inmates, while also providing for community, employee, and inmate safety. Furthermore, the facility plays an integral role in reducing crime and its associated costs by providing inmates with a means to improve their conditions through involvement in traditional correctional programming, faith-based activities, cognitive-based activities, exposure to "real life" skills and effective staff-inmate interaction.

Moreover, the inmate population is offered an opportunity to participate in a variety of facility-support and community-based work activities. The ECF's ultimate goal is to encourage inmates to participate in the specific programs and activities that will best prepare each inmate for release and increase their opportunity for a successful law-abiding life, positively impacting not only the offenders' lives, but also their families' lives and the lives of all who reside in those communities.
(Text modified slightly from website.)
Source: https://www.doc.ks.gov/facilities/ecf/overview

Photo 6.3: Ellsworth Correctional Facility
Source: prisoninsight.com

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 6.1
COUNTY FACILITIES

- Ellsworth County Facilities
- Ellsworth County Boundary

Landfill & Noxious Weed Department
Health Department
EMS
County Courthouse
Sheriff
Economic Development

N Highway 232
N 60th Rd
E Elk Dr
N 290th Rd
40
70
6th Rd
Old 40
105 Rd
Highway 14
156
Highway 156
140
1st Rd
Avenue L
Highway 156
141
Highway 141
NE 160th Ave
Avenue T
Avenue T
10th Rd
5th Rd
Highway 4
Avenue Y
4
16th Rd
Highway 14

Esri, HERE, Earthstar Geographics

N

0 1 2 4 Miles

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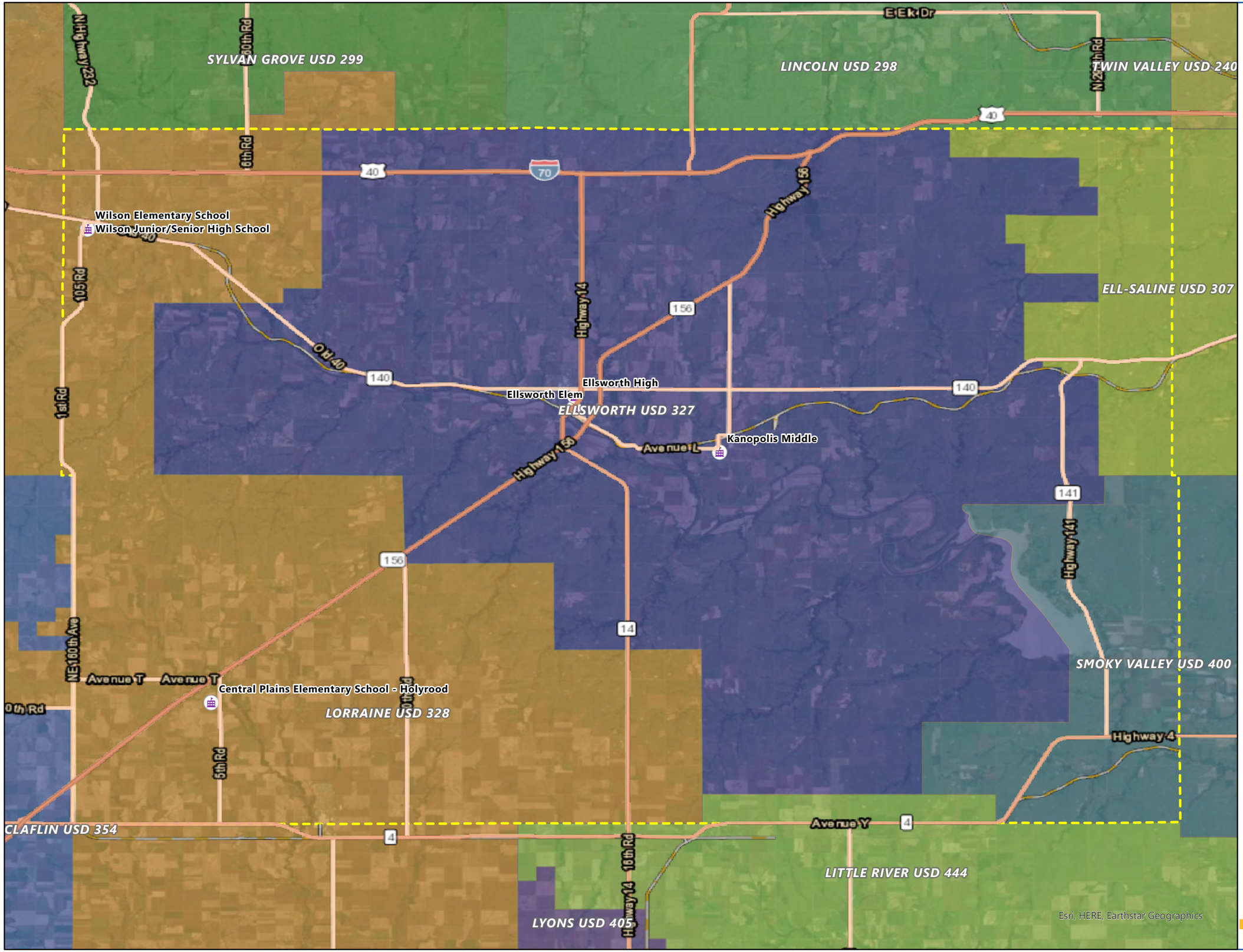
Specializing in Municipal, County and Neighborhood Planning

MSA



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 6.2
SCHOOL FACILITIES

School Facilities

Ellsworth County Boundary

N

0 1 2 4 Miles

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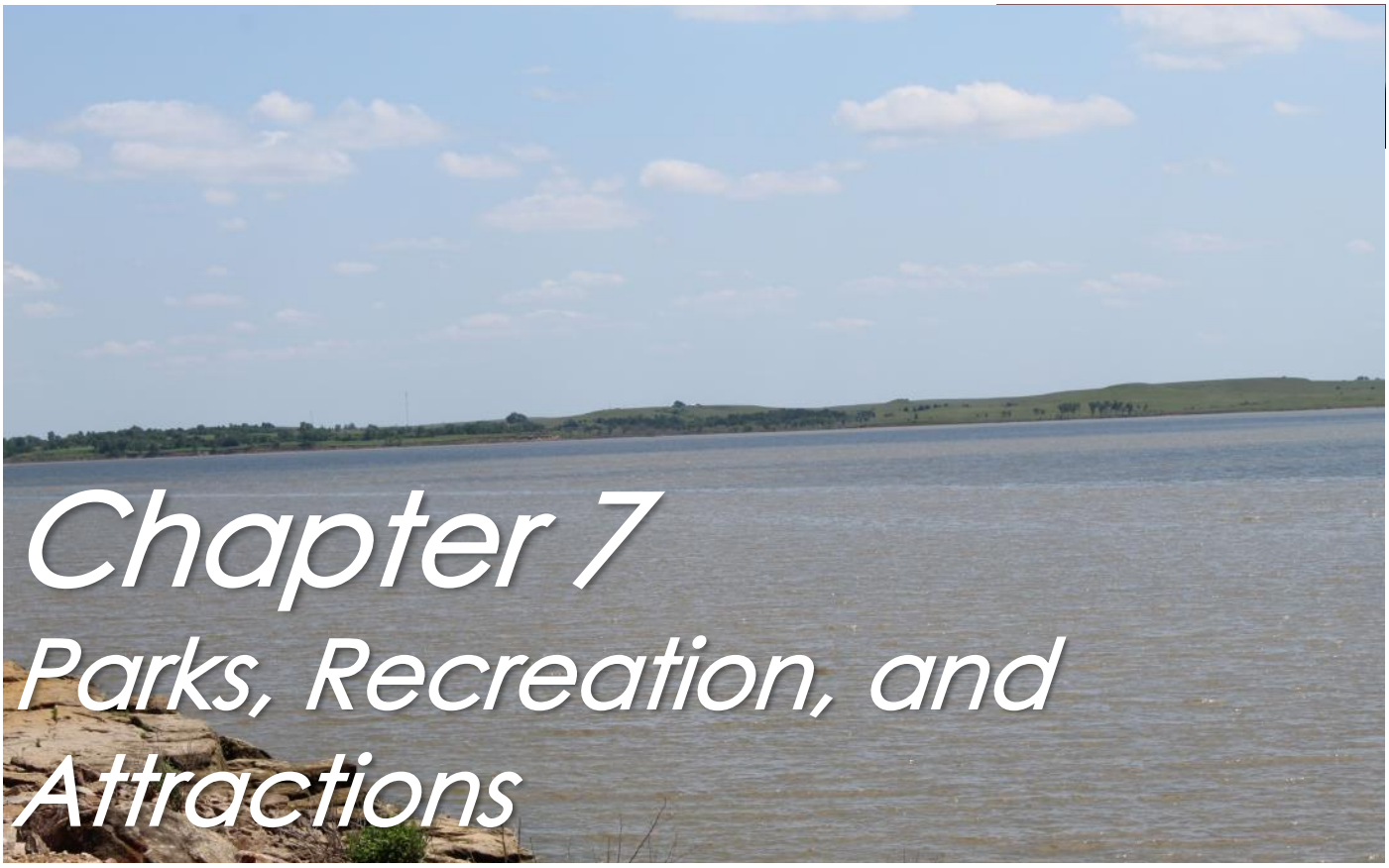
MSA



Chapter 7
Parks, Recreation, and Attractions

Parks, Recreation, and Attractions

This chapter includes a brief description of the facilities located throughout Ellsworth County, including the communities. Even though parks are typically located within municipalities, they do serve the needs of those residing outside of the municipalities. Parks, recreation, and attractions provide residents with social, cultural, and recreational opportunities.

County Parks and Recreation

County parks and recreation is primarily limited to fishing, golf, and state parks.

Fishing

Ellsworth County offers anglers a multitude of opportunities to fish, up to and including:

- Kanopolis Lake;
- Holyrood Lake;
- Alum Creek;
- Ash Creek;
- Blood Creek;
- Bluff Creek;
- Buffalo Creek;
- Clear Creek;
- East Oak Creek;
- Little Wolf Creek;
- Loss Creek;
- Mud Creek;
- Oak Creek;
- Oxide Creek;
- Sand Creek;
- Skunk Creek;
- Spring Creek;
- Table Rock Creek;
- Thompson Creek;
- Turkey Creek;
- West Oak Creek;
- Wiley Creek;
- Wilson Creek, and;
- Wolf Creek.

Source: https://www.fishingworks.com/kansas/ellsworth-ks/stream/

Ellsworth Golf Course

Dating back to 1922, the course is situated in the pristine Smoky Hills. Ellsworth Golf Course has set the standard for beautiful, scenic views and challenging golf for central Kansas. The 9 hole, par 35 municipal golf course is managed by the City of Ellsworth and is a USGA Member Club. The golf course also has a bar/restaurant with a golf simulator.

Source: https://www.ellsworthks.net/pview.aspx?id=21030&catid=26

State Parks

Mushroom State Park

Located on the Prairie Trail Scenic Byway northwest of Marquette about 5 miles north of Kanopolis Reservoir and State Park, 3 miles west of K-141 on

Avenue K (a county road) or south of K-140 from Caneiro on 25th Road.

One of the 8 Wonders of Kansas Geography, Mushroom Rock is the smallest, but one of the most unique, state parks in Kansas. The park is only 5 acres but boasts some of the most unusual rock formations anywhere. The rocks served as meeting places and landmarks for Native Americans and early pioneers such as John C. Fremont and Kit Carson.

Resembling giant mushrooms rising above the horizon, the Dakota formations of Mushroom Rock State Park are the remains of beach sands and sediments of the Cretaceous Period, the interval of geologic time from about 144 to 66 million years ago. Sandstone and sedimentary rock is held together by natural cement. The concretions that make up Mushroom Rocks are cemented calcium carbonate. The largest rock measures 27 feet in diameter.

About six miles to the west, in the city of Kanopolis, are four remaining buildings of Fort Harker, an active U.S. Army outpost from November 1866 to October 1872.
Source: https://ksoutdoors.com/State-Parks/Locations/Mushroom-Rock

Central Kansas Prairie Shooters

Central Kansas Prairie Shooters is home to some of the best Shooting Sports Competitions in Kansas. The facility is a huge 5 bay range, with rifle shooting to 300 yards. We host Monthly IDPA, Steel Challenge, and 3-Gun Competitions.
Source: http://www.kspistol.com/about.html

Kanopolis State Park

The first state park in Kansas, Kanopolis State Park is situated in the rolling hills, bluffs, and woods of the scenic Smoky Hills region of the state. From the towering Dakota sandstone bluffs to the caves and crevices of Horsethief Canyon, the park and surrounding area offer rugged beauty and stunning vistas. The park is split into two areas north and south of the dam. There are two federal parks as well.

Kanopolis offers more than 30 miles of trails open to hikers, mountain bikers, and horseback riders, 15 of which are on the Smoky Hill Wildlife Area. The 3,500-acre lake and 12,500-acre wildlife area provide anglers and hunters abundant fish and game. Nestled near the Smoky Hill River toward the northwest portion of the wildlife area is Faris Caves, which were carved by early pioneers and served as a milk house, school house, and living quarters.

Wildlife viewing and photography opportunities are plentiful. In the winter, bald eagles and ospreys fish the river. Songbirds and wildflowers brighten the landscape throughout the area.

Kanopolis State Park also manages nearby Mushroom Rock State Park, a picnic area with unusual geologic formations that amaze first-time and return visitors alike.
Source: https://ksoutdoors.com/State-Parks/Locations/Kanopolis

Community Parks and Recreation

This section describes the different parks available throughout the communities of Ellsworth County. Some communities that are unincorporated do not have parks.

Ellsworth

Ellsworth offers four community parks: Ellsworth Sport Complex, Ellsworth Swimming Pool and Holt Park, Krizek Park, and Preisker Park. The Ellsworth County fairgrounds are also located in the City of Ellsworth.

Ellsworth Sports Complex is located in southern Ellsworth. It is home to the City's two t-ball fields as well as baseball and softball fields. Ellsworth Swimming Pool and Holt Park is located within neighborhoods and provides a swimming area with a slide and diving boards in the summer months.

Krietz Park is located along Douglas Ave and provides residents with a disc golf course, tennis courts, playground equipment, a shelter, and a walking trail.

Prisker Park was built in the 1930's and is located in central Ellsworth. The park's beauty comes from the stonework around the bridges, band shell, and restrooms. The park also provides a splash pad for residents in the summer months.
Source: https://www.ellsworthks.net/facility.aspx

Kanopolis

Kanopolis is home to Kanopolis City Park. The park provides residents with a sand volleyball court, outside exercise equipment, playground equipment, and a park shelter with tables and chairs. Kanopolis Middle School provides some

recreation opportunities as well and is equipped with a football fields, baseball field, and tennis courts.
Source: Marvin Planning Consultants

Holyrood

Holyrood is home to the Holyrood City Park. The park offers a full playground, picnic shelter, and restroom facilities.
Source: Marvin Planning Consultants

Lorraine

Lorraine has two city parks. Stanley Park is located on the northwest side of the city and is a large open greenspace with trees, tables, and a small playground. Centennial Park is located on the corner across from the bank. It is a smaller park with a playground facility and picnic shelter with tables.
Source: https://www.ellsworthks.net/facility.aspx

Wilson

Wilson is home to the Ed and LaVange Shiroky Park, (Worlds Largest Handpainted Czech Egg), Jellison Park and Ballfields, Lions Club Park, Pride Park - Splash Pad, Veterans Park, and the WEDC Disc Golf Course. Wilson Junior/Senior High School offers a football field with a track open to all residents.
Source: http://wilsonkansas.com/

Regional Parks and Recreation

Lake Wilson (Wilson State Park)

Wilson State Park was established by the Kansas Legislature in 1966. The Hell Creek Area was established at this time.

Wilson State Park has four large shelters available for use. Tatanka (a church) is a great place for weddings and is located on the Hell Creek side of the state park. The Otoe area has Pine Shelter and Yucca Shelter. All the shelters are covered and have picnic tables and charcoal grills. Electricity is available at Tatanka & Pine. Yucca shelter does not have electricity.
Lake Wilson Marina is located in the Hell Creek Area of the state park and is a full service marina. They carry all kinds of items needed for camping and fishing, including food/drink, dry goods, bait and tackle, and many other items. Boat slip rental, storage rental, and boat repair are also available through the marina.
Source: https://ksoutdoors.com/State-Parks/Locations/Wilson

Photo 7.2: Lake Wilson
Source: travelks.com

Attractions

Throughout Ellsworth County, including the communities, there are numerous attractions, including museums, historical sites, and points of interest. Much of the landscape of the county, as well as the attractions, are surrounded by the beautiful Smoky Hills.

Livery Stables

The Livery Stables at the Hodgden House Museum Complext is a Dakota Sandstone Livery Stable, constructed in 1887 by Robert Martin. The Livery Stable is one of a few livery stables still standing in

the region
(Note: text slightly modified from website.)
Source: https://www.ellsworthcountykansashistory.org/preserve

Hodgden [Hodgen] House Museum Complex

The Hodgden house was built in 1875 by Perry and Phoebe Hodgden, a very influential resident in the development of Ellsworth. His was the first private home to be built of stone after the fires of 1874 and 1876 consumed most of the buildings and residences on north and south Main Streets comprising the heart of the town.

In 1961 the house was once again restored to its original elegance. The Ellsworth Historical Society established a museum on the site in 1963 and has continued to make acquisitions and enlarge their exhibits since that time. The house is filled with artifacts from those early days.

Photo 7.3: Livery Stables (left)
Source: Marvin Planning Consultants

The museum grounds also includes the Second Baptist Church, built in 1886 along side of the Shanelec Windmill, which is also a part of the grounds. The museum grounds also features the one room school house that held classes from 1880-1967. It was moved to the museum grounds which is approximately 8 miles from where it was originally located.
Source ellsworthcountykansashirstory.org

Fort Harker Commanding Officers Quarters/ Junior Officers Quarters

In 1868 General Sheridan moved his command from Fort Leavenworth to Fort Harker for the purpose of protecting settlers and conducting campaigns against the Native Americans. In 1869 Brevet Colonel Joseph Tilford with two troops of General Custer's 7th Cavalry were stationed at Fort Harker before leaving on a campaign in February 1870. Then in May 1870 General Custer himself passed through Fort Harker with the rest of the 7th Cavalry on their way from Fort Leavenworth to Fort Hays, and ultimately, to their defeat at the Battle of the Little Bighorn. The largest main officers home is still standing today and can be toured as a part of the museum as well as one of the junior officer quarters. The other standing building is a private residence.
Source: ellsworthcountykansashistory.org

Photo 7.4: Hodgden House Museum Complex
Source: Marvin Planning Consultants

Fort Harker Guardhouse

Fort Harker, located in Kanopolis, was an active military installation of the United States Army from November 17, 1866 to October 5, 1872. The fortification was named after General Charles Garrison Harker, who was killed in action at the Battle of Kennesaw Mountain in the American Civil War. Fort Harker replaced Fort Ellsworth, which had been located 1.6 km (0.99 mi) from the location of Fort Harker and was abandoned after the new fortifications at Fort Harker were constructed. Fort Harker was a major distribution point for all military points farther west and was one of the most important military stations west of the Missouri River.
Source: ellsworthcountykansashistory.org

1873 Ellsworth County Jail

Steel bars and handsome native stone walls are all that remains of the 1873 Ellsworth County Jail in Ellsworth. The building served as a jail for over 35 years, before being replaced by the 1910 Ellsworth County Jail at 200 Court Avenue. It was then sold to the city of Ellsworth, and among other things, served as housing for African Americans

from 1912 through 1920. In 1960 it passed into private hands and was deeded to the Ellsworth County Historical Society in 1988. The small plaque in front of the jail says that the first prisoner, J.M. Gruder, escaped. The Ellsworth Reporter announced, "The sheriff is not at all to blame as the building is not full ready for prisoners."
Source: http://www.kansastravel.org/ellsworthcountyjail.htm

Photo 7.5: Fort Harker Guardhouse
Source: Marvin Planning Consultants

Various Petroglyph Sites

There are one of 30 American Indian rock art sites located in the state of Kansas. The majority of the sites are located in four counties in the central part of the state. Smaller numbers are located in southeast and southwestern Kansas. 12 of them are located in Ellsworth County. These sites have examples of anthropomorphic figures and human-like forms, animals and animal-like forms, geometric designs, straight lines, and grooves. Previous analysis of a fraction of this rock art indicates it is the product of Indian tribes inhabiting Kansas during the protohistoric and historic periods of circa AD 1541 to AD 1870.

- Cave Hollow Petroglyph Site;
- Elm Creek Petroglyph Site;
- Haystack Mound Petroglyph Site;
- Indian Hill Site;
- Katzenmeier Petroglyph Site;
- Owl's Nest Petroglyph Site;
- Petroglyph Site 14EW403;
- Petroglyph Site 14EW404;
- Petroglyph Site 14EW405;
- Petroglyph Site 14EW406;
- Red Rock Canyon Petroglyph Site, and;
- Ward Petroglyph Site

Source: https://www.kshs.org/natreg/natreg_listings/search/county:EW

Ellsworth Downtown Historic District

The Ellsworth Downtown Historic District is a historic district which was listed on the National Register of Historic Places in 2007. The district is a 30 acres area generally including blocks between N. Main & 3rd Sts. from Lincoln to Kansas Avenues, plus the west side of Kansas Ave. It included 52 contributing buildings. Its NRHP nomination asserted: "The buildings in downtown Ellsworth interpret the history of the community's permanent commercial development. The Ellsworth Downtown Historic District was nominated to the National Register of Historic Places under Criterion A for its association with the growth and development of Ellsworth and Criterion C for its architectural significance."
Source: https://npgallery.nps.gov/NRHP

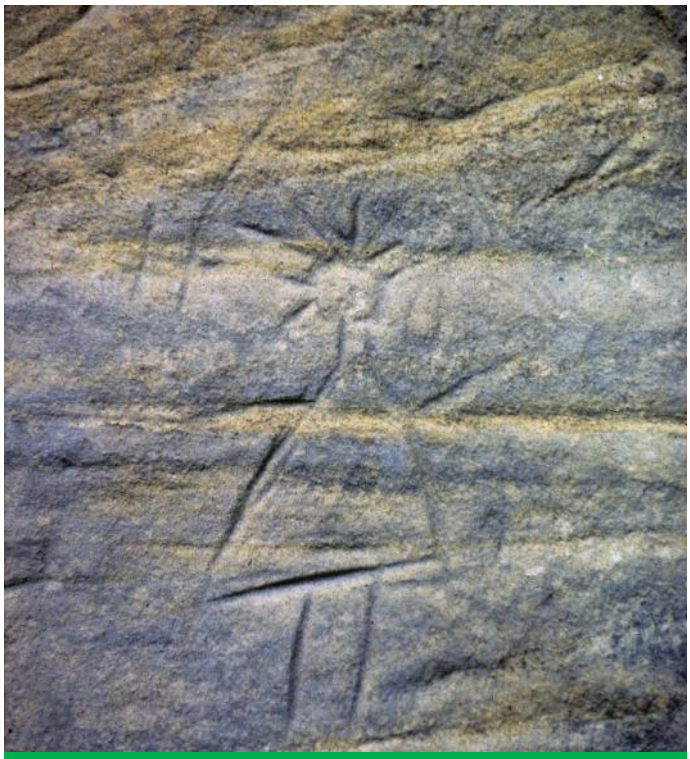


Photo 7.6: Ward Petroglyph Site
Source: Kansas State Historical Society

Holyrood Santa Fe Depot

The Holyrood Santa Fe Depot was built in 1887 as the Santa Fe Railroad stretched west though Ellsworth County. The building has vertical board and batten siding with simple Victorian characteristics that include eave brackets and multi light windows. It served as a combination depot for passengers and freight. Although no recollections have been found noting the closure,

local historians recall that fright service ended in the early 1980's.
(Note: text slightly modified from website.)
Source: https://www.kshs.org/natreg/natreg_listings/view/1433

Insurance Building

Constructed from 1887 to 1888, and later modified in 1929, the Insurance Building is a brick, two-story Victorian eclectic commercial building atop a Warrensburg limestone block foundation. It was built by Ellsworth contractor Frank Easterly who was also hired to do the remodel in 1929. It was nominated for its historical association with the growth and development of Ellsworth and for its architectural significance as an example of the Victorian eclectic commercial style.
(Note: text slightly modified from website.)
Source: https://www.kshs.org/natreg/natreg_listings/search/page:2/county:EW/records:al

Photo 7.7: Holyrood Santa Fe Depot
Source: Kansas State Historical Society

Lloyd, Ira E. Stock Farm

Ellsworth attorney Ira E. Lloyd, who settled in Ellsworth in 1873, developed a stock farm east of town in the early 20th century. Lloyd had a brief political career in state-level politics, serving in the Kansas Senate representing District 30 from 1885 to 1887. He partnered with W. H. Huntington to manage his Ellsworth Horse Farm north of town until 1902. Lloyd slowly acquired parcels of land that eventually became his 172-acre stock farm on the eastern outskirts of Ellsworth.

Lloyd transitioned away from the horse farm north of town and focused on his new stock farm east of town. At this property, Lloyd managed a rather diverse small farm raising shorthorn cattle, chickens, and turkeys, and growing crops such as wheat and corn. It was nominated as part of the "Historic Agriculture-Related Resource of Kansas" multiple property nomination for its local significance in the area of agriculture.
(Note: text slightly modified from website.)
Source: https://www.kshs.org/natreg/natreg_listings/view/1698

Ellsworth Area Arts Council Gallery

The Ellsworth Area Arts Council Gallery welcomes new exhibit ideas from all kinds of artists including but certainly not limited to painting, photography, fiber art, ceramics, sculpture, installations and woodworking.
Source: Marvin Planning Consultants

Kanopolis Drive In

The Kanopolis Drive In has been open since 1952. It is a single screen drive in theater located on the northwest side of Kanopolis. The theater has a 60x30 foot screen and a capacity of 165 cars.
Source: https://en.wikipedia.org/wiki/Kanopolis_Drive-in_Theatre

Photo 7.8: Kanopolis Drive In
Source: Marvin Planning Consultants

Points of Interest

Worlds Largest Czech Egg

The idea of creating the World's Largest Czech Egg began in approximately 2003, when past President of the Wilson Chamber of Commerce, Sharon Holloway, contacted Erika Nelson, World's Smallest Replica of the World's Largest Things (Lucas, Kansas), with the idea. Major funding for the project was received from the LaVange Shiroky Revokable Trust Improvement Fund. Other grants received include an Embassy of the Czech Republic Grant, Midwest Energy Community Grant, and a Smoky Hills Charitable Foundation Grant. The World's Largest Hand-painted Czech Egg stands 20 ft. high and 15 ft. wide. It was decorated with a

traditional Czech design by local artist, Christine Slechta. Nine years and many fundraisers later, Hess Services, Inc. delivered the fiberglass egg in August of 2012.

Volunteers sanded the egg in the summer of 2013 and the black base coat was painted by volunteers in the summer of 2014. The egg design was done by Christine Slechta (Wilson School Arts Teacher) with students and volunteers doing the painting in the summer of 2015. The World's Largest Czech Egg was dedicated during a ceremony on Friday, July 29, 2016 at the home of the Czech Egg, the Ed & LaVange Shiroky Park.
Source: https://wilsonkschamber.com/worlds-largest-czech-egg/

Photo 7.9:World's Largest Czech Egg
Source: Marvin Planning Consultants

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Chapter 8
Public Safety

Public Safety

Public safety encompasses county law enforcement, emergency medical services (EMS), fire departments, emergency management, and noxious weed control. These services are made up of municipal and county-wide providers.

County Law Enforcement

Ellsworth County Sheriff's Department

Ellsworth County deputies are responsible for covering approximately 720 square miles which includes I-70, K-156, K-14, K-4, & K-140 highways. This also includes both the state and federal ground around Kanopolis Lake. Some of the duties of the deputies are working traffic accidents, criminal investigations, serving civil process, executing warrants, and assisting four small communities with their law enforcement coverage. Sheriff's deputies also assist the City of Ellsworth Police Department when requested.

Source: http://www.ellsworthcounty.org/County_departments/sheriff_s_office/index.php

20th Judicial District Court of Kansas

The Twentieth Judicial District Court Services Office serves Barton, Ellsworth, Rice, Russell and Stafford counties. The central office location is 1806 Twelfth Street, Great Bend, Kansas, with staff traveling to the outlying counties on a regular basis to provide probation services. Regular duties of Court Services Officers includes supervision of adult and juvenile probationers for the District Court, as well as the completion of adult and juvenile pre-sentence investigations.

A few of the other services provided by Court Services include supervision of bond cases, coordination of community work service hours, presentation of the Check Management Seminar, coordination of the DUI Impact Panel, and referrals to community service providers in the areas of substance abuse and mental health treatment. The District is served by one Chief Court Services Officer, a Court Services Officer II, six Court Services Officer I positions and a Secretary.

Source: https://www.ricecounty.us/departments/district_court/index.php

Emergency Medical Services

Ellsworth County EMS

Ellsworth County Ambulance Service provides pre-hospital emergency medical care and transportation. The Ambulance Service accepts volunteers. The emergency services building, located at 1107 Evans St in Ellsworth, houses Ellsworth County EMS.

Fire Departments

Ellsworth Volunteer Fire Department

The Ellsworth Volunteer Fire Department is responsible for providing an efficient and effective delivery of fire, medical, rescue, and life safety emergency services within City limits. The Ellsworth Volunteer Fire Department currently has 40 firefighters.
Source: https://www.ellsworthks.net/pview.aspx?id=21029&catid=26

Holyrood Volunteer Fire Department

The Holyrood Fire Department, located in Holyrood, provides fire protection and emergency response services to the Holyrood community. The Fire Department's mission is to prevent the loss of life and property. In addition to responding to fires, the Holyrood Fire Department also responds to medical emergencies, motor vehicle accidents, rescue calls, and incidents involving hazardous materials. There are approximately 14 volunteers currently.
Source: https://www.countyoffice.org/holyrood-fire-department-holyrood-ks-fed/

Kanopolis Volunteer Fire Department

The Kanopolis Volunteer Fire Department is a team of volunteers that respond to all grass and structure fires within Ellsworth County.
Source: Marvin Planning Consultants

Lorraine Volunteer Fire Department

The Lorraine Fire Department provides fire protection and emergency response services to the Lorraine community. The Fire Department's mission is to prevent the loss of life and property. In addition to responding to fires, the Lorraine Fire Department also responds to medical emergencies, motor vehicle accidents, rescue calls, and incidents involving hazardous materials. There are approximately 10 volunteers.
Source: https://www.countyoffice.org/lorraine-fire-department-lorraine-ks-fee/

Emergency Management

Ellsworth County Emergency Management

The Ellsworth County Emergency Management Department is housed in the Ellsworth County Courthouse. The mission of the Department is to ensure that local capabilities exist for the effective mitigation against, preparedness for, response to, and recovery from all types of major emergencies or disasters (natural, technological, and national security) that threatens Ellsworth County.

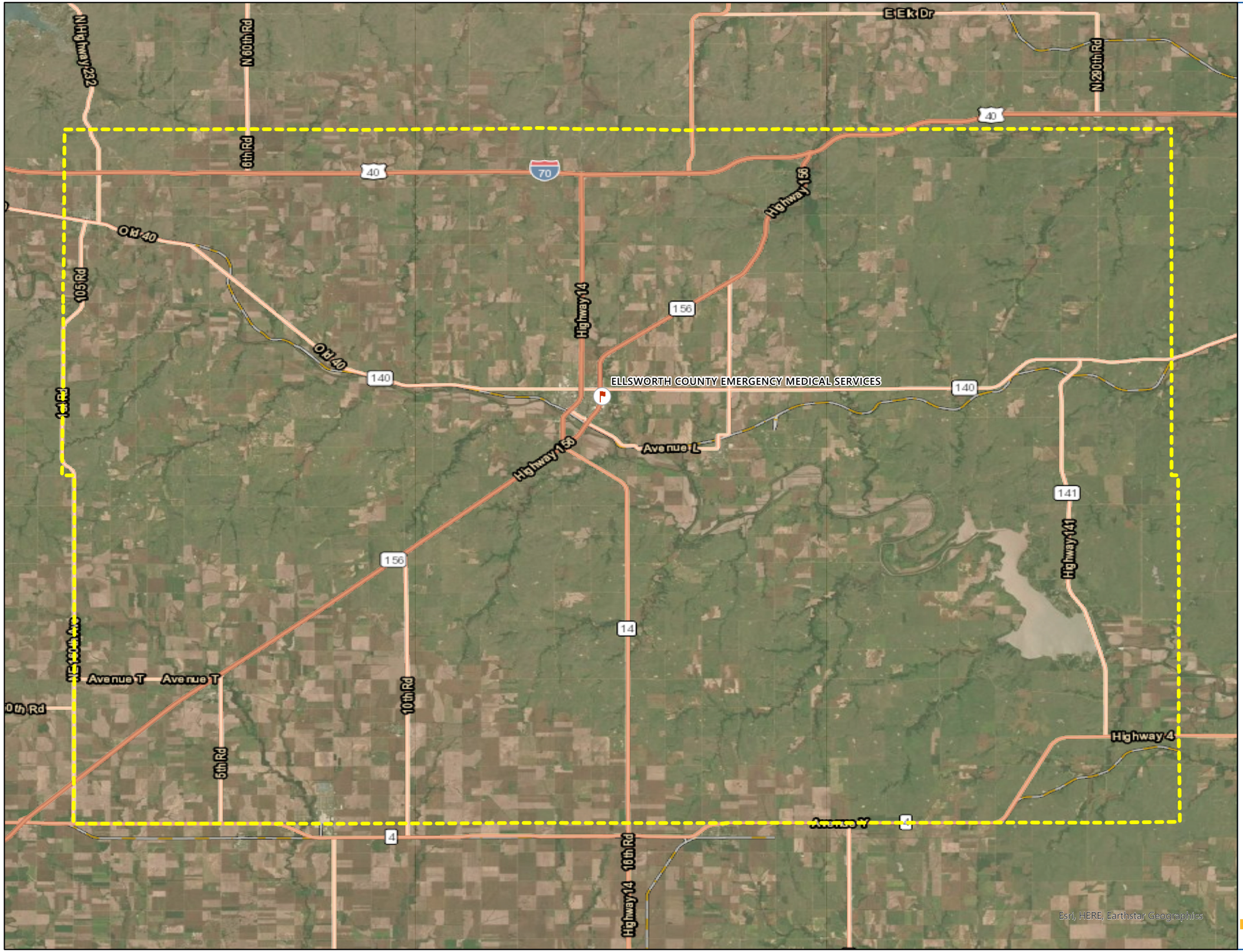
Ellsworth County Emergency Management is committed to working with the public, the media, and the response agencies not only during an emergency but prior to and after the incident. This is done in part by hosting drills that test the different parts of the Ellsworth County Emergency Operations Plan. These drills utilize the different response agencies to include fire, medical, law enforcement, hospital, public works, local media, and the private sector.

Noxious Weed Department

Located at 501 W. 13 St in Ellsworth, the purpose of this county office is to: (1) enforce the State Noxious Weed Law within the county boundaries and (2) providing information and material to help control and eradicate noxious weeds. The Kansas Legislature has declared 12 weeds as noxious. They are: Musk Thistle, Field Bindweed, Canada Thistle, Leafy Spurge, Russian Knapweed, Kudzu, Bur Ragweed, Quackgrass, Sericea Lespedeza, Pignut, Johnson Grass, and Hoary Grass.

The Kansas Noxious Weed Law, KSA, Chapter 2, Article 13, requires all persons who own or supervise land in Kansas to control the spread of and to eradicate all weeds declared by legislative action to be noxious. Copies of the State Weed Law are available at the Noxious Weed Office.

The Noxious Weed Department sprays 240 miles of county roads every year for noxious weeds.
Source: http://www.ellsworthcounty.org/residents/noxious_weed_and_landfill/index.php



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 8.1 EMERGENCY MEDICAL SERVICES

- Ellsworth County Boundary
- EMS Locations

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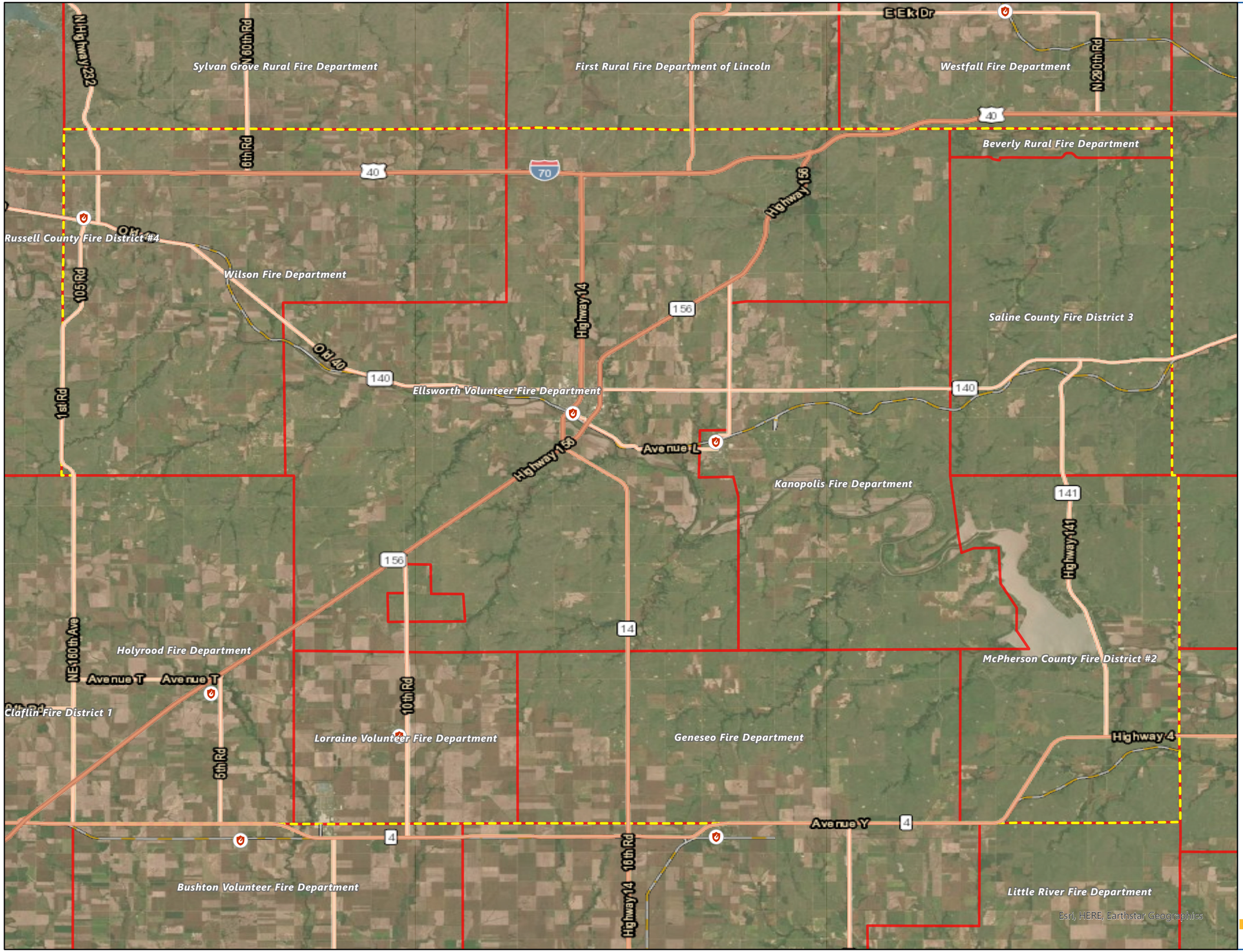

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 8.2
FIRE DISTRICTS

- Fire Stations
- Fire Districts
- Ellsworth County Boundary

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Chapter 9 Communications and Utilities

Communications and Utilities

Communication and utilities are critical to most people. As humans, we want to stay in touch with our families, friends, and the day to day activities and news occurring around us. This Chapter provides the different communication media available throughout Ellsworth County. In addition, the Chapter examines the different utilities and their providers located in Ellsworth County.

Communications

Communication comes in many forms. Residents communicate via newspapers, television, cable, radio, and the internet. This section will identify the different providers available within Ellsworth County.

Newspapers

Ellsworth County Independent Reporter

The official newspaper for Ellsworth County is the Ellsworth County Independent Reporter. The newspaper provides access to obituaries, local news, front pages and more. The Ellsworth County Independent Reporter is one of the larger weekly newspapers in the region. The newspaper has an approximate audience of 2,000 readers. The parent company of the publication is Ellsworth Reporter.

Source: https://www.mercolocal.com/local-business/category/Family-and-Community/Ellsworth-County-Independent-Reporter-Ellsworth-Kansas

Television

Ellsworth County has a number of local over the air television stations, these include:

- KSNC (NBC) out of Great Bend;
- KBSH-DT (CBS) out of Hays;
- KPTS (PSB) out of Hutchinson;
- KOOD (PBS) out of Hays;
- KWCH-DT (CBS) out of Hutchinson;
- KAAS (FOX) out of Salina;
- KSCW-DT (CW) out of Wichita, and;
- KMTW (Independent) out of Hutchinson

Cable Television

Vyve Broadband Cable

About 47.28%, or 3,072 people, have Vyve Broadband cable internet available to them in the county. The company covers the central, east, north, south, northeast, northwest, and southeast Ellsworth County area.

Vyve Broadband is above average when comparing download speeds to all other internet providers in the county. Versus other cable providers in the area, Vyve Broadband cable is the fastest. There are no different maximum speeds throughout the county. The fastest plan anyone in the county can order from Vyve Broadband goes up to 250 Mbps, and all customers can get this speed.

In Ellsworth County download speeds tend to be slower than upload speeds for Vyve Broadband

cable. Compared to other ISPs, Vyve Broadband is below average where upload speeds are concerned, and the fastest compared to other county cable providers. Vyve Broadband offers no different upload speeds across the county. The fastest upload speed available to anyone from this ISP in Ellsworth County is up to 25 Mbps, which is available to everyone covered.
(Note: text modified slightly from website).
Source: https://bestneighborhood.org/cable-tv-and-internet-ellsworth-county-ks/

H&B Communications Cable

About 2.12%, or 138 people, have H&B Communications cable internet available to them in the county. The company covers the southern Ellsworth County area.

H&B Communications is below average when comparing download speeds to all other internet providers in Ellsworth County. Versus other cable providers in the area, H&B Communications cable is the slowest. There are no different maximum speeds throughout the county. The fastest plan anyone in the county can order from H&B Communications goes up to 15 Mbps, and all customers can get this speed.

Download speeds tend to be slower than upload speeds for H&B Communications cable. Compared to other ISPs, H&B Communications is below average where upload speeds are concerned, and the slowest compared to other county cable providers. H&B Communications offers no different upload speeds across the county. The fastest upload speed available to anyone from this ISP in Ellsworth County is up to 1.0 Mbps, which is available to everyone covered.
(Note: text modified slightly from website).
Source: https://bestneighborhood.org/cable-tv-and-internet-ellsworth-county-ks/

Internet Service

Ellsworth County has several options for broadband internet access including leased lines, frame relay, and a variety of DSL services. Cable high-speed internet connections are also available, all of which are attractive for remote hosting, server farms, and related information technology (IT) services. These connections include:

- AT&T;
- HughesNet;
- Viasat, and;
- EarthLink

Source: broadbandsearch.net/service/kansas/ellsworth

Utilities

Maintaining the existing infrastructure and providing opportunities for growth, where appropriate, is an important consideration for Ellsworth County. By efficiently planning for maintenance and strategically locating maintenance equipment and personnel, the county can ensure maintenance and construction occur in a timely and cost effective way.

Storm Drainage

Storm drainage is handled by surface drainage throughout the county's jurisdiction. Storm drainage flows into the county's network of swales, ditches, and streams during heavier rains and eventually into any of the major waterways flowing through the county.

Rural Water Systems

There are a number of different providers within Ellsworth County for water. Some are municipal systems, and the rest is provided by Rural Water Districts (RWD), some have a combination of the previous two, and there are private wells where groundwater can be located. However, most of the county water supply is provided by rural water districts and individual wells. Rural Water District Number 1 covers the entirety of Ellsworth County aside from a small portion in the southeast corner that is covered by Saline County RWD Number 1 and Rice County RWD Number 1.

Much of the rural county depends on the rural water districts which in turn rely on water sources outside of Ellsworth County.

Upgrading and expansion of the existing rural water distribution system would need to occur to support substantial new development in rural areas. Existing sources for the rural water districts are believed to have adequate water supplies but the current distribution system cannot support substantial growth. See Figure 9.1 for the coverage of the different rural water districts.

Ellsworth County RWD #1

Rural Water District No. 1, or the Post Rock Rural Water District, was first organized in 1979 by a group of farmers in the Wilson area who were searching for a safe and reliable source of water. The District now serves water directly in segments of eight counties and indirectly to two more counties,

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 9.1
RURAL WATER DISTRICTS

Ellsworth County Boundary

Ellsworth Co. RWD #01

Saline Co. RWD #07

Rice Co. RWD #01

Wilson

Ellsworth

Kanopolis

Holyrood

Lorraine

Bushton

Geneseo

N Highway 232

N 60th Rd

E Elk Dr

N 290th Rd

40

70

Highway 156

Old 40

105 Rd

Highway 14

156

140

1st Rd

Avenue H

141

Highway 141

NE 160th Ave

Avenue T

10th Rd

14

Highway 4

5th Rd

4

Avenue Y

16th Rd

Esri, HERE, Earthstar Geographics

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through over 1,500 retail customers and 10 wholesale accounts. Post Rock RWD's sole source of water is Kanopolis Lake which is fed by the Smoky Hill River. The lake is a good supply for the system. The protection and preservation of this precious resource is essential. Post Rock RWD's treatment plant currently has the capacity to produce 1.1 million gallons of water per day. Water is stored in a 200,000 gallon underground clear well for distribution to the system. The finished product is distributed to Post Rock's customers through approximately 1,800 miles of pipeline.
Source: https://postrockrwd.com/about-us

WASTEWATER

Developments outside of the municipalities of Ellsworth County will typically be made up of multiple individual septic systems. These systems should continue to be monitored closely by the County Environmental Office. This includes proper separation distances from property lines and water supply wells as required by local codes and the Kansas Department of Health and Environment (KDHE).

In subdivisions with a gross density of more than one unit per two acres, community wastewater systems meeting wastewater treatment standards established by the KDHE should generally be installed. In addition, the county should encourage replacement of septic systems in subdivisions with community systems when feasible. This is particularly important where residential densities are too high to accommodate replacement of septic systems.

Developments using individual septic systems should design lots to provide efficient septic fields that are not less than two acres. Thus, nearly square lots are desired or with a smaller ratio of depth to width are more effective than deep narrow lots.

Alternatives to individual septic system treatment should be encouraged especially where rock is relatively shallow below the ground surface.

Community wastewater treatment options include:

- Community collection systems with pumping to an existing community treatment facility;
- Community non-discharging lagoons and collection systems;
- Individual septic tanks with community collection systems and lateral fields, and;
- Community collection systems with packaged treatment plant facilities, Tandem systems using individual septic tanks limit the cost of service lines by reducing solids from the liquid effluent and permit smaller, less expensive treatment plants.

In new developments, the county should also encourage the use of environmentally sensitive methods of wastewater treatment and disposal. The conservation concept and maintaining common open space provides greater opportunities for development of these systems.

Techniques such as spray irrigation and land treatment are becoming more applicable and should be considered for projects when feasible. This may represent cooperative efforts among several developments. With these methods, wastewater is aerated in deep lagoons and applied to the land surface at rates consistent with the absorption capacity of the soil. This process will require a close working relationship with KDHE to ensure all state and federal regulations are being met.

Other techniques that are also environmentally sensitive options include:

- Wastewater reclamation and reuse. This represents a refinement of the land treatment option. Treatment is typically achieved in deep aerated cells over 14 to 40 days. After further treatment and settlement, the water can then be applied to cropland and open space.
- Constructed Wetlands. Artificial wetlands are gaining growing acceptance for treatment of wastewater. This technique supplements rather than replaces septic treatment. The wetlands provide further treatment for effluent and have been combined with aerobic treatment units (ATUs) before effluent is conducted to drainage fields.

Chapter 10 Energy

Energy

Energy usage in the early 21st Century is becoming a critical issue throughout Kansas as well as the entire United States. Our dependency on non-renewable energy sources has increased significantly over the past 100 years.

Energy consumption comes in several forms, such as:

- Lighting our homes, businesses, and industries;
- Cooling and heating our homes, businesses, and industries;
- Heating our water for homes, businesses, and industries;
- Food preparation;
- Transportation – both personal and business related;
- Agricultural equipment, and
- Recreation and Entertainment – vehicular, computers, music, etc.

The 21st Century has ushered in an increased concern for energy usage and its impacts on the environment. This increased concern for the environment created a better understanding of the carbon footprint generated by any one individual as well as striving towards modifying our behavior patterns in order to lessen the footprint. In addition, the phrase and concept of sustainability has become more widely used, even in Kansas.

Energy in Ellsworth County refers to both the oil and natural gas industry as well as the renewable energy industry. Energy is a critical asset in Ellsworth County.

Oil and Natural Gas

Oil and natural gas production has a solid history in Ellsworth County. Table 10.1 shows the number of wells and production by barrels and cumulatively between 1995 and 2021. As of 2021, there are a total of 308 registered oil wells, which is down considerably from 1995 (a decrease of 41.8%). Between 1995 and 2021, the oil production in Ellsworth County has steadily declined along with the amount of wells; barrel production has decreased by 73.4%.

Natural gas production, based upon the Kansas Geological Survey, has increased in the county over the time period of 1995 to 2021. Table 10.3 shows the annual production of natural gas, similar to oil production for Ellsworth County. Despite the number of wells decreasing by 80.1%, the production of natural gas only decreased by 18.8%.

TABLE 10.1: OIL WELLS AND PRODUCTION BY BARREL AMOUNT

Year	Wells	Production (barrels)	Cumulative (barrels)
1995	529	387,848	129,273,533
1996	396	387,254	129,660,787
1997	393	385,987	130,046,774
1998	375	312,153	130,358,927
1999	313	316,073	130,675,000
2000	311	316,073	131,000,931
2001	301	305,078	131,306,009
2002	290	297,501	131,603,510
2003	293	296,840	131,900,350
2004	291	275,626	132,175,976
2005	291	284,065	132,460,041
2006	294	341,261	132,801,302
2007	292	311,097	133,112,399
2008	304	336,250	133,448,649
2009	302	296,570	133,745,219
2010	206	276,772	134,021,991
2011	316	259,609	134,281,600
2012	323	273,553	134,555,153
2013	329	287,672	134,842,825
2014	331	293,682	135,136,507
2015	335	288,595	135,425,102
2016	325	291,255	135,716,357
2017	332	265,600	135,981,957
2018	335	246,128	136,228,085
2019	334	236,047	136,464,132
2020	315	210,097	136,674,229
2021	308	103,294	136,793,384

Source: Kansas Geological Survey

TABLE 10.4: NATURAL GAS PRODUCTION BY YEAR

Year	Wells	Production (mcf)	Average per well (mcf)
1995	229,554	16	10,037,801
1996	143,038	15	10,180,839
1997	127,809	16	10,308,648
1998	73,384	14	10,382,032
1999	125,068	14	10,507,100
2000	87,411	14	10,594,511
2001	68,467	15	10,662,978
2002	67,384	12	10,730,362
2003	109,115	14	10,839,477
2004	132,498	15	10,971,975
2005	109,118	16	11,081,093
2006	83,962	16	11,165,055
2007	-	-	11,165,055
2008	75,997	10	11,241,052
2009	85,699	10	11,326,751
2010	356,041	22	11,682,792
2011	303,390	21	11,986,182
2012	244,366	21	12,230,548
2013	181,524	18	12,412,072
2014	229,736	19	12,641,808
2015	197,452	18	12,839,260
2016	119,880	13	12,959,140
2017	152,015	12	13,111,155
2018	110,185	12	13,221,340
2019	58,878	13	13,280,218
2020	73,067	15	13,353,285
2021	45,673	13	13,398,958

Source: Kansas Geological Survey

Renewable Energy

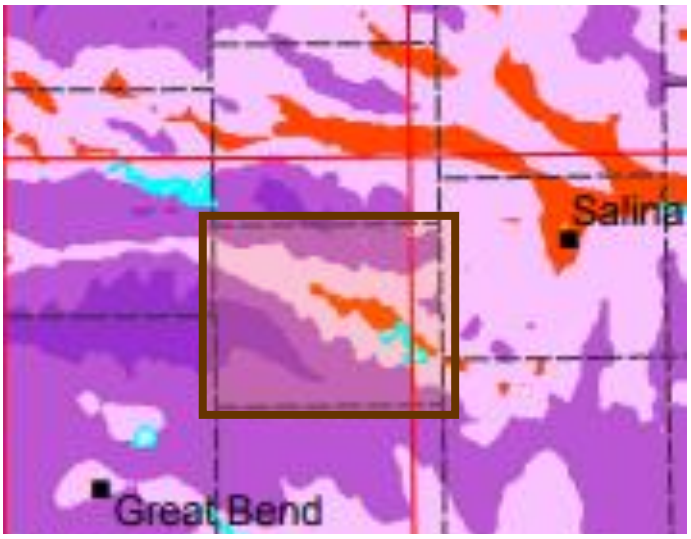
Renewable energy sources, according to most definitions, include natural resources such as the wind, the sun, water, and the earth (geothermal) that can be used over and over again with minimal or no depletion, as well as tapping into sources of methane (from natural resources or man-made conditions). The most common sources of renewable energy used in Kansas are the wind, the sun, water, and earth. The following are examples of how these renewable resources can be used to diversify the county's energy portfolio.

Wind

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

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

Figure 10.1: Annual Average Wind Speed @ 80 Meters



Source: US Department of Energy's Office of Energy Efficiency and Renewable Energy

According to the US Department of Energy's Office of Energy Efficiency & Renewable Energy, "*Areas with annual average wind speeds around 6.5 meters per second and greater at 80-m height are generally considered to have a resource suitable for wind development. Utility-scale, land-based wind turbines are typically installed between 80- and 100-m high although tower heights for new installations are increasing—up to 140 m—to gain access to better wind resources higher aloft.*"

As shown in Figure 10.1, a majority of Ellsworth County receives at least 7.5 meters per second of annual wind speeds when measured at 80 meters aloft. Therefore, Ellsworth County, like much of western Kansas, wind energy has seen significant growth in the past two decades in the county; favorable conditions seen in figure 10.1 show why this is possible.

Smoky Hills Wind Farm

Developed by Lenexa-based TradeWind Energy and operated by Enel Green Power, Smoky Hills Wind Farm is located on the Ellsworth-Lincoln County line. Phase I of this project went online in January 2008 using 56 Vestas V80 turbines (1.8 MW). Phase II went online at the end of 2008 with 99 GE 1.5 MW turbines. Total project size is 250 MW. Buyers of the power from the project include Sunflower Electric Power Corporation, Midwest Energy, and Kansas City Board of Public Utilities as well as the Cities of Independence, Missouri and Springfield, Missouri.
Source: Kansas Legislature

Post Rock Wind Farm

The 201MW Post Rock Wind Farm is located in Ellsworth and Lincoln counties. US. Wind Capital Group, a US-based subsidiary of Irish renewable energy firm NTR, is the owner and developer of the wind power project.

The construction of the $375m Post Rock Wind Farm started in September 2011 and was completed by October 2012. The wind farm was officially inaugurated in November 2012.

The wind farm has the potential to serve electricity needs of 70,000 households while offsetting 815,000t of greenhouse gas emissions a year.
Source: https://www.power-technology.com/projects/post-rock-wind-farm-kansas-us/

Solar

Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that

today's systems are not as bulky as their ancestors. Today, solar is being used much like wind turbines, on a small-scale level (home or business) or a much grander level (solar farms).

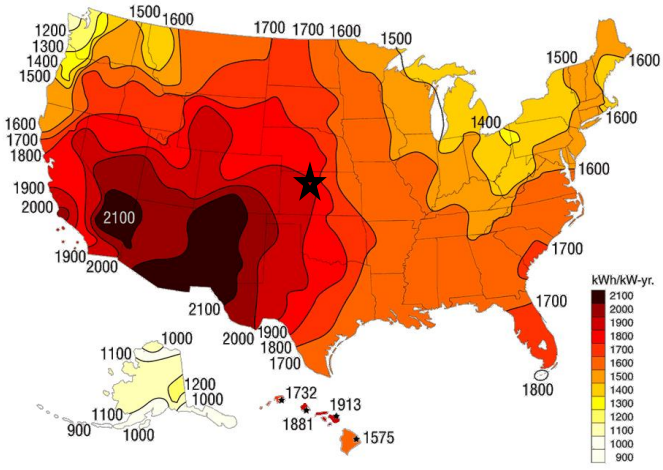
Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar costs, at the time of this plan, have been seeing dramatic cost decreases per kW. Solar is rapidly becoming much more affordable to install and use.

According to the Solar Energy Industries Association, there is great potential for solar generation in Ellsworth County as a majority of the county and the state lies within some of the better areas in the country for solar potential.

In the future, it may become desirable for new subdivisions/developments to incorporate dedicated renewable energy systems such as solar and wind. In order for this to occur, a standard subdivision regulation and zoning code would likely need to be modified in order to allow these systems.

Commercial solar provides opportunities for agricultural producers through the development of solar farms on lands with low to marginal production capacity. Instead of leaving land unfarmed, producers could work with energy developers to build new facilities.

FIGURE 10.2: SOLAR POTENTIAL



Source: Solar Energy Industries Association

GEOTHERMAL ENERGY

Geothermal energy is typically utilized through a process where a series of pipes are lowered into vertical cores called heat-sink wells. The pipes carry a highly conductive fluid that either is heated or cooled by the constant temperature of the ground. The resulting heat exchange is then transferred back into the heating and cooling system of a home or other structure. This is called a geothermal heat exchange system or ground source heat pump. The California Energy Commission estimates the costs of a geothermal system can earn net savings immediately when financed as part of a 30-year mortgage. *(Source: American Planning Association, PAS Memo January/February 2009)*.

METHANE ENERGY

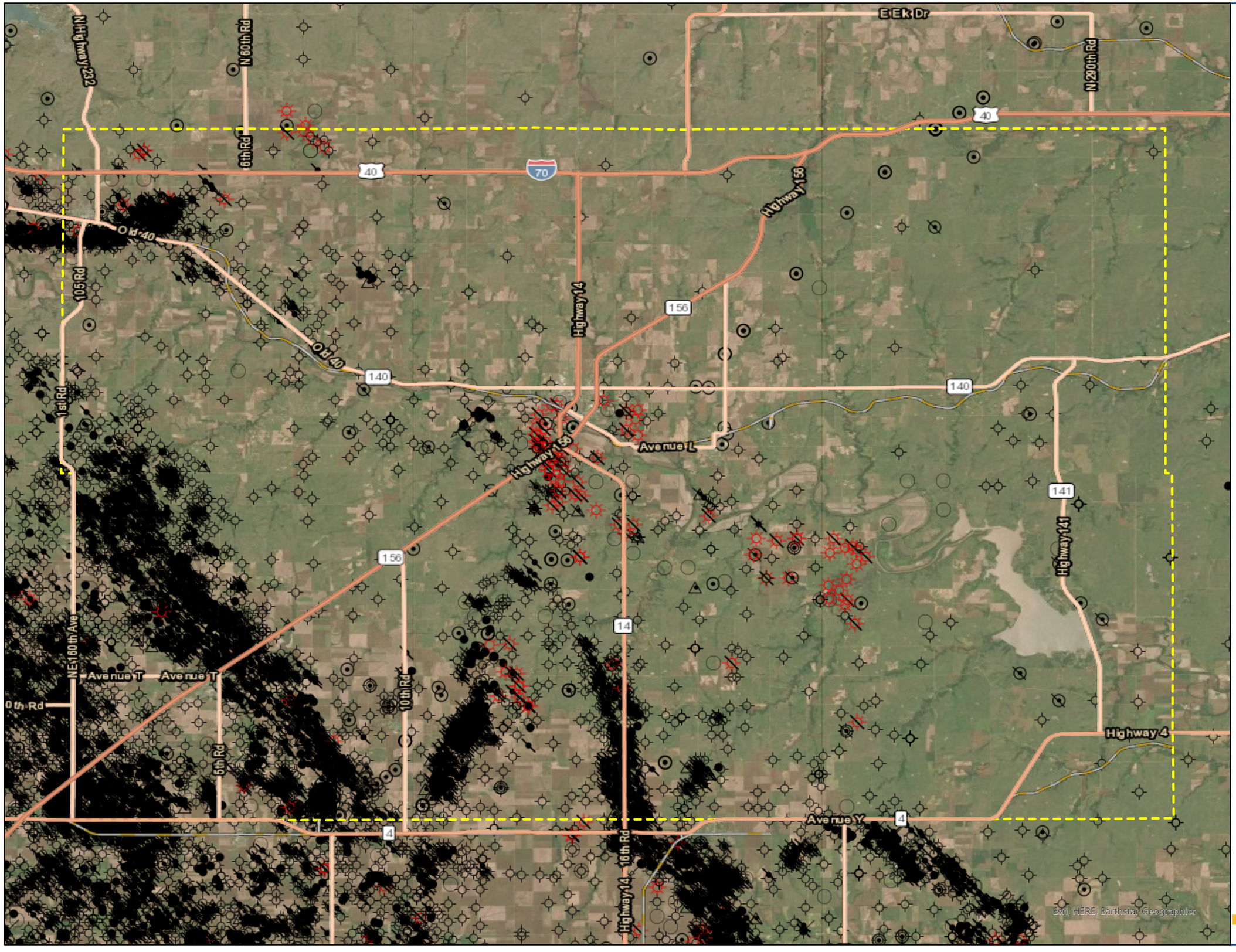
The use of methane to generate electricity is becoming more cost-effective across the country. Methane electrical generation can be accomplished through the use of a methane digester which takes the raw gas, naturally generated from some form of decomposing material, and converts the gas into electrical power.

There have been some attempts to take the methane generated from animal manure and convert it into electricity; most have been successful but were costly to develop. Another approach to methane electrical generation is to tap into the methane being generated from a solid waste landfill; instead of burning off the methane, it can be piped into a methane convertor and generated into electricity for operating a manufacturing plant or placed on the overall grid for distribution.

Methane convertors make use of unwanted gases and are able to produce a viable product. As long as humans need to throw garbage into a landfill or the production of livestock is required, there will be a source of methane to tap for electrical generation.

FUTURE USE OF ENERGY

Energy in the future is at a crossroads in the United States. There are some really wanting to move away from fossil fuels to all renewables and some wanting to limit renewable energy sources. Ellsworth County is getting heavily vested in both directions.



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 10.1 OIL AND GAS WELL LOCATIONS

- Ellsworth County Boundary

Oil and Gas Wells

- Coal Bed Methane
- Coal Bed Methane, Plugged-Abandoned
- Dry and Abandoned
- Enhanced Oil Recovery
- Enhanced Oil Recovery, Plugged-Abandoned
- Gas
- Gas, Plugged-Abandoned
- Injection
- Injection, Plugged-Abandoned
- Intent
- Location
- Oil and Gas
- Oil and Gas, Plugged-Abandoned
- Oil
- Oil, Plugged-Abandoned
- Other
- Other, Plugged-Abandoned
- Salt Water Disposal
- Salt Water Disposal, Plugged-Abandoned

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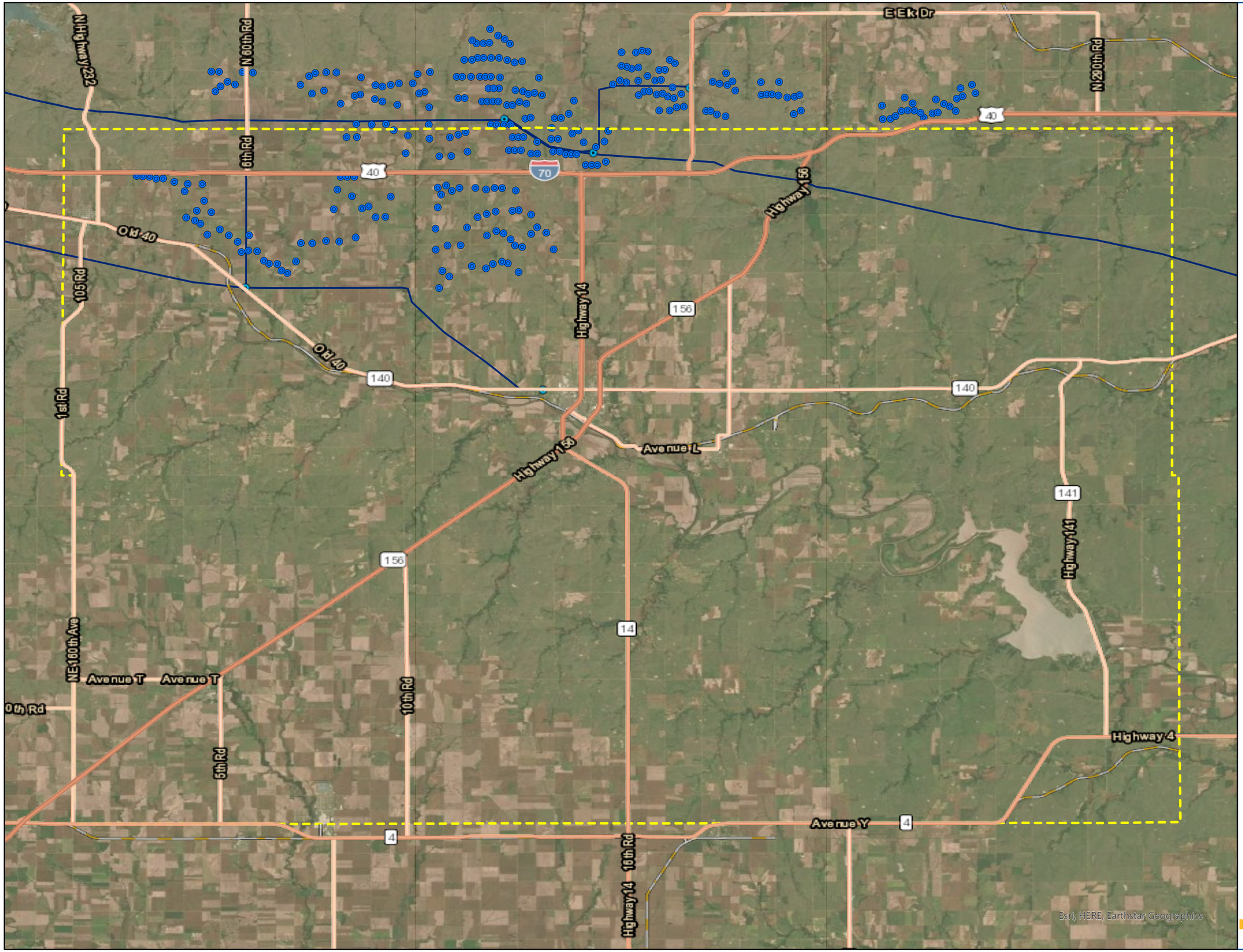

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 10.2 WIND ENERGY INFRASTRUCTRE

Ellsworth County Boundary

Wind Energy Infrastructure

- Wind Turbines
- Electric Substations
- Electric Transmission Lines

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Chapter 11 Hazards

Hazards

This Chapter of the Ellsworth County Comprehensive Vision Plan contains the description of specific hazards within the planning area. Good planning would dictate the need to include such issues as Hazards within the Comprehensive Vision Plan. The information found in this Chapter has been taken from the current Hazard Mitigation Plan written for the counties of Clay, Cloud, Dickinson, Ellsworth, Jewell, Lincoln, Mitchell, Osborne, Ottawa, Republic, Saline, and Smith. The discussion herein will be focused on those with a land use impact and only for Ellsworth County.

Hazards Section

One of the key items within the hazard mitigation plan is a risk assessment for the future. The assessment is based upon the type of hazard event and likelihood of it occurring again in the future.

The types of hazards assessed are:

- Agricultural infestation;
- Civil disorder;
- Dam and levee failure;
- Drought;
- Earthquake;
- Expansive soils;
- Extreme temperature;
- Flood;
- Hailstorm;
- Hazardous materials;
- Land subsidence;
- Landslide;
- Lightning;
- Major disease outbreak;
- Radiological;
- Soil erosion & dust;
- Terrorism/Agri-Terrorism;
- Tornado;
- Utility/Infrastructure failure;
- Wildfire;
- Windstorm, and;
- Winter Storm.

Hazard Mitigation Plan

The Multi-jurisdictional Hazard Mitigation Plan rates the 22 different hazards on Location, Maximum Probable Extent, Probability of Future Events, and Overall Significance. It is critical to monitor hazards, even the ones rated as a Low Risk. The key to successfully addressing these incidents is to follow through with the Goals and Strategies developed to mitigate the issues. Successful mitigation will aid in minimizing the overall loss occurring from any hazard situation.

The following information is taken directly from the 2019 Hazard Mitigation Plan which includes Ellsworth County. The expectation of this section and Chapter is that information, goals and mitigation strategies will be updated in the Comprehensive Vision Plan as new Hazard Mitigation Plans are adopted.

Based on the identification of potential hazards, each hazard is profiled to provide data concerning previous occurrences, the probability of future occurrence and the threat to the planning area. As north-northwest Kansas is generally uniform in terms of climate, topography, building characteristics, and development trends, overall hazards and vulnerability do not vary greatly across the planning area. Weather-related hazards such as drought, extreme temperatures, hail, tornados, windstorms, and winter storms affect the entire planning area. As such, one general profile will be created for these hazards. However, some hazards such as dam and levee failure, flood and landslide may have local variances and multiple profiles may be developed if the risk does not match with the entire planning area.

For each identified hazard the following information is provided:

- **Hazard Description:** a general discussion of the hazard and includes information on potential warning time, the potential duration of the event, and potential impacts;
- **Hazard Location:** the geographic extent or location of the hazard in the planning area;
- **Previous Occurrences and Extent:** information on historic incidents and their impacts;
- **Hazard Vulnerability and Impact:** discussion of the vulnerability of the region, or specific jurisdiction as appropriate, and potential impacts of identified hazards;
- **Future Development:** potential results of future development related to hazards;
- **Probability of Future Occurrence:** frequency of past events used to gauge the likelihood of future occurrences, and
- **Consequence Analysis:** analysis of the potential impacts using set criteria.

Calculated Priority Risk Index

The North-Northwest Kansas HMPC used the calculated priority risk index (CPRI) methodology to prioritize each of the identified hazards. CPRI prioritization considers the following four elements of risk:

- Probability;
- Magnitude/Severity;
- Warning Time, and;
- Duration.

The following tables provide a summary for each of the risk elements, including a rationale behind each numerical rating.

Table 11.1: Risk Elements

	Rating	Rating Parameters
Probability	4 Highly Likely	Event is probable within the calendar year
		Event has up to 1 in 1 year chance of occurring (1/1=100%)
		History of events is greater than 33% likely per year
		Event is "Highly Likely" to occur
	3 Likely	Event is probable within the next three years
		Event has up to 1 in 3 years chance of occurring (1/3=33%)
		History of events is greater than 20% but less than or equal to 33% likely per year
		Event is "Likely" to occur
	2 Occasional	Event is probable within the next five years
		Event has up to 1 in 5 years chance of occurring (1/5=20%)
		History of events is greater than 10% but less than or equal to 20% likely per year
		Event could "Possibly" occur
	1 Unlikely	Event is possible within the next 10 years
		Event has up to 1 in 10 years chance of occurring (1/10=10%)
		History of events is less than or equal to 10% likely per year
		Event is "Unlikely" but is possible of occurring

	Rating	Rating Parameters
Magnitude /Severity	4 Catastrophic	Multiple deaths
		Complete shutdown of facilities for 30 or more days
		More than 50 percent of property is severely damaged
	3 Critical	Injuries and/or illnesses result in permanent disability
		Complete shutdown of critical facilities for at least two weeks
		25–50 percent of property is severely damaged
	2 Limited	Injuries and/or illnesses do not result in permanent disability
		Complete shutdown of critical facilities for more than one week
		10–25 percent of property is severely damaged
	1 Negligible	Injuries and/or illnesses are treatable with first aid
		Minor quality of life lost
		Shutdown of critical facilities and services for 24 hours or less
		Less than 10 percent of property is severely damaged

	Rating	Rating Parameters
Warning Time	4	Less than 6 hours
	3	6-12 hours
	2	12-24 hours
	1	24+ hours

	Rating	Rating Parameters
Duration	4	More than 1 week
	3	Less than 1 week
	2	Less than 1 day
	1	Less than 6 hours

Using the rankings described in the tables above, the following weighted formula was used to determine each hazard's CPRI:

Probability x 0.45 + Magnitude/Severity x 3.0 + Warning Time x 0.15 + Duration x 0.10

Based on their CPRI, each hazard was assigned a planning significance category. Each planning significance category was assigned a CPRI range, with a higher score indicating greater planning criticality. The following table details planning significance CPRI ranges.

Based on their CPRI, each hazard was assigned a planning significance category. Each planning significance category was assigned a CPRI range, with a higher score indicating greater planning criticality. The following table details planning significance CPRI ranges.

CPRI Range Planning Significance

	CPRI Range	
Planning Significance	**Low CPRI**	**High CPRI**
High	3.0	4.0
Moderate	2.0	2.9
Low	1.0	1.9

The terms high, moderate and low indicate the level of prioritization of planning effort for each hazard, and do not indicate the potential impact of a hazard occurring. Hazards rated with moderate or high planning significance were more thoroughly investigated and discussed due to the availability of data and historic occurrences, while those with a low planning significance were generally addressed due to lack of available data and historical occurrences. The following table shows previous CPRI ratings for Ellsworth County. Based on discussions with the HMPC, the CPRIs were reviewed and approved or modified as required.

TABLE 11.2: REGIONAL HAZARD CPRI PLANNING SIGNIFICANCE

Hazard CPRI Planning Significance

Hazard	Probability	Magnitude/Severity	Warning Time	Duration	CPRI
Agricultural Infestation	1.22	1.89	1.00	4.00	1.67
Civil Disorder	1.00	1.00	4.00	1.00	1.48
Dam and Levee Failure	1.00	2.67	2.00	3.56	1.91
Drought	3.11	3.00	1.00	4.00	2.85
Earthquake	1.00	1.44	4.00	1.00	1.58
Expansive Soils	1.11	1.00	1.00	4.00	1.35
Extreme Temperature	2.00	1.33	1.33	3.00	1.80
Flood	3.00	2.67	2.22	3.00	2.78
Hailstorm	4.00	3.11	3.00	1.00	3.28
Hazardous Materials Event	1.22	1.78	4.00	1.33	1.82
Land Subsidence	1.00	1.11	1.89	4.00	1.47
Landslide	1.00	1.00	3.89	1.00	1.43
Lightning	1.11	1.00	4.00	1.00	1.50
Major Disease Outbreak	1.00	2.56	1.00	4.00	1.77
Radiological Event	1.00	1.00	4.00	4.00	1.75
Soil Erosion & Dust	2.00	1.11	1.00	4.00	1.78
Terrorism, Agri-Terrorism	1.00	2.00	4.00	1.00	1.75
Tornado	3.22	3.22	4.00	1.00	3.12
Utility / Infrastructure Failure	2.22	1.67	4.00	2.11	2.31
Wildfire	3.22	2.33	3.89	1.89	2.92
Windstorm	3.89	3.00	2.11	1.89	3.16
Winter Storm	4.00	2.67	1.78	2.78	3.14

HAZARDS GOALS AND POLICIES

The following goals were established for the entire Hazard Mitigation Plan.

Goal 1: Reduce and/or eliminate the risk to the people and property of North-Northwest Kansas from the identified hazards in this plan.

Goal 2: Strive to protect all of the vulnerable populations, structures, and critical facilities in North-Northwest Kansas from the impacts of the identified hazards.

Goal 3: Improve public outreach initiatives to include education, awareness and partnerships with all willing entities in order to enhance understanding of the risks North-Northwest Kansas faces due to the impacts of the identified hazards.

Goal 4: Enhance communication and coordination among all agencies and between agencies and the public.

Note: the table above is only the excerpt for Ellsworth County. See the 2019 Hazard Mitigation Study for the surrounding counties.

Based upon the 2019 Hazard Mitigation Study's regional/county specific ratings similar to Table 10.1, the following Table calculates a regional CPRI rating for each hazard.

Hazards Funding Sources

The following funding sources are taken directly from the 2019 Multi-jurisdictional Hazard Mitigation plan.

- Hazard Mitigation Grant Program (HMGP): The HMGP assists in implementing long-term hazard mitigation measures following Presidential disaster declarations. Funding is available to implement projects in accordance with State, Tribal, and local priorities.
- Pre-Disaster Mitigation (PDM): The PDM program provides funds on an annual basis for hazard mitigation planning and the implementation of mitigation projects prior to a disaster. The goal of the PDM program is to reduce overall risk to the population and structures, while at the same time, also reducing reliance on Federal funding from actual disaster declarations.
- Flood Mitigation Assistance (FMA): FMA provides funds on an annual basis so that measures can be taken to reduce or eliminate risk of flood damage to buildings insured under the NFIP.
- Public Assistance (PA) Grant Program: The mission of FEMA's PA program is to provide assistance to State, Tribal and local governments, and certain types of Private Nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. Through the PA program, FEMA provides supplemental Federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain private non-profit organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process. The Federal share of assistance is not less than 75% of the eligible cost for emergency measures and permanent restoration. The grantee (usually the State) determines how the non-Federal share (up to 25%) is split with the eligible applicants.
- Small Business Administration (SBA) Disaster Loans: The SBA provides low-interest disaster loans to homeowners, renters, businesses of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.
- The Housing and Urban Development Agency provides flexible grants to help cities, counties, and States recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations.
- Community Development Block Grant Program - The Community Development Block Grant (CDBG) program is a flexible program that provides communities with resources to address a wide range of unique community development needs. Beginning in 1974, the CDBG program is one of the longest continuously run programs at the Housing and Urban Development Agency. The CDBG program provides annual grants on a formula basis to 1209 general units of local government and states. HUD provides flexible grants to help cities, counties, and states recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations.
- Individual & Households, Other Needs Assistance (ONA) Program: The ONA program provides financial assistance to individuals or households who sustain damage or develop serious needs because of a natural or man-made disaster. The funding share is 75% federal funds and 25% state funds. The ONA program provides grants for necessary expenses and serious needs that cannot be provided for by insurance, another federal program, or other source of assistance. The current maximum allowable amount for any one disaster to individuals or families is $25,000. The program gives funds for disaster-related necessary expenses and serious needs, including the following categories:
    - Personal property
    - Transportation
    - Medical and dental
    - Funeral
    - Essential tools
    - Flood insurance
    - Moving and storage
- Wildland Urban Interface (WUI) Grants: The 10-Year Comprehensive Strategy focuses on assisting people and communities in the WUI to moderate the threat of catastrophic fire through the four broad goals of improving prevention and suppression, reducing hazardous fuels, restoring fire-adapted ecosystems, and promoting community assistance. The WUI Grant may be used to apply for financial assistance towards hazardous fuels and educational projects within the four goals of: improved prevention, reduction of hazardous fuels, restoration of fire-adapted ecosystems and promotion of community assistance.

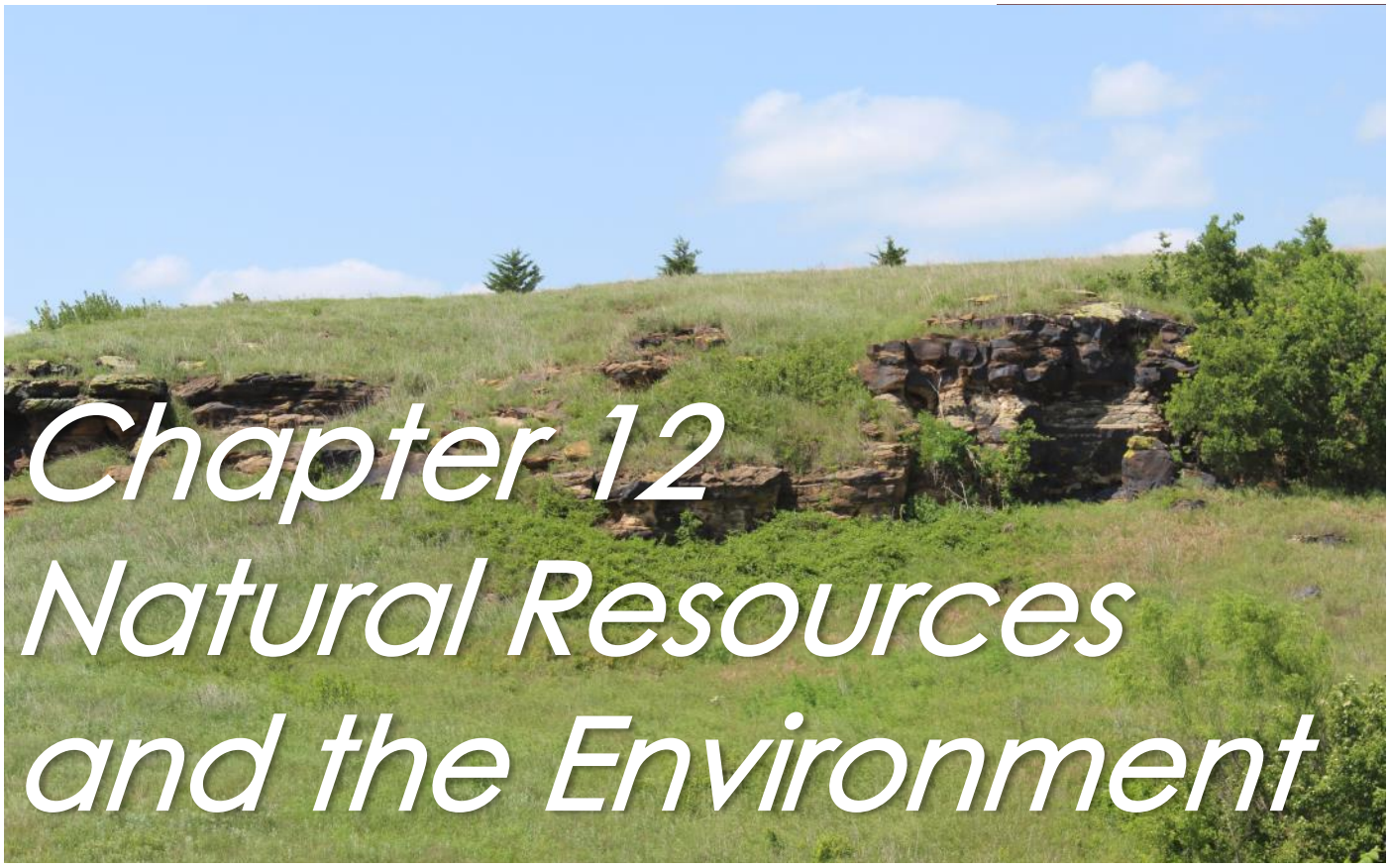
Mitigation Strategies

The following pages are key hazard mitigation strategies formulated during the study period.

TABLE 11.3: MITIGATION ACTIONS

Action Identification	Description	Hazard Addressed	Responsible Party	Overall Priority	Goal(s) Addressed	Estimated Cost	Potential Funding Source	Proposed Completion Timeframe	Current Status
Ellsworth County-1	Ellsworth County is committed to continued participation and compliance with the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
Ellsworth County-2	Purchase and demolish properties located in the floodplains in the county. **(NFIP)**	Dam and Levee Failure, Flood	NFIP Administrator	Low	1,2	$100,000 per property	HMGP, PDM, Local	Five years	On-going, lack of funding
Ellsworth County-3	Conduct NFIP community workshops to provide information and incentives for property owners to acquire flood insurance. **(NFIP)**	Flood	NFIP Administrator	High	1,2,3	Staff Time	Local	Continuous	New
Ellsworth County-4	Dredge the lakes, watersheds and river channels located near communities within the county to allow a larger capacity of water and water flow during heavy snows and thunderstorms. **(NFIP)**	Dam and Levee Failure, Flood, Drought, Extreme Heat, Winter Storm	Emergency Manager, NFIP Administrator	Low	1,2	$1,000,000 plus	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-5	Conduct a flood plain study to determine the number of properties located in the floodplains in the county and purchase properties that are located in the 100- and 500-year floodplain after the properties have been determined. **(NFIP)**	Dam and Levee Failure, Flood	Emergency Manager, NFIP Administrator	Low	1,2	$60,000 per property	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-6	Purchase and install a multi-purpose public address and warning system.	All Hazards	Emergency Manager	High	1,2	$40,000 per system	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-7	Provide a NOAA Weather Radio to all residents in the county.	All Hazards	Emergency Manager	High	1,2	$20,000	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-8	Build community storm shelters in underserved rural areas and communities.	All Hazards	Emergency Manager	High	1,2	$500,000 per shelter	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-9	Have a community wide drainage and stormwater cleanup days to remove all trash and debris from local drainage ways.	All Hazards	Emergency Manager	High	1,2,3	Staff Time	HMGP, PDM, Local, Other Grants	Three years	On-going, no progress made
Ellsworth County-10	Conduct countywide tree-trimming program to remove branches and trees from power lines.	Utility/ Infrastructure Failure	Emergency Manager, REC Directors	High	1,2	$18,000	HMGP, PDM, Local, Other Grants	Three years	On-going, program on-going with a proactive stance
Ellsworth County-11	Purchase backup generators for City Halls, Emergency Operations Centers, the Police Departments, the Fire Departments, Community Centers, as well as two portable units for locations as needed throughout the county.	Utility/ Infrastructure Failure	Emergency Manager	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Three years	On-going, lack of funding
Ellsworth County-12	Provide a reimbursement program for local residents to purchase generators needed at their homes or businesses.	Utility/ Infrastructure Failure	Emergency Manager	High	1,2	Dependent on participation	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-13	Purchase a computer backup system for county.	All Hazards	Emergency Manager	Medium	1,2	$5,000	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-14	Purchase an EM Mobile Unit to serve as a command post during a hazard event.	All Hazards	Emergency Manager	Medium	1,2	$50,000 per unit	HMGP, PDM, Other Grants	Five years	On-going, lack of funding
Ellsworth County-15	Purchase lightning detection systems to provide warnings at city parks, campgrounds, and school recreation areas.	Lightning	Emergency Manager	High	1,2	$5,000	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-16	Purchase pumper trucks and/or fire and response equipment for each fire station within the county.	Hazardous Material, Wildfire	Emergency Manager	Medium	1,2	$40,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-17	The county would like to offer an individual safe room program with FEMA funding.	Earthquake, Hail, Windstorm, Lightning, Tornado	Emergency Manager	High	1,2	Staff Time	HMGP, PDM, Local, Other Grants	Five years	On-going, no progress made
Ellsworth County-18	Help cities become Firewise Communities by having each community have a Firewise Plan.	Drought, Wildfire	Emergency Manager	High	1,2,4	$10,000 plus	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
Ellsworth County-19	Install a saferoom in the Ellsworth County Medical Center	Tornado	Emergency Preparedness Director for Medical Center	High	1,2	207750	Local, State, Federal, In Kind, Donations, Grants	Four years	On-going. lack of funding

City of Ellsworth-1	Continued participation in the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Ellsworth-2	Continued enforcement of floodplain ordinance. **(NFIP)**	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Ellsworth-3	Acquire and demolish properties located in floodplains. **(NFIP)**	Flood	City Administrator	Low	1,2	$60,000 per property	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-4	Have a community wide drainage and stormwater cleanup days to remove all trash and debris from local drainage ways.	Flood, Winter Storm	City Administrator	High	1,2,3	Staff Time and $5,000	HMGP, PDM, Local, Other Grants	Three years	On-going, lack of funding
City of Ellsworth-5	Purchase backup generators critical facilities.	Utility/ Infrastructure Failure	City Administrator	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-6	Purchase a computer backup system city.	All Hazards	City Administrator	Medium	1,2	$5,000	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-7	Purchase remote weather cameras to view incoming weather events around the city.	All Hazards	City Administrator	High	1,2	$15,000 per system	HMGP, PDM, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-8	Purchase above ground gas pumps for city vehicles in times of disasters with a backup generator.	Utility/ Infrastructure Failure	City Administrator	High	1,2	$15,000 per setup	HMGP, PDM, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-9	Become a Firewise Community by having a Firewise Plan.	Drought, Wildfire	City Administrator	High	1,2,4	$10,000 plus	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Ellsworth-58	Construct community safe rooms	Tornado, Windstorm	Mayor	Medium	1,2	$500,000	Local, State, Federal	Five years	On-going, lack of funding
City of Holyrood-1	Continued participation in the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Holyrood-2	Continued enforcement of floodplain ordinance. **(NFIP)**	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Holyrood-3	Construct community safe rooms	Tornado, Windstorm	Mayor	Medium	1,2	$500,000	Local, State, Federal	Five years	On-going, lack of funding
City of Holyrood-4	Purchase backup generators critical facilities	Utility/ Infrastructure Failure	Mayor	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Kannapolis-1	Continued participation in the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Kannapolis-2	Continued enforcement of floodplain ordinance. **(NFIP)**	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Kannapolis-3	Construct community safe rooms	Tornado, Windstorm	Mayor	Medium	1,2	$500,000	Local, State, Federal	Five years	On-going, lack of funding
City of Kannapolis-4	Purchase backup generators critical facilities	Utility/ Infrastructure Failure	City Administrator	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Lorraine-1	Continued participation in the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Lorraine-2	Continued enforcement of floodplain ordinance. **(NFIP)**	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Lorraine-3	Construct community safe rooms	Tornado, Windstorm	Mayor	Medium	1,2	$500,000	Local, State, Federal	Five years	On-going, lack of funding
City of Lorraine-4	Purchase backup generators critical facilities	Utility/ Infrastructure Failure	City Administrator	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Lorraine-5	Become a Firewise Community by having a Firewise Plan.	Drought, Wildfire	City Administrator	High	1,2,4	$10,000 plus	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Wilson-1	Continued participation in the **NFIP**.	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Wilson-2	Continued enforcement of floodplain ordinance. **(NFIP)**	Flood	NFIP Administrator	High	1,2	Staff Time	Local	Continuous	In progress
City of Wilson-3	Construct community safe rooms	Tornado, Windstorm	Mayor	Medium	1,2	$500,000	Local, State, Federal	Five years	On-going, lack of funding
City of Wilson-4	Purchase backup generators critical facilities	Utility/ Infrastructure Failure	City Administrator	High	2	$10,000 - $15,000 per unit	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding
City of Wilson-5	Become a Firewise Community by having a Firewise Plan.	Drought, Wildfire	City Administrator	High	1,2,4	$10,000 plus	HMGP, PDM, Local, Other Grants	Five years	On-going, lack of funding



Chapter 12 Natural Resources and the Environment

Natural Resources and the Environment

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

Chapter Topics

The following topics will be covered in this chapter.

- Natural Conditions
- Wetlands
- Soil Types
- Capability Grouping
- Soil Suitability and Limitations
- Prime Farmland
- Hydric Soils
- Groundwater
- Surface Water
- Flooding Hazards

Natural Conditions

Climate

The following information was taken from the Ellsworth County Soil Survey by the United States Department of Agriculture - Soil Conservation Service - 1985.

The climate of Ellsworth County is typical continental, as can be expected of a location in the interior of a large landmass in the middle latitudes. It is characterized by large daily and annual variations in temperature. Winters are cold because of frequent outbreaks of polar air. The cold temperatures prevail only from December to February. Warm summer temperatures prevail for about 6 months every year. They provide a long growing season for the crops grown in the county. Spring and fall are relatively short.

Ellsworth County is generally along the western edge of the flow of moisture-laden air from the Gulf of Mexico. Shifts in this current result in a rather large range in the amount of precipitation received. Precipitation is heaviest from May through September, when much of it falls during late-evening or nighttime thunderstorms. Precipitation in dry years is marginal for agricultural production. Even in wet years, crops commonly are adversely affected by prolonged periods without rain.

In winter the average temperature is 32.4 degrees F, and the average daily minimum temperature is 20.1 degrees. In summer the average temperature is 78.4 degrees, and the average daily maximum temperature is 91.3 degrees.

The total annual precipitation is 28.09 inches. Of this, 20.81 inches, or 74 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 15.35 inches.

Severe windstorms and tornadoes accompany well developed thunderstorms, but they are infrequent and of local extent. Losses from hail are more severe, but they are not so great as the losses in counties to the west.

The average seasonal snowfall is 23.5 inches. On the average, 20 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The sun shines 76 percent of the time possible in summer and 64 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 13.4 miles per hour, in April. Average annual windspeed is 11.4 miles per hour.

Geology

The following information was taken from the Kansas Geological Survey.

Ellsworth-Kanopolis anticline is part of the Wilson-Burns element; the Smoky Hill River valley follows approximately the axis of this structure across most of Ellsworth County, and the course of the river may be controlled by structure along that element. Departures of the Smoky Hill River from the axis of the crest of the Ellsworth-Kanopolis anticline, as mapped on top of the Precambrian basement, may be caused in part by superimposed reflection of the structure in younger rocks.

Mapping of the Kiowa-Dakota contact along the Smoky Hill River indicates considerable apparent offset of the contact from the northeast bank of the river near Kanopolis to the southwest bank of the river south of Ellsworth, a distance of about five miles. The apparent offset of the contact and differences in altitude of the contact along the river indicate that the Ellsworth-Kanopolis anticline is reflected in the contact of the Kiowa and Dakota Formations. The low altitude of the contact in the area east of Kanopolis probably is due to its location on the structurally low parts of the northeast flank of the Ellsworth-Kanopolis anticline. Three faults have been mapped at the surface in Ellsworth County.

Relief and Drainage

The following information was taken from the Ellsworth County Soil Survey by the United States Department of Agriculture - Soil Conservation Service - 1985, as well as the Kansas Geological Survey.

Relief

Relief, or lay of the land, influences the formation of soils through its effect on drainage, runoff, plant cover, and soil temperature. Although climate and plants are the most active factors of soil formation, relief also is important, mainly because it controls the movement of water on the surface and into the soil. Runoff is more rapid on the steeper upland soils than on the less sloping soils. As a result, erosion is more extensive. Hedville soils formed in old parent material, but relief has restricted their formation. Runoff is rapid on these moderately sloping to steep soils, and much of the soil material is removed as soon as a soil profile forms.

Drainage

Drainage of Ellsworth County is divided among three river systems. The Saline River drains a large northeastern area, the Smoky Hill River occupies the center of the county and has the largest watershed, and the Arkansas River receives the runoff from the southwest part of the county. Thus, part of the divide between the large watersheds of the Kansas River and the Arkansas River extends across southwestern Ellsworth County.

The drainage pattern in Ellsworth County is dendritic (tributaries extend from main streams as do branches on a tree). Examination of the drainage pattern on 7 1/2-minute topographic quadrangle maps shows a number of tributaries that turn to enter trunk streams at angles greater than normal for a dendritic pattern. Several of these obviously result from stream piracy. Valleys are fairly wide and shallow throughout most of the county, but streams have cut some rather deep canyons in areas of thick sandstone bodies. Other stream-pattern peculiarities seem to result from diversion of the stream upon encountering resistant sandstone bodies in the Dakota Formation. Streams tributary

to the Saline River appear to be gaining drainage area at the expense of the Smoky Hill watershed.

Most of the streams are intermittent; that is, they carry water during and for a time after rainfall. During the summer even the trunk streams often have only standing pools of water.

Wildlife

There are no critical habitats for threatened and endangered species nor species in need of conservation.
Sources Kansas Department of Wildlife & Parks

Wetland

Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods during the year, including during the growing season. Water saturation (hydrology) largely determines the soil development and the types of plant and animal communities living in and on the soil.

Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions favoring the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Two general categories of wetlands are recognized: coastal or tidal wetlands and inland or non-tidal wetlands.

Inland Wetlands

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

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

The federal government protects wetlands through regulations (like Section 404 of the Clean Water Act), economic incentives and disincentives (for example, tax deductions for selling or donating wetlands to a qualified organization and the "Swampbuster" provisions of the Food Security Act), cooperative programs, and acquisition (for example, establishing national wildlife refuges).

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

The federal government achieves the restoration of former or degraded wetlands under the Clean Water Act Section 404 program as well as through watershed protection initiatives. Together, partners can share limited resources to find the best solutions to protect and restore America's natural resources. While regulation, economic incentives, and acquisition programs are important, they alone cannot protect the majority of our remaining wetlands. Education of the public and efforts in conjunction with states, local governments, and private citizens are helping to protect wetlands and to increase appreciation of the functions and values of wetlands. The rate of wetlands loss has been slowing. Approximately 75 percent of wetlands are privately owned, so individual landowners are critical in protecting these areas.

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

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

Wetlands are categorized in several classifications, each more detailed and specific than the previous. The NWI uses five systems; marine, estuarine, riverine, lacustrine, and palustrine. Within each system, there are subsystems, classes, subclasses, and dominance types to describe different wetland characteristics. The system classification refers to wetlands sharing similar hydrologic, geomorphologic, chemical, or biological factors. The following are definitions and examples of three of the five systems used to describe wetlands. The marine and estuarine wetland systems are located in and near the open ocean; therefore, they do not occur in Kansas. Further information, through NWI, on specific classifications is available.

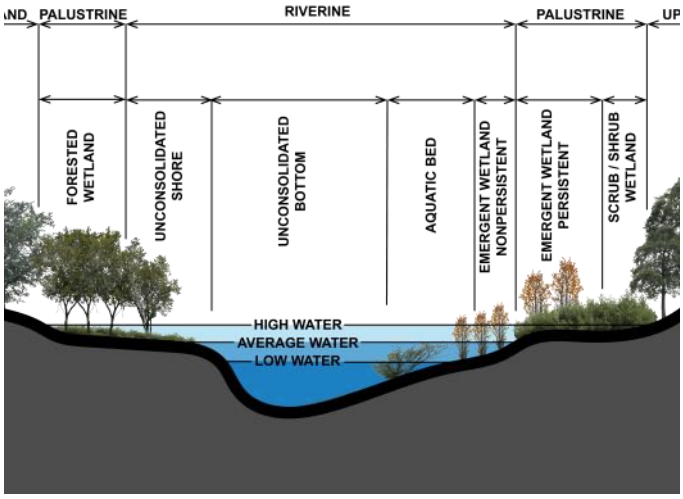
Ellsworth County experiences each of the other three wetland systems. The majority of the wetlands in the county occur mostly along the rivers and as meadow areas. However, there are smaller wetland pockets scattered around Ellsworth County. Figures 12.1, 12.2, and 12.3 depict common examples of the riverine, lacustrine, and palustrine wetlands, respectively. These figures were produced by the United States Fish and Wildlife Service, and are taken from their 1979 publication entitled "Classification of Wetlands and Deepwater Habitats of the United States", some enhancement was completed in order to place accents on key areas. Figure 12.4 shows the occurrence of wetlands in Ellsworth County.

Riverine Wetlands

Figure 12.1 shows the riverine system includes all wetlands occurring in channels, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergent, emergent mosses, or lichens, and (2) habitats with water containing ocean derived salts in excess of 0.5%. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. Therefore, water is usually, but not always, flowing in the riverine system.

Springs discharging into a channel are also part of the riverine system. Uplands and palustrine wetlands may occur in the channel, but are not included in the riverine system. Palustrine Moss-Lichen Wetlands, Emergent Wetlands, Scrub-Shrub Wetlands, and Forested Wetlands may occur adjacent to the riverine system, often in a floodplain.

Figure 12.1: Riverine Wetlands



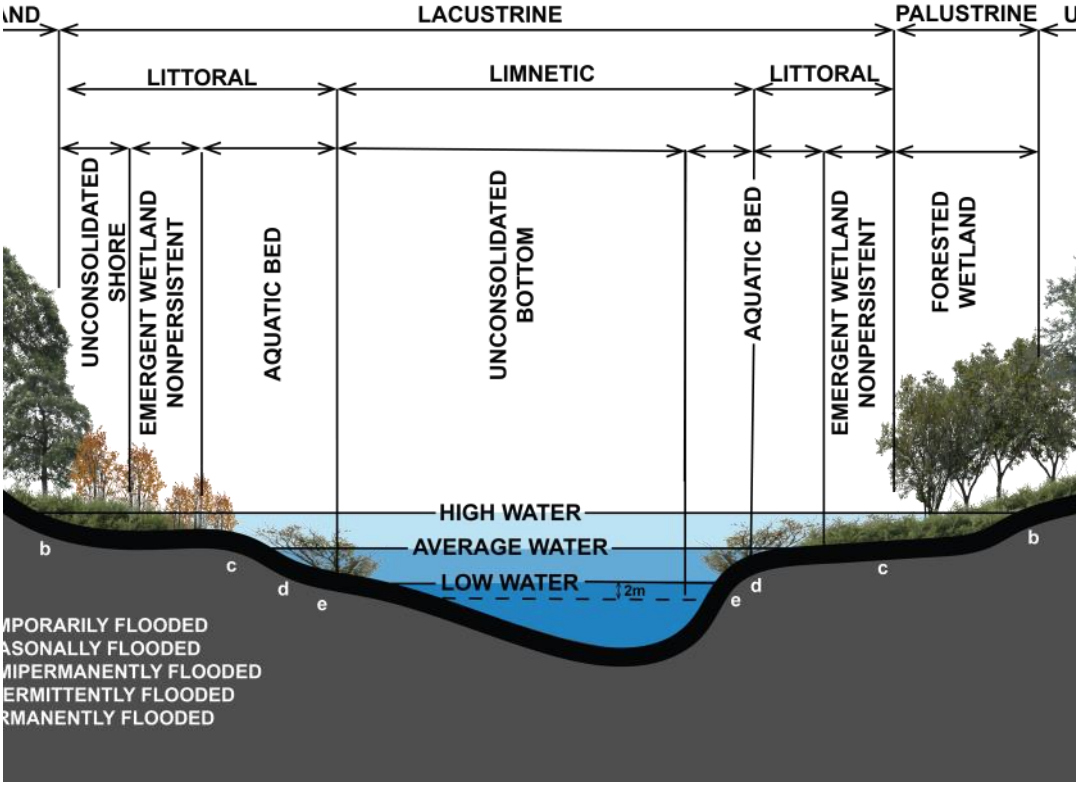
Source: National Wetlands Inventory

Lacustrine Wetlands

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

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

FIGURE 12.2: LACUSTRINE WETLANDS



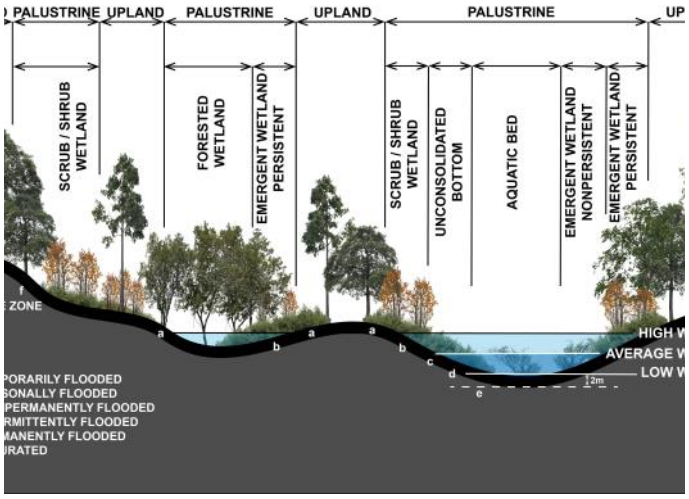
Source: National Wetlands Inventory

PALUSTRINE WETLANDS

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

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

FIGURE 12.3: PALUSTRINE WETLAND SYSTEM



Source: National Wetland Inventory

TABLE 12.1: SOIL TYPES PRESENT IN ELLSWORTH COUNTY

Map Unit Symbol	Map Unit Name	Non-irrigated Capability Class	Irrigated Capability Class	Acres in AOI	% of AOI
2176	McCook loam, occasionally flooded	2w	2w	1,050.50	0.20%
2178	McCook silty clay loam, frequently flooded	5w	-	1,067.10	0.20%
2236	Roxbury silt loam, occasionally flooded	2w	2w	6,840.80	1.50%
2266	Tobin silt loam, occasionally flooded	2w	2w	29,075.20	6.30%
2347	McCook silt loam, rarely flooded	1	1	5,648.30	1.20%
2375	Roxbury silt loam, rarely flooded	2e	1	3,570.20	0.80%
2519	Armo loam, 3 to 7 percent slopes	3e	3e	17,708.80	3.80%
2521	Armo loam, 7 to 15 percent slopes	6e	6e	14,186.00	3.10%
2613	Harney silt loam, 1 to 3 percent slopes	2e	2e	66,053.70	14.30%
2616	Harney silty clay loam, 3 to 7 percent slopes	3e	3e	41.8	0.00%
2633	Harney-Wakeen complex, 3 to 7 percent slopes	3e (Harney), 4e (Wakeen)	3e (Harney), 3e (Wakeen)	14,354.10	3.10%
2634	Harney-Wells complex, 3 to 7 percent slopes	3e (Harney), 3e (Wells)	3e (Harney), 3e (Wells)	50,191.80	10.80%
2718	Nibson silt loam, 3 to 30 percent slopes	6e	6e	7,169.20	1.50%
2726	Nibson-Wakeen silt loams, 3 to 20 percent slopes	6e (Nibson, 6e (Wakeen)	6e (Nibson, 6e (Wakeen)	6,593.80	1.40%
2953	Wakeen silt loam, 3 to 7 percent slopes	4e	4e	27.6	0.00%
3352	Edalgo loam, 3 to 7 percent slopes	4e	4e	2,240.00	0.50%
3365	Edalgo-Hedville loams, 7 to 15 percent slopes	6e (Edalgo), 6e (Hedville)	6e (Edalgo), 6e (Hedville)	24,408.80	5.30%
3366	Edalgo-Hedville loams, 15 to 40 percent slopes	7e (Edalgo), 7e (Hedville)	7e (Edalgo), 7e (Hedville)	5,014.90	1.10%
3390	Lancaster loam, 1 to 3 percent slopes	3e	3e	45.8	0.00%
3392	Lancaster loam, 3 to 7 percent slopes, eroded	4e	4e	86.4	0.00%
3396	Lancaster-Hedville complex, 3 to 20 percent slopes	6e (Lancaster), 6e (Hedville)	-, -	81,198.00	17.50%
3491	Wells loam, 1 to 3 percent slopes	2e	2e	13,372.10	2.90%
3492	Wells loam, 3 to 7 percent slopes	3e	3e	25,871.80	5.60%
3521	Cass fine sandy loam, occasionally flooded	2w	-	843.1	0.20%
3601	Jansen sandy loam, 1 to 3 percent slopes	3e	-	7,228.30	1.60%
3750	Hord silt loam, nonflooded	1	-	1,878.50	0.40%
3755	Hord silt loam, rarely flooded	2c	1	1,998.80	0.40%
3800	Crete silt loam, 0 to 1 percent slopes, loess plains and breaks	2s	2s	46,903.70	10.10%
3801	Crete silt loam, 1 to 3 percent slopes, loess plains and breaks	2e	2e	5,562.00	1.20%
3829	Crete silty clay loam, 1 to 3 percent slopes, eroded	2e	2e	2,554.20	0.60%
3832	Crete-Wells complex, 3 to 7 percent slopes	3e (Crete), 3e (Wells)	3e (Crete), 3e (Wells)	1,655.40	0.40%
3843	Geary silt loam, 1 to 3 percent slopes	2e	2e	3,704.60	0.80%
3844	Geary silt loam, 3 to 7 percent slopes	3e	3e	4,200.10	0.90%
3898	Meadin sandy loam, 3 to 15 percent slopes	6s	-	5,290.00	1.10%
3921	Smolan silty clay loam, 1 to 3 percent slopes	2e	2e	41.6	0.00%
9971	Arents, earthen dam	8	-	158.7	0.00%
9986	Miscellaneous water	-	-	23.9	0.00%
9999	Water	-	-	5,026.30	1.10%
Totals for Area of Interest				462,885.80	100.00%

Source: Marvin Planning Consultants

SOILS CLASSIFICATIONS

SOIL TYPES

Soil types inform appropriate land use. Table 12.1 outlines the soil types present in Ellsworth County, while Figure 12.6 shows the soil types present in the County. A brief description of the soil types will follow Table 12.1.

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 12.4
USFWS NATIONAL WETLAND INVENTORY

Ellsworth County Boundary

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

N

0 1 2 4 Miles

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Soil Type Descriptions

The following soil descriptions (found on Table 12.1 and in Figure 12.6) were taken from the USDA. The descriptions include where the soil type occurs, the principal uses of the soil, the principal crops, and native vegetation.

McCook loam, occasionally flooded; McCook silty clay loam, frequently flooded; McCook silt loam, rarely flooded

The McCook series consists of very deep, well drained, moderately permeable soils that formed in stratified, calcareous alluvium. These soils are on flood plains. Most areas are cultivated and irrigated. Major crops are corn, grain sorghum, alfalfa, and winter wheat. Only a small acreage is still in native vegetation.

Roxbury silt loam, occasionally flooded; Roxbury silt loam, rarely flooded

The Roxbury series consists of very deep, moderately well drained or well drained, moderately permeable soils formed in calcareous silty alluvium on floodplains and alluvial fans. Most areas of Roxbury soils are cultivated. Principal crops are alfalfa, corn, sorghum, and wheat. Native vegetation is tall and midgrasses.

Tobin silt loam, occasionally flooded

The Tobin series consists of very deep, well drained soils that formed in silty alluvium. Tobin soils are on flood plains on river valleys. Most areas are cultivated. Principal crops are wheat, grain sorghum, and alfalfa. Native vegetation is mid and tall grasses.

Armo loam, 3-7 % slopes; Armo loam, 7-15 % slopes

The Armo series consists of deep, well drained, moderately permeable soils on ridgetops, knolls and sideslopes. The gentler slopes are cultivated. The principal crops are winter wheat or grain sorghum. The steeper slopes are in native vegetation with big bluestem, switchgrass, indiangrass, sideoats grama, and little bluestem.

Harney silt loam, 1-3% slopes; Harney silty clay loam, 3-7% slopes; Harney-Wakeen complex, 3-7% slopes; Harney-Wells complex, 3-7% slopes

The Harney series consists of deep, well drained, moderately slowly permeable soils that formed in loess. These soils are on uplands on slopes. Mostly cultivated for wheat and sorghums are the principal crops. Native vegetation is mixed short, mid, and tall grasses.

Nibson silt loam, 3-30% slopes; Nibson-Wakeen silt loam, 3-20% slopes

The Nibson series consists of shallow, somewhat excessively drained soils that formed in residuum from interbedded chalky shales and soft limestone. Permeability is moderate. These soils are on uplands. Almost all areas of Nibson soils are used for rangeland. Native vegetation is mid and tall prairie grasses.

Wakeen silt loam, 3-7% slopes

The Wakeen series consists of well drained soils that are moderately deep over chalky limestone. These soils are on plains, knolls, and ridgetops. Gentle slopes are mostly cropped and steeper slopes are usually in native range. Principal crops are winter wheat and sorghum. Native vegetation is tall and mid prairie grasses.

Edalgo loam, 3-7% slopes; Edalgo-Hedville loams, 7-15% slopes; Edalgo-Hedville loams, 15-40% slopes

The Edalgo series consists of moderately deep, well drained soils that formed in colluvium or loess over residuum weathered from clayey shale. Edalgo soils are on hillslopes on uplands. Most areas are used for rangeland with some of the gentler slopes cultivated to wheat and grain sorghum. Native vegetation is tall grass prairie. The Hedville series consists of shallow and very shallow, somewhat excessively drained soils that formed in residuum weathered from sandstone. Hedville soils are on hillslopes of uplands. Nearly all is in rangeland. Native vegetation is tall and mid grass prairie.

Lancaster loam, 1-3% slopes; Lancaster-Armo loam, 3-7% slopes, eroded; Lancaster-Hedville complex, 3 -20% slopes

The Lancaster series consists of moderately deep, well drained soils that formed in residuum from sandstone and sandy shales. Lancaster soils are on hillslopes on uplands. Most gentle slopes are cultivated. Principal crops are wheat and sorghums. Steeper slopes are usually in range. Native vegetation is dominated by mid and tall grasses; big bluestem, indiangrass, and little bluestem are most common.

Wells loam, 1-3% slopes; Wells loam, 3-7% slopes, eroded;

The Wells series consists of very deep, well drained soils that formed in residuum from noncalcareous

sandstones and sandy shales modified by thin deposits of colluvium from sandstone and loess. Wells soils are on hillslopes on uplands. Most areas are in cropland. Principal crops are wheat or sorghum. Native vegetation is mid or tall grass prairie.

Cass fine sandy loam, occasionally flooded

The Cass series consists of deep, well drained soils. They formed in alluvium on floodplains in Central Nebraska Loess Hills. Most areas are cultivated, and much of it is irrigated. The main crops are corn, alfalfa, and sorghum. The native vegetation is tall prairie grasses and deciduous trees along streams.

Jansen sandy loam, 1-3% slopes

The Jansen series consists of very deep, well drained moderately permeable soils formed in loamy sediments over alluvial sand and gravel. Cropped to milo, wheat and alfalfa. Some areas are irrigated. Native vegetation is short, mid and tall grasses, and includes big bluestem, little bluestem, switchgrass, sideoats grama, western wheatgrass, blue grama and sand dropseed.

Hord silt loam, nonflooded; Hord silt loam, rarely flooded

The Hord series consists of very deep, well drained, moderately permeable soils that formed in mixed loess and alluvium on foot slopes and stream terraces. Nearly all the acreage is in cultivated crops and much of it is irrigated. Corn, grain sorghum, soybeans, and alfalfa are the principal crops. Minor crops are winter wheat and introduced pasture grasses. A small acreage is in native grass.

Crete silt loam, 0-1% slopes, loess plains and breaks; Crete silt loam, 1-3% slopes, loess plains and breaks; Crete sily clay loam, 1-3% slopes, eroded; Crete-Wells complex, 3-7% slopes

The Crete series consists of very deep, moderately well drained soils formed in loess. Crete soils are on interfluves and hillslopes on loess uplands and loess-covered stream terraces on river valleys. Most areas are cropped. The main crops are corn, soybeans, sorghum, and wheat.

Geary silt loam, 1-3% slopes; Geary silt loam, 3-7% slopes

The Geary series consists of very deep, well drained soils that formed in loess. Geary soils are on hillslopes on uplands. Most areas are cultivated. The principal crops are wheat and grain sorghum. Native vegetation is tall and mid prairie grasses.

Meadin sandy loam, 3-15% slopes

The Meadin series consists of very deep, excessively drained, rapidly permeable soils formed in loamy and sandy material over gravelly sand. Meadin soils are used mainly as range. The soils are generally not suited to cultivation except where irrigated.

Smolan silty clay loam, 1-3% slopes

The Smolan series consists of very deep, well and moderately well drained soils that formed from loess. Smolan soils are on paleoterraces on river valleys or on hillslopes on uplands. Slopes of less than 6 percent are usually cultivated. Principal crops are wheat or sorghum. The steeper slopes and part of the gentler slopes are used for native range. Native vegetation is mid or tall grass prairie.

Capability Grouping

Capability classes are groups of soils that have the same relative degree of hazard or limitation. The risks of soil damage or limitation in use become progressively greater from class I to class VIII. The capability classes are useful as a means of introducing the map user to the more detailed information on the soil map. The classes show the location, amount, and general suitability of the soils for agricultural use. Only information concerning general agricultural limitations in soil use are obtained at the capability class level.

- Class I soils have few limitations that restrict their use.
- Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
- Class III soils have severe limitations that reduce the choice of plants, or that require special conservation practices, or both.
- Class IV soils have very severe limitations that reduce the choice of plants, or that require very careful management, or both.
- Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.
- Class VI soils have severe limitations that make them generally unsuitable for cultivation.
- Class VII soils have very severe limitations that make them unsuitable for cultivation.
- Class VIII soils and landforms have limitations that nearly preclude their use for commercial crop production.

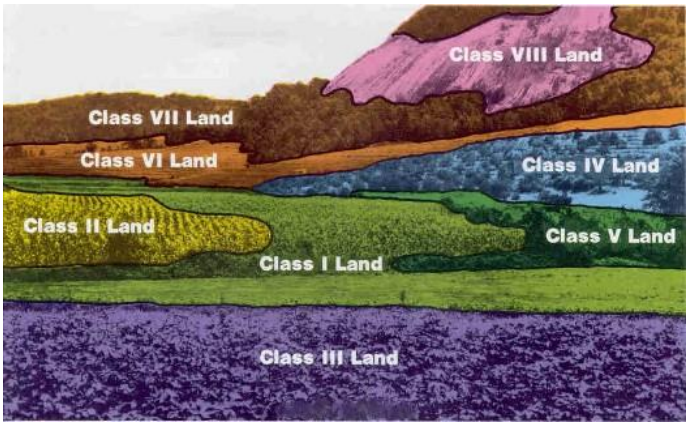
TABLE 12.2: SOIL SYMBOL SUITABILITY AND LIMITATIONS

Soil Symbol/Soil Name	Dwellings without Basements		Dwellings with Basements		Septic tank and absorption fields		Sewage Lagoons		Sanitary Landfill		Small Commercial Businesses	
	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions	Suitability	Conditions
2113 - Inavale	2	1,2	2	1,2	2	1,8,9,10	2	1,2,9	2	1,2,9,13	2	1,2
2117 - Inavale-Munjor	2	1,2	2	1,2	2	1,2,3,8,9,10	2	1,2,9	2	1,2,9,13	2	1,2
3254 - Sutphen	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10	2	1,2,3	2	1,2,3,13	2	1,2,3,4
3261 - Muir	2	1,2,3,4	2	1,2,3,4	1	1,10	1	1,9	1	1,13	2	1,2,3,4
3360 - Edalgo	2	2,3,4,5	2	2,3,4,5,7	2	2,3,10,11	2	6,7,9	2	2,3,10,13	2	1,2,3,4,5,6
3364 - Edalgo-Hedville	2	1,2,3,4,5	2	1,2,3,4,5,6,7	2	1,2,3,6,10,11	2	1,2,3,7,9	2	1,2,3,6,11,13	2	1,2,3,4,5,6
3391 - Lancaster	1	4	1	4,7	2	2,3,10,11	2	2,3,5,6,7,9	2	2,3,11,13	1	4,6
3396 - Lancaster-Hedville	1	4	1	4,7	2	2,3,6,10,11	2	2,3,5,6,7,9	2	2,3,6,11,13	2	2,3,4,5,6
3402 - Longford	2	1,2,3,4,5	1	4,7	2	1,2,3,10,11	1	6,9	1	13	2	1,2,3,4,5,6
3404 - Longford	2	2,3,4,5	1	4,7	2	2,3,10,11	1	6,9	1	13	2	2,3,4,5,6
3492 - Wells	1	4	1	4,7	1	10	1	1,9	1	13	1	4,6
3521 - Cass	2	1	2	1	2	1,8,9,10	2	1,2,9	2	1,9,13	2	1
3529 - Gibbon	2	1,2	2	1,2	2	1,2,9,10	2	1,2,3,9	2	1,2,9,13	2	1,2
3545 - Hobbs	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10	2	1,2,3,9	2	1,2,3,13	2	1,2,3,4
3561 - Hobbs	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10	2	1,2,3,7,9	2	1,2,3,13	2	1,2,3,4
3569 - Hobbs-Geary	2	1,2,3,4	2	1,2,3,4	2	1,2,3,6,10,11	2	1,2,3,9	2	1,2,3,11,13	2	1,2,3,4,6
3580 - Huscher	2	1,2,3,4	2	1,2,3,4	2	1,2,3,8,9,10	2	1,2,3,9	2	1,2,3,9,13	2	1,2,3,4
3612 - Grigston	2	1,2,3,4	2	1,2,3,4	2	1,2,3,9,10	2	1,2,3,9	2	1,2,3,13	2	1,2,3,4
3625 - Sutphen	2	1,2,3,4	2	1,2,3,4	2	1,2,3,9,10	2	1,9	2	1,2,3,13	2	1,2,3,4
3775 - Muir	2	1,2,3,4	2	1,2,3,4	1	1,10	1	1,9	1	1,13	2	1,2,3,4
3777 - Sherdahl	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10	1	1,9	1	1,13	2	1,2,3,4
3778 - Sherdahl	0	-	0	-	2	10	1	6,9	1	13	1	4,6
3779 - Sherdahl	0	-	0	-	1	10	2	6,9	0	-	1	4,6
3785 - Tivin	0	-	0	-	2	1,2,3,8,9	2	1,2,3,6,9	2	1,2,3,9,13	2	1,2,3,6
3800 - Crete	2	2,3,4	2	2,3,4	2	2,3,10	1	9	1	13	2	2,3,4
3801 - Crete	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10	1	9	1	13	2	1,2,3,4
3802 - Crete	2	1,2,3,4	1	4,7	2	1,2,3,10,11	1	6,9	1	13	2	1,2,3,4
3828 - Crete	2	1,2,3,4	2	12,3,4	2	1,2,3,10,11	1	9	1	13	2	1,2,3,4
3830 - Crete	2	1,2,3,4	2	1,2,3,4	2	1,2,3,10,11	1	6,9	1	13	2	1,2,3,4
3844 - Geary	1	4,7	1	4,7	2	1,2,3,10,11	1	6,9	1	13	1	4,6,7
3845 - Geary	1	4,6,7	1	4,6,7	2	2,3,6,10,11	2	2,3,5,6,7,9	1	6,13	2	2,3,4,5,6,7
3846 - Geary	1	4	1	4,7	1	10	1	6,9	1	13	1	4,6
3882 - Holder	1	4	1	4	1	10	1	6,9	1	13	1	4,6
4525 - Benfield	2	2,3,4,5,6,7	2	2,3,4,5,6,7	2	2,3,6,10,11	2	2,3,5,6,7,9	2	2,3,6,11,13	2	4,5,6,7
4590 - Clime-Sogn	1	4,6	1	4,6,7	2	2,3,6,10,11	2	2,3,5,6	2	2,3,6,11,13	2	2,3,4,5,6
4725 - Kipson-Sogn	2	2,3,4,5,6,7	2	3,4,5,6,7	2	2,3,6,10,11	2	2,3,5,6,7,9	2	2,3,6,11,13	2	2,3,4,5,6,7
4783 - Tully	2	1,2,3,4,5	2	1,2,3,4,5	2	1,2,3,10,11,12	1	1,6	1	1,11,13	2	1,2,3,4,5,6,7
7010 - Calco	2	1,2,4	2	1,2,3	2	1,2,10	2	1,2,9	2	1,2,13	2	1,2,4

Source: Marvin Planning Consultants

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.
Source: Natural Resources Conservation Service

FIGURE 12.5: CAPABILITY GROUPING CLASSES



Source: Natural Resources Conservation Service

SOIL SUITABILITY AND LIMITATIONS

LIMITATIONS

These limitation interpretations are based on the engineering properties of soils, on test data for soils in the survey area and others nearby or adjoining, and on the experience of engineers and soil scientists familiar with the soils of Ellsworth County.

Soil limitations are indicated by the ratings Not Limited, Somewhat Limited, and Very Limited. Refer to figures 12.7-12.12 and Table 12.2 throughout this section.

Not Limited (red) means soil properties are generally favorable for the stated use, or in other words, that limitations are minor and easily overcome.
Somewhat Limited (yellow) means some soil properties are unfavorable but can be overcome or modified by special planning and design.
Very Limited (green) means soil properties may be so unfavorable and difficult to correct or overcome as to require various degrees of soil reclamation, special designs, or intensive maintenance.

DWELLINGS WITHOUT BASEMENTS

Figure 12.7 shows the soil suitability conditions for constructing dwelling without a basement (slab on-grade construction). In addition, Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.

Very Limited Conditions

Based on Table 12.2, the majority of soils in Ellsworth County are considered very limited for a dwelling unit without a basement. There are four major conditions impacting the soils (not all four are present in any one soil type). The conditions present in the different soils are:

- Flooding
- Depth to Saturated Zone
- Ponding
- Shrink Swell
- Depth to Hard Bedrock
- Slope
- Depth to Soft Bedrock

These conditions may or may not eliminate the ability of a land owner to build a slab-on-grade dwelling unit, but specific conditions will need to be engineered to overcome potential problems in the future.

Somewhat Limited Conditions

Besides the severe soils, there are eight soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

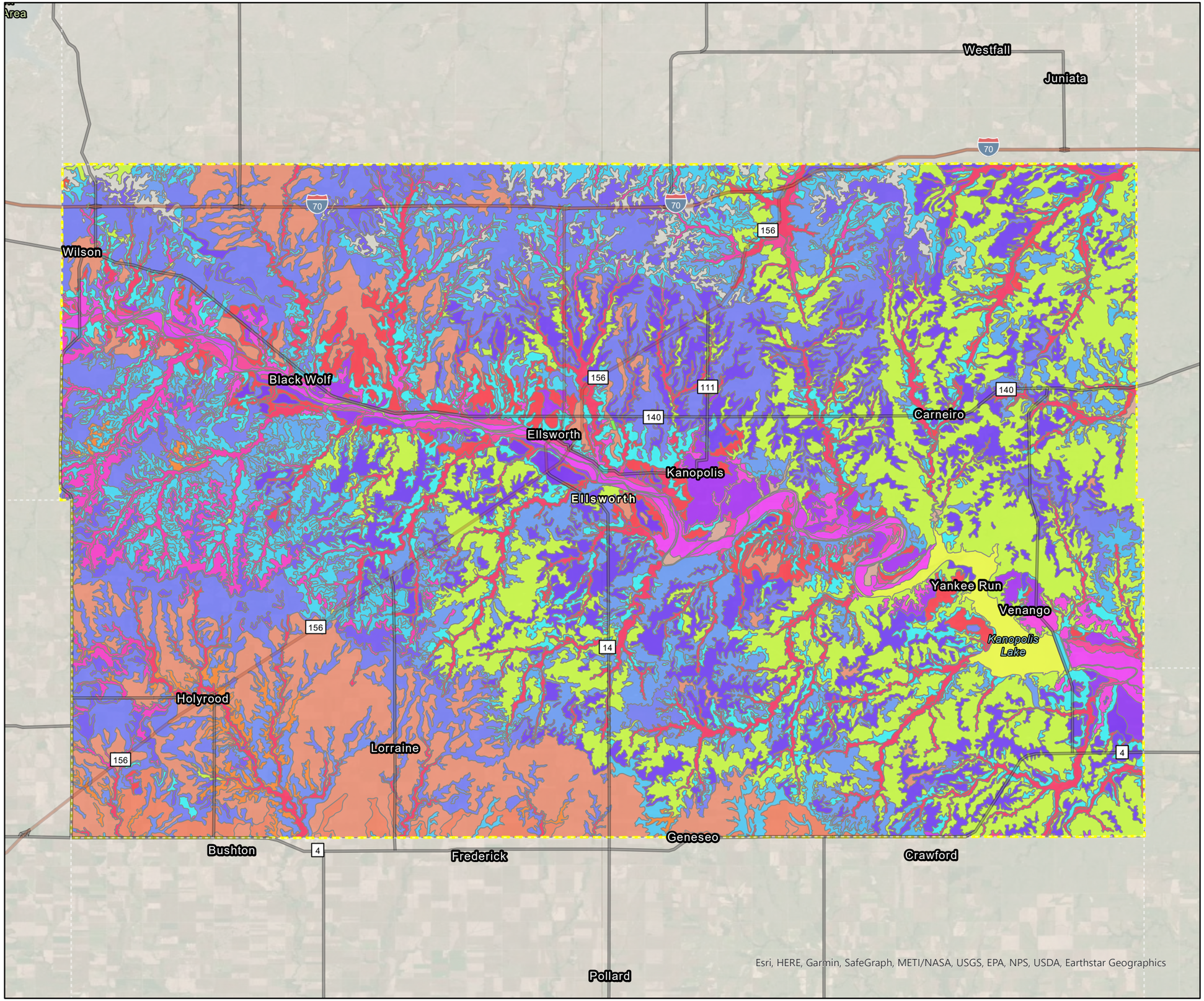
- Shrink Swell
- Slope
- Depth to Soft Bedrock

Not Limited

There are three soil groups - Sherdahl (3778), (3779) Sherdahl, and Tivin that do not pose limitations in Ellsworth County for dwellings without basements.

DWELLINGS WITH BASEMENTS

Figure 12.8 shows the soil suitability conditions for constructing dwellings with basements. In addition, Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 12.6
GENERAL SOILS

Ellsworth County Boundary

Soils

Mapunit Name

- Arents, earthen dam
- Armo loam, 3 to 7 percent slopes
- Armo loam, 7 to 15 percent slopes
- Cass fine sandy loam, occasionally flooded
- Crete silt loam, 0 to 1 percent slopes, loess plains and breaks
- Crete silt loam, 1 to 3 percent slopes, loess plains and breaks
- Crete silty clay loam, 1 to 3 percent slopes, eroded
- Crete-Wells complex, 3 to 7 percent slopes
- Edalgo loam, 3 to 7 percent slopes
- Edalgo-Hedville loams, 15 to 40 percent slopes
- Edalgo-Hedville loams, 7 to 15 percent slopes
- Geary silt loam, 1 to 3 percent slopes
- Geary silt loam, 3 to 7 percent slopes
- Harney silt loam, 1 to 3 percent slopes
- Harney silty clay loam, 3 to 7 percent slopes
- Harney-Wakeen complex, 3 to 7 percent slopes
- Harney-Wells complex, 3 to 7 percent slopes
- Hord silt loam, nonflooded
- Hord silt loam, rarely flooded
- Jansen sandy loam, 1 to 3 percent slopes
- Lancaster loam, 1 to 3 percent slopes
- Lancaster loam, 3 to 7 percent slopes, eroded
- Lancaster-Hedville complex, 3 to 20 percent slopes
- McCook loam, occasionally flooded
- McCook silt loam, rarely flooded
- McCook silty clay loam, frequently flooded
- Meadin sandy loam, 3 to 15 percent slopes
- Miscellaneous water
- Nibson-Wakeen silt loams, 3 to 20 percent slopes
- Roxbury silt loam, occasionally flooded
- Roxbury silt loam, rarely flooded
- Smolan silty clay loam, 1 to 3 percent slopes
- Tobin silt loam, occasionally flooded
- Wakeen silt loam, 3 to 7 percent slopes
- Water
- Wells loam, 1 to 3 percent slopes
- Wells loam, 3 to 7 percent slopes

N

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0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.7
SOIL SUITABILITY FOR DWELLINGS WITHOUT BASEMENTS

Ellsworth County Boundary

Suitability Ratings

- Not rated
- Not limited
- Somewhat limited
- Very limited

N

0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.8
SOIL SUITABILITY FOR DWELLINGS WITH BASEMENTS

Ellsworth County Boundary

Suitability Ratings

- Not rated
- Not limited
- Somewhat limited
- Very limited

N

0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.9 SEPTIC TANK ABSORPTION FIELD CONDITIONS

Ellsworth County Boundary

Suitability Ratings

- Not rated
- Somewhat limited
- Very limited

N

0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.10
SEWAGE LAGOON DOMINANT CONDITION

Ellsworth County Boundary

Suitability Ratings

- Not rated
- Not limited
- Somewhat limited
- Very limited

N

0 1 2 4 Miles

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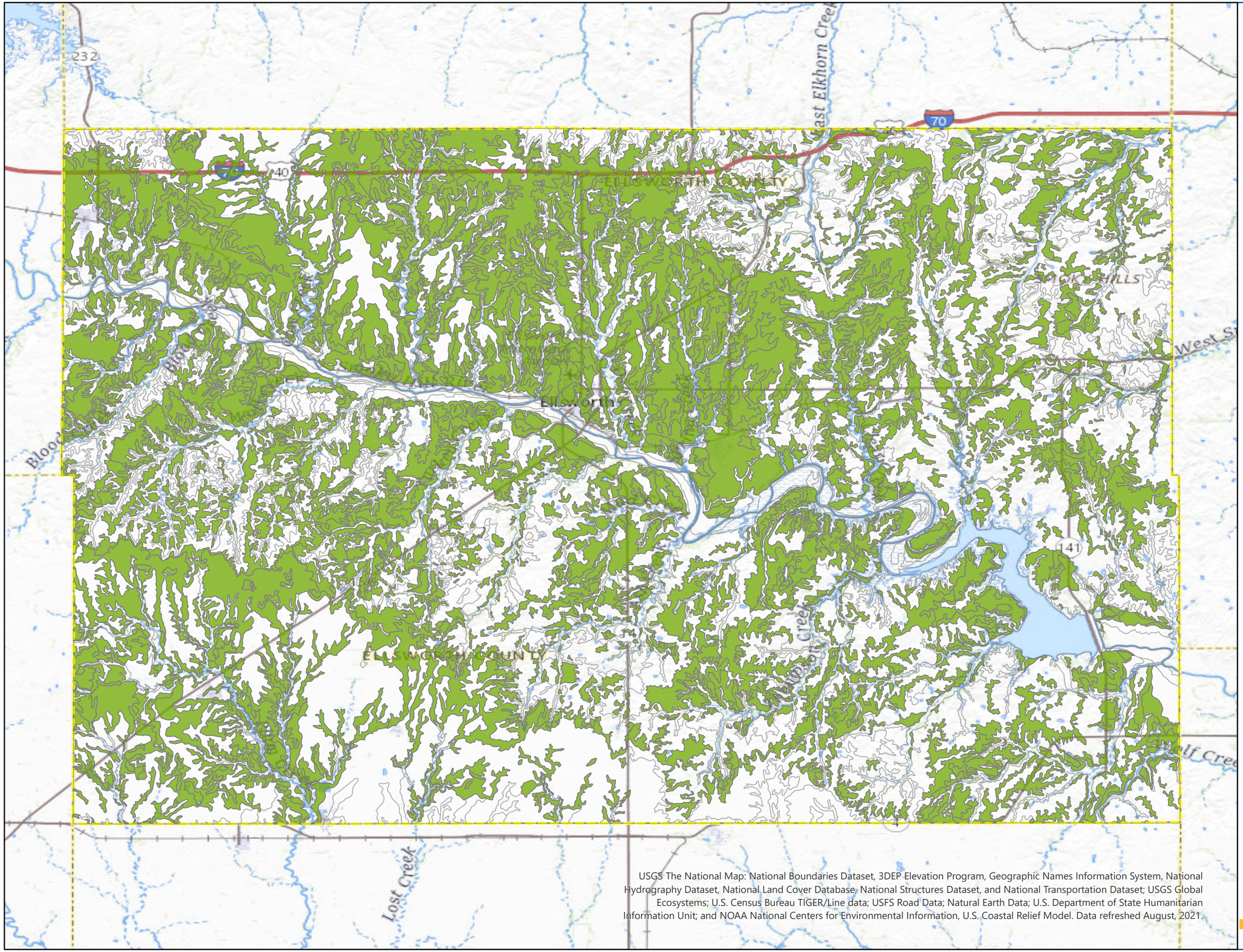
FIGURE 12.11
SOIL SUITABILITY FOR SANITARY LANDFILLS

Potentially Suitable for Landfills

Ellsworth County Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

N

0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.12 SOILS SMALL COMMERCIAL BUILDING SUITABILITY

Ellsworth County Boundary

Suitability for Small Commercial Buildings

- Not rated
- Not limited
- Somewhat limited
- Very limited

N

0 1 2 4 Miles

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COMPREHENSIVE VISION PLAN

FIGURE 12.13
PRIME FARMLAND

Ellsworth County Boundary

Farmland Classification

- Prime Farmland
- Farmland of Statewide Importance
- Not Prime Farmland

N

0 1 2 4 Miles

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Very Limited Conditions

Based on Table 12.2, the majority of soils in Ellsworth County are considered very limited for a dwelling unit with a basement. There are seven major conditions impacting the soils (not all seven are present in any one soil type). The conditions present in the different soils are:

- Flooding
- Depth to Saturated Zone
- Ponding
- Shrink Swell
- Depth to Hard Bedrock
- Slope
- Depth to Soft Bedrock

These conditions may or may not eliminate the ability of a land owner to build a dwelling with a basement, but specific conditions will need to be engineered to overcome potential problems in the future.

Somewhat Limited Conditions

Besides the severe soils, there are eleven soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

- Shrink Swell
- Slope
- Depth to Soft Bedrock

Not Limited

There are three soil groups - Sherdahl (3778), (3779) Sherdahl, and Tivin that do not pose limitations in Ellsworth County for dwellings with basements.

Septic Tanks and Absorption Fields

Figure 12.9 shows the soil suitability conditions for placement of a septic tank and absorption field in Ellsworth County. Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.

Very Limited Conditions

Based upon Table 12.2, there are seven conditions impacting the use of septic tanks and absorption fields in Ellsworth County. The major conditions impacting the soils are:

- Flooding
- Depth to Saturated Zone
- Ponding
- Filtering Capacity
- Seepage
- Slow Water Movements
- Depth to Bedrock

These conditions may or may not eliminate the ability of a land owner to use a septic tank and absorption field but specific conditions will need to be engineered to eliminate potential problems in the future.

Somewhat Limited Conditions

Besides the severe soils, there are six soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

- Flooding
- Slow Water Movements

Sewage Lagoons

Figure 12.10 shows the soil suitability conditions for placement of sewage lagoons in Ellsworth County. Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.

Very Limited Conditions

Based on Table 12.2, there are seven conditions impacting the use of sewage lagoons in Ellsworth County. The major conditions impacting the soils are:

- Flooding
- Depth to Saturated Zone
- Ponding
- Depth to Hard Bedrock
- Slope
- Depth to Soft Bedrock
- Seepage

These conditions may or may not eliminate the ability of a land owner to use a sewage lagoon but specific conditions will need to be engineered to eliminate potential problems in the future.

Somewhat Limited Conditions

Besides the very limited soils, there are sixteen soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

- Flooding
- Slope
- Seepage

These conditions may need special engineering to eliminate potential problems in the future.

Sanitary Landfills

Figure 12.11 shows the soil suitability conditions for placement of sanitary landfills in Ellsworth County. Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.

Very Limited Conditions

Based on Table 12.2, there are eight conditions impacting the use of sanitary landfills in Ellsworth County. The major conditions impacting the soils are:

- Flooding
- Depth to Saturated Bedrock
- Ponding
- Seepage
- Slope
- Slow Water Movement
- Depth to Bedrock
- Dusty

These conditions may or may not eliminate the ability of a land owner to use a sanitary landfill but specific conditions will need to be engineered to eliminate potential problems in the future.

Somewhat Limited Conditions

Besides the very limited soils, there are seventeen soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

- Flooding
- Slope
- Dusty

These conditions may need special engineering to eliminate potential problems in the future.

Small Commercial Businesses

Figure 12.12 shows the soil suitability conditions for placement of small commercial businesses in Ellsworth County. Table 12.2 provides the suitability by soil types and the specific conditions impacting the soil.

Very Limited Conditions

Based on Table 12.2, there are seven conditions impacting the use of small commercial buildings in Ellsworth County. The major conditions impacting the soils are:

- Flooding
- Depth to Saturated Bedrock
- Ponding
- Shrink-Swell
- Depth to Hard Bedrock
- Slope
- Depth to Soft Bedrock

These conditions may or may not eliminate the ability of a land owner to use a small commercial building but specific conditions will need to be engineered to eliminate potential problems in the future.

Somewhat Limited Conditions

Besides the very limited soils, there are seven soils considered somewhat limited which is less of an issue when developing. The conditions that are creating the somewhat limited classification are:

- Shrink-Swell
- Slope
- Depth to Soft Bedrock

These conditions may need special engineering to eliminate potential problems in the future.

Other Factors Impacting Land Uses

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

Prime Farmland

Prime farmland is directly tied to the specific soils and their composition. The map in Figure 12.13 identifies Prime Farmland, Prime Farmland if Drained, Farmland of Statewide Importance, and Not Prime Farmland.

According to the USDA, Prime farmland

> *"...is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. It must also be available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or*

alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding."

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, state, and federal levels, as well as individuals, must encourage and facilitate the wise use of our nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, feed, forage, fiber, and oilseed crops. Such soils have properties that are favorable for the economic production of sustained high yields of crops. The soils need only to be treated and managed using acceptable farming methods. The moisture supply, of course, must be adequate, and the growing season has to be sufficiently long. Prime farmland soils produce the highest yields with minimal inputs of energy and economic resources, and farming these soils results in the least damage to the environment.
Prime farmland soils may presently be in use as cropland, pasture, or woodland, or they may be in other uses. They either are used for producing food or fiber or are available for these uses. Urban or built-up land and water areas cannot be considered prime farmland.

Prime farmland soils usually get an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The acidity or alkalinity level of the soils is acceptable. The soils have few or no rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are not subject to frequent flooding during the growing season. The slope ranges mainly from 0 to 6 percent.

Soils that have a high water table, are subject to flooding, or are droughty may qualify as prime farmland soils if the limitations or hazards are overcome by drainage, flood control, or irrigation. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information on the criteria for prime farmland can be obtained at the local office of the Soil Conservation Service.

A recent trend in land use in some parts of the county has been the conversion of some prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are wet, more erodible, droughty, or difficult to cultivate and less productive than prime farmland.

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

Soil and Water Classifications

Groundwater

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

Use of Groundwater

Groundwater use in the county comes in three forms; domestic, livestock supply, and public water supply. Each use is important to the overall viability of Ellsworth County.

Domestic and Livestock supplies

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

Public water supplies

The public water supply is one of the most critical uses of groundwater resources. These supplies are used by the municipalities supplying water to their residents. All of the incorporated communities have a publicly owned water supply system.

The State of Kansas places a great deal of value on these systems across the state. The value is so high that a Wellhead Protection Program is available to municipalities, counties, and rural water districts through Kansas Department of Health. This program allows the empowered entities to designate special areas around their wells and well fields in order to protect the quality and quantity of the water within the underlying aquifers. Development of a wellhead protection plan can help the entities receive financial assistance to protect and secure the source of drinking water for the community.

Wellhead Protection

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

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

1. Appoint Local Wellhead Protection Committee
2. Obtain Wellhead Protection Area Delineation
3. Conduct Pollutant Source Inventory
4. Develop Management Strategies
5. Conduct a Local Public Meeting on Wellhead Protection Plan
6. Implement Actions of Wellhead Protection

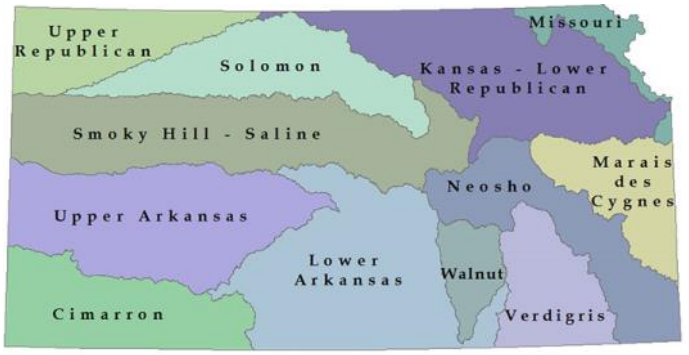
Surface Water

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

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

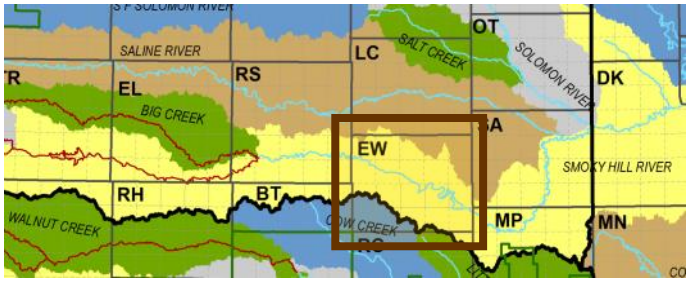
Ellsworth County lies predominantly within the Smoky Hill – Saline Basin, which covers 12,229 square miles. This basin can be broken down further into sub-basins. The sub-basins include the Saline River and Smoky Hill River. The southwest corner of the county lies in the Lower Arkansas Basin. This basin includes the Cow Creek sub-basin.

Figure 12.14: Kansas Drainage Basins



Source: Kansas Department of Agriculture, Division of Conservation

Figure 12.15: Drainage Subbasins



Source: Kansas Department of Agriculture, Division of Conservation

Hydric Soils

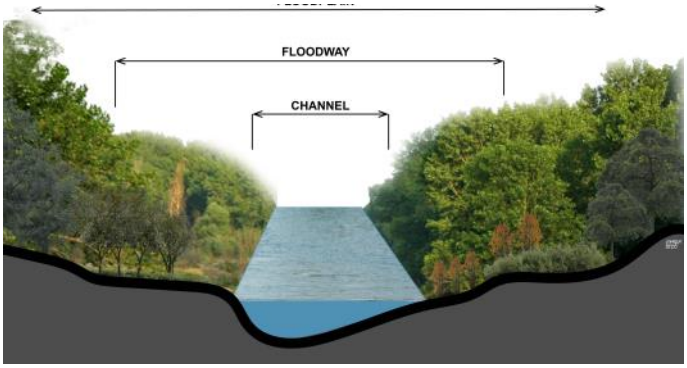
Hydric soils are formed under conditions of saturation, flooding, or ponding. The process has to occur long enough during the growing season to develop anaerobic conditions in the upper part. Hydric soils along with hydrophytic vegetation and wetland hydrology are used to define wetlands. (USDA/NRCS,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

Flooding Hazards

Flooding is the temporary covering of the soil surface by flowing water from any source, such as streams and rivers overflowing their banks, runoff from adjacent or surrounding slopes, or a combination of different sources. During a

flooding event there are a number of components that make up the flooded area.

FIGURE 12.16: FLOOD PLAIN CROSS SECTION



The areas on figure 12.15 are defined as such:
Floodway which is the channel of a watercourse and those portions of the adjoining floodplains which are required to carry and discharge the 100-year flood with no significant increase in the base flood elevation.
Floodplain which is the low land near a watercourse which has been or may be covered by water from flood of 100-year frequency, as established by engineering practices of the U.S. Army Corps of Engineers. It shall also mean that a flood of this magnitude may have a 1 percent chance of occurring in any given year.
Floodway Fringe which is the portion of a floodplain that is inundated by floodwaters but is not within a defined floodway. Floodway fringes serve as temporary storage for floodwaters.

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

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

Photo 12.1: On top - a home north of Quincy, Illinois within the 100- year floodplain. The river is between 1 and 2-miles away. On the bottom is the same house during the floods.
Source: Marvin Planning Consultants

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

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

Chapter 13 Land Use

Land Use

The purpose of the Ellsworth County Land Use Chapter is to provide a general guide to land use which directs future uses and zoning criteria. The resulting land uses are intended to be a guide without creating multiple incompatibilities with what currently exists within Ellsworth County. This Chapter reflects the existing conditions and should be flexible in order to meet the needs of its citizens as well as the vision of the county.

The Ellsworth County Land Use Chapter provides the basis for the formulation of land use and the zoning regulations. For this reason, it is imperative to formulate a plan tailored to the needs, desires and environmental limitations of the planning area. The chapter should promote improvements in all the components of the local economy.

Ellsworth County Land Use Elements

The elements of the Ellsworth County Land Use Chapter include:

- Existing Land Use
- Future Land Use

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

Existing Land Use

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

Overall, development patterns in and around Ellsworth County have been influenced by topography, water, soils and manmade features such as U.S. Highways and several hard-surfaced county roads. These items will likely continue to influence development patterns throughout the course of the planning period.

Existing Land Use Categories

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

- Agricultural
- Farmsite/Residential
- Residential
- Commercial
- Utilities

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

Agricultural: Row crop, alfalfa, pastureland and all grain crops are considered agriculture land uses. Lincoln County is an agricultural based county and the existing land use map verifies these uses.

Farmsite/Residential and **Residential:** This category includes residential dwellings either as a farmstead, acreage or residential developments located within the county. Residential units of this type are distributed throughout the County.

Commercial: Uses in this category consist of convenience stores; feed, seed, automobile and machinery sales; petroleum sales, etc. Commercial uses tend to be located near urban areas or in proximity to major highways for accessibility.

Exempt: Governmental or religious organizations.

Not for Profit: Religious organizations or other organizations such as a donation site.

Other: A use that has not yet been determined.

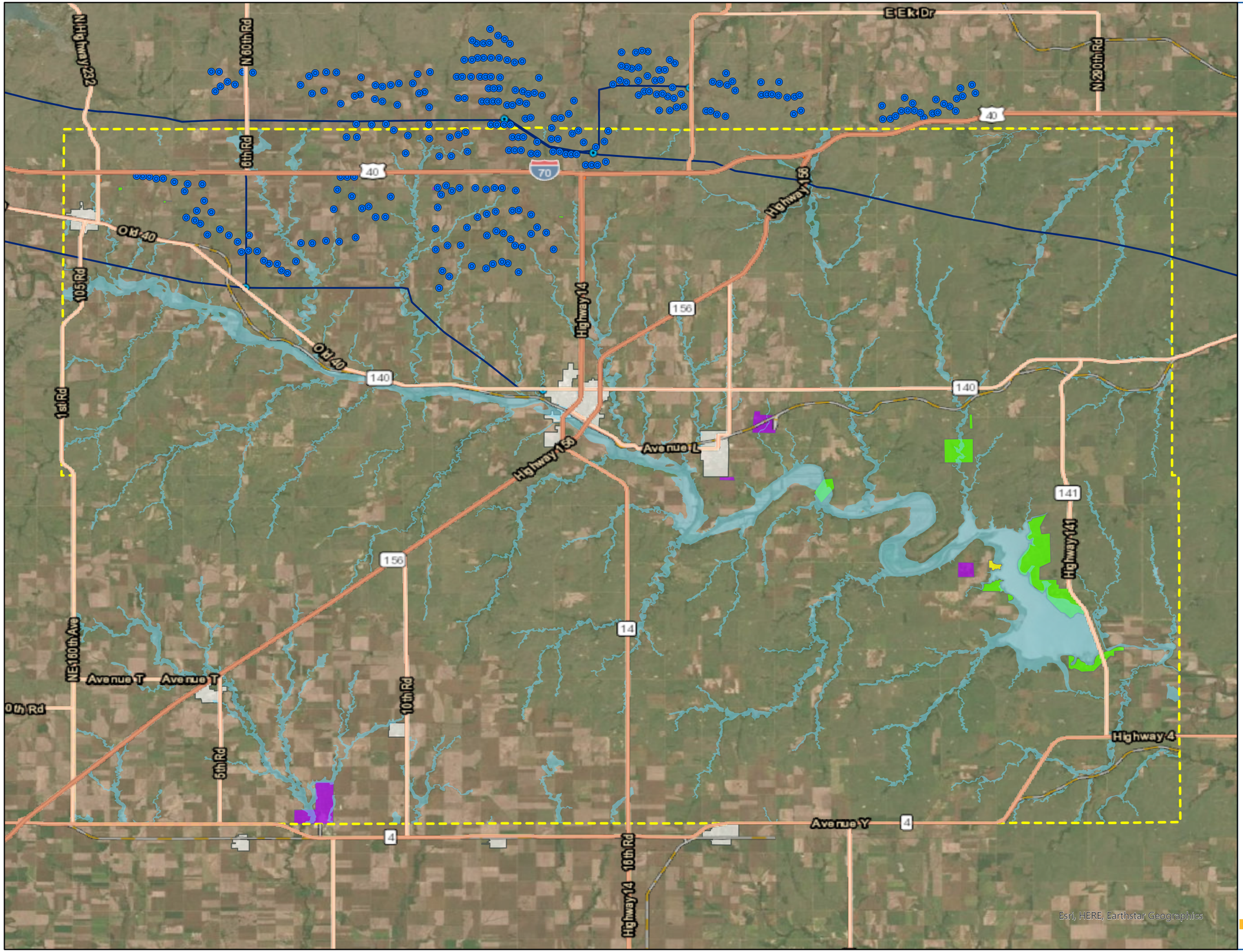
Utilities: Public or private utility company *or* land that is owned or operated by a private or public utility.

Vacant: Land that lacks a current use.

Physical Character of Ellsworth County

One of the most critical factors, concerning land use development in any area is the physical characteristics of the area. The physical character of Ellsworth County has a variety of different environmentally sensitive landscapes. The county is a variety of environments including:

- Smoky Hill Saline River valley and associated floodplain;
- Lower Arkansas basin and the Cow Creek sub-basin;
- Smoky Hill River
- Limestone outcroppings
- Cropland
- Rolling hills



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 13.1
EXISTING LAND USE

- Ellsworth County Boundary
- Ellsworth County Floodplains
- Incorporated Cities
- Wind Turbines
- Electric Substations
- Electric Transmission Lines

Existing Land Use

- Agricultural
- Residential
- Parks & Recreation/Attractions
- Commercial
- Utility

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0 1 2 4 Miles

Future Land Use Plan

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

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

- The current use of land within and around the county;
- The desired types of growth, including location of growth;
- Future development activities;
- Physical characteristics, opportunities and constraints of future growth areas, and;
- Current population and economic trends affecting the county.

Efficient allocation of land recognizes the forces of the private market and the limitations of the capital improvement budget. This Plan acknowledges these factors play an important role in the growth and development of Ellsworth County. A Future Land Use Plan is intended to be a general guide to future land uses that balance private sector development (the critical growth element in any county) with the concerns, interests, and demands of the overall local economy. The future policies within this plan will be critical to directing growth in Ellsworth County for the next 10 to 20 years.

Extraterritorial Jurisdiction (ETJ)

The State of Kansas provides for the use of extraterritorial jurisdictions as well as when and where they may be used. The law states, providing a municipality follows basic steps when a county has no planning and zoning, they may take up to a three-mile ETJ. Currently, no municipality has taken up an ETJ.

ETJ Policies

These are policies which should be agreed upon by the cities and county in the future to make quality growth a priority for the entire county and the cities.

- The Ellsworth County Board of Commissioners should agree to allow the city to enforce their building codes within this ETJ. This is the only way quality construction will occur and make the development practical to annex in the future.
- The Ellsworth County Board of Commissioners should allow a city's subdivision regulations to supersede the county's in order for lots, blocks, streets, water and sanitary sewer lines to meet the necessary urban standards. Again, if the city is to annex the development in the future, the development should meet the urban criteria.
- Any development where large lots are permitted within the ETJ, the county should require the developments to be developed to county standards. The county should also be required to "Ghost Plat" the development in case the city does eventually reach the area. This allows for the cities to eventually grow to these developments and not hit a road block for future growth.
- If these developments are within reach of a city, and the development is meeting the urban development standards, then annexation should be considered and completed.

Examples of Land Use Districts

Example language (for the land use districts laid out in the future land use map) can be seen on the following pages.

ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 13.2
FUTURE LAND USE

- Ellsworth County Boundary
- Ellsworth County Floodplains
- Incorporated Cities
- Wind Turbines
- Electric Transmission Lines
- Electric Substations

Future Land Use

- Agricultural
- Commercial
- Parks & Recreation/Attractions
- Residential
- Utility
- I-1 or Heavy C

N

0 1 2 4 Miles

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AGRICULTURAL

General Purpose

The Agricultural district represents an area in the county where agriculture is protected, but limited. The land use is intended to provide a location where agriculture can continue to thrive.

Compatible Uses

1. Crop production, including grazing lands
2. Livestock operations for all types of animals
3. Agri-Tourism activities such as: hunting preserves, fishing, vineyards etc.
4. Private and commercial grain storage
5. Oil and gas production
6. Manure/fertilizer applications
7. Single acreage developments
8. Public recreational, wildlife and historical areas
9. Renewable energy equipment
10. Religious uses and structures
11. Educational uses and structures
12. Adult entertainment where appropriate

Incompatible Uses

1. Large scale residential developments including mobile homes as a single-family dwelling unless located within a mobile home park
2. Large commercial developments

Potential issues to consider

1. Rural Water availability and connections
2. Transportation routes (designation, condition, etc.)
3. Slopes
4. Proximity to existing livestock facilities
5. Topography
6. Natural amenities such as trees, ponds, and streams
7. Site drainage
8. Flooding hazards.
9. Groundwater availability
10. Groundwater contamination
11. Wetlands
12. Existing and/or proposed sanitary system
13. Potable well locations

Special policies

1. Residential lot sizes may vary depending upon the type of sanitary system installed and the source of potable water.
2. Residential densities within this land use category should be no more than 2 dwelling units per 1/4 section.
3. Cluster developments should be considered and used whenever soils, topography, natural amenities warrant.

Commercial District Land Use

General Purpose

This area is focused on commercial uses throughout the county. This area should continue to promote basic retail, service, and office uses.

Typical Uses

1. General retail businesses on all floors
2. General offices on all floors
3. Restaurants without drive-thru
4. Drinking establishments
5. Public facilities
6. Religious uses and structures
7. Educational uses and structures
8. Community/Recreational Center

Potential issues to consider

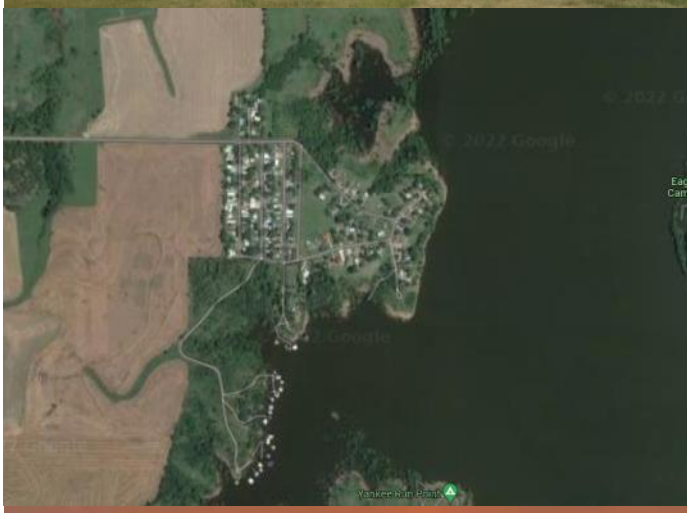
1. Traffic control
2. Rail traffic
3. Parking, especially on-street
4. Character of the area
5. Potential design modifications

Buildable lot policies

1. Building lots in this district should vary throughout depending upon the use. The typical downtown lot widths range between 50 and 100 feet or more.

Specific Uses not Recommended

1. Industrial uses
2. Residential developments
3. Apartments
4. Storage within existing buildings



Rural Residential

General Purpose

This land use is intended to provide for residential development adjacent to and in close proximity to the municipalities and highways where conditions prove favorable. Industrial, commercial, or livestock operations of any size would not be permitted and buffers in the residential land use area would be critical. Lot size requirements would be based upon the capacity of the area to provide potable water and to properly handle sanitary waste systems. However, it is intended that densely developed areas would be connected to a rural water district.

Compatible Uses

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

Incompatible Uses

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

Potential issues to consider

1. Rural Water availability and connections
2. Existing road conditions
3. Floodplain and flooding hazard
4. Transportation routes (designation, condition, etc.)
5. Slopes
6. Groundwater availability
7. Groundwater contamination
8. Proximity to existing livestock facilities
9. Wetlands
10. Depth to groundwater
11. Topography
12. Natural amenities such as trees, ponds, and streams
13. Site drainage
14. Existing and/or proposed sanitary system
15. Potable well locations

Special policies

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

Chapter 14 Transportation

Transportation

Transportation networks tie communities together as well as providing a link to the outside world. Adequate circulation systems are essential for the safe and efficient flow of vehicles and pedestrians, and accessibility to all parts of the community. The Transportation chapter will identify existing systems and those necessary to provide safe and efficient circulation of vehicles within Ellsworth County.

Existing Transportation System and Facilities

Residents within a county have specific transportation needs. These include rail service, bus service, air transportation, as well as vehicular transportation. All of the transportation facilities present are not available within the county and require residents to travel to the nearest location. This portion of the Comprehensive Vision Plan examines those services with regard to the closest proximity for residents of Ellsworth County.

Railroad Service

The closest rail freight service to Ellsworth County is in Hays. The nearest passenger service is located in Dodge City or Hutchinson through Amtrak.

Bus Service

The nearest commercial bus service with ticketing services is available in Salina via Greyhound.

Commercial Airport Service

Salina Airport Authority in Salina is the nearest commercial facility to residents in Ellsworth County. However, arrivals and departures are limited to major airlines. Currently, the airport and commercial service connects people to Denver and Chicago through United Express.

Small craft Public Airports

The City of Ellsworth has a well-developed airport facility which supports a number of locally based aircraft. The airport is owned, operated, and maintained by the city. Additional funding is received by Ellsworth County. Day to day operations are the responsibility of city staff. Located on the north edge of the city, the airport has a primary north-south asphalt runway 4,329 feet in length, with a crosswind turf surface runway which is 2,225 feet in length. There is a short 380 foot connecting taxiway. The primary runway has turnarounds at each end.

Airfield lighting includes identification, runway/ taxiway, and approach. Available electronic navigation aids include a VOR facility, a non-directional beacon, a GPS, and Loran-C. Presently, the Ellsworth Municipal Airport does not have published instrument approaches.

Terminal area facilities include an apron for aircraft parking, a pilot's lounge, aircraft storage hangars, and automobile parking. Aviation fuel is available,

as well as a courtesy car for transportation around town.
(Text modified slightly from website.)
Source: https://www.ellsworthks.net/pview.aspx?id=21024&catid=26

State and Federal Highways

Interstate Highway 70 and US Highways 14, 156, 140, 111, and 232 intersect in Ellsworth County and are significant economic drivers for commerce and tourism.

Transportation Planning and Land Use

Land use and transportation create the pattern for future development and are extremely interdependent upon one another in order to effectively shape the community. An improved or new transportation route generates a greater level of accessibility and will likely determine how adjacent land will be utilized in the future.

In the short term, land use shapes the demand for transportation and vice versa; one key to good land use planning is to balance land use and transportation. However, new or improved roads, as well as, county and state highways may change land values, thus altering the intensity of which land is utilized.

In general, the greater the transportation needs of a particular land use, the greater its preference for a site near major transportation facilities.

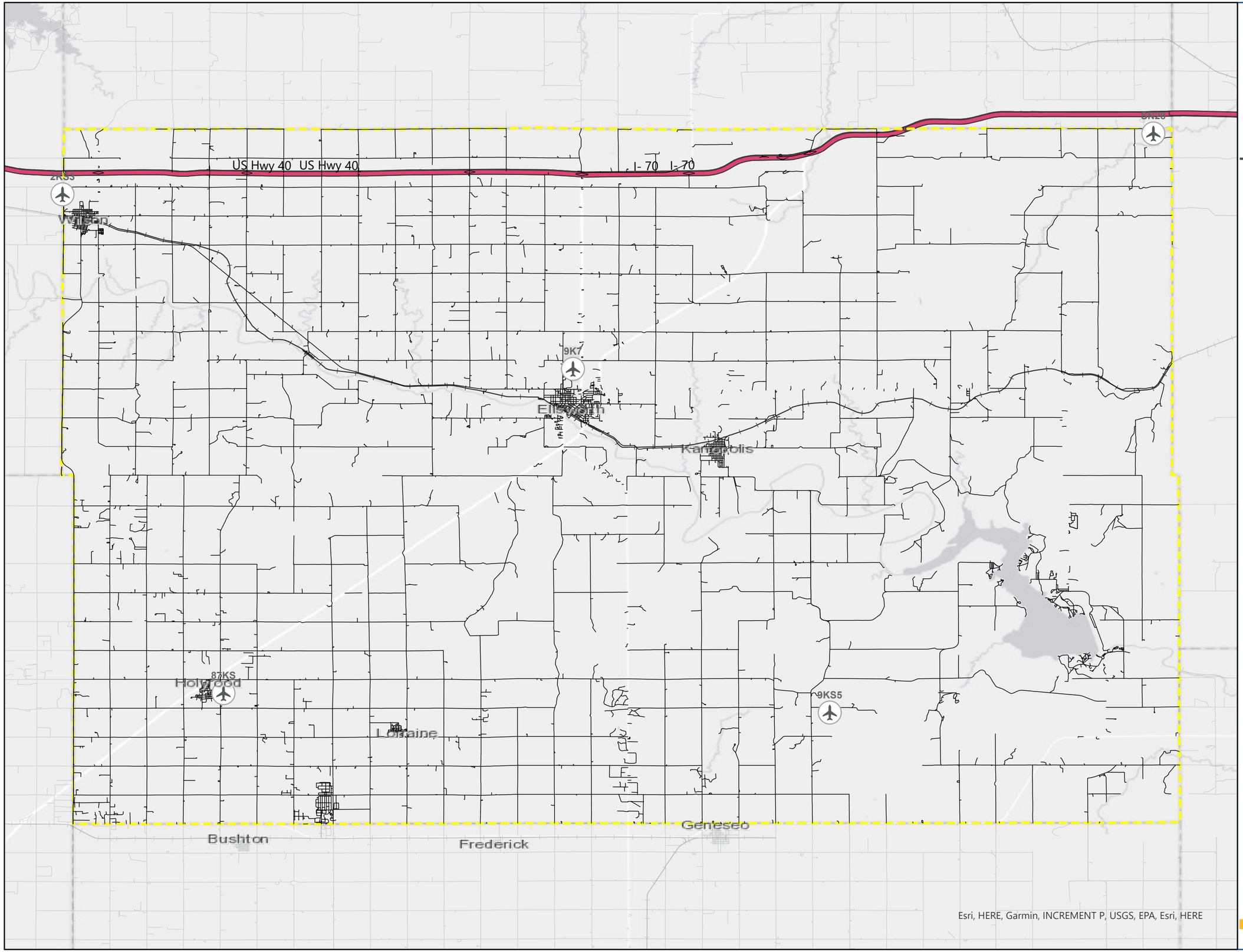
Commercial activities are most sensitive to accessibility since their survival often depends upon how easy a consumer can get to the business. Thus, commercial land uses are generally located near the center of their market area and along highways or at the intersection of arterial streets.

Industrial uses are also highly dependent on transportation access, but in a different way. For example, visibility is not as critical for an industry as it is for a retail store. Industrial uses often need access to more specialized transportation facilities, which is why industrial sites tend to be located near railroad lines or highways to suit individual industrial uses.

Street and Road Classification System

All of the public highways, roads, and streets are classified into multiple functional areas.

- Trafficway: Major roadway with or without medians accommodating large volumes of traffic with limited access. Primarily used for safe progression of through traffic. Typically controlled by federal or state government.
- Major Arterial: Major street with or without medians accommodating high volumes of traffic and controlled access. Primarily used for safe and efficient circulation of high volumes of traffic between sections of the city and across the urbanized area. Does not primarily serve as direct access to abutting property.
- Minor Arterial: Street with moderate volumes of traffic and controlled access. Direct access to abutting properties is allowed. Primarily used for safe and efficient circulation of traffic between areas and across the city.
- Collector: Street with low traffic volumes and unlimited access. Primary use is for circulation within residential areas and between land uses. Collectors distribute traffic from local street to arterial streets. Direct access should be limited.
- Local Street: Street with low volume of traffic, slow design speeds, and unlimited access. Primarily used for direct access to abutting properties.



ELLSWORTH COUNTY

COMPREHENSIVE VISION PLAN

FIGURE 14.1
TRANSPORTATION SYSTEM

- Ellsworth County Boundary
- Airports
- Local Roads
- US Interstates

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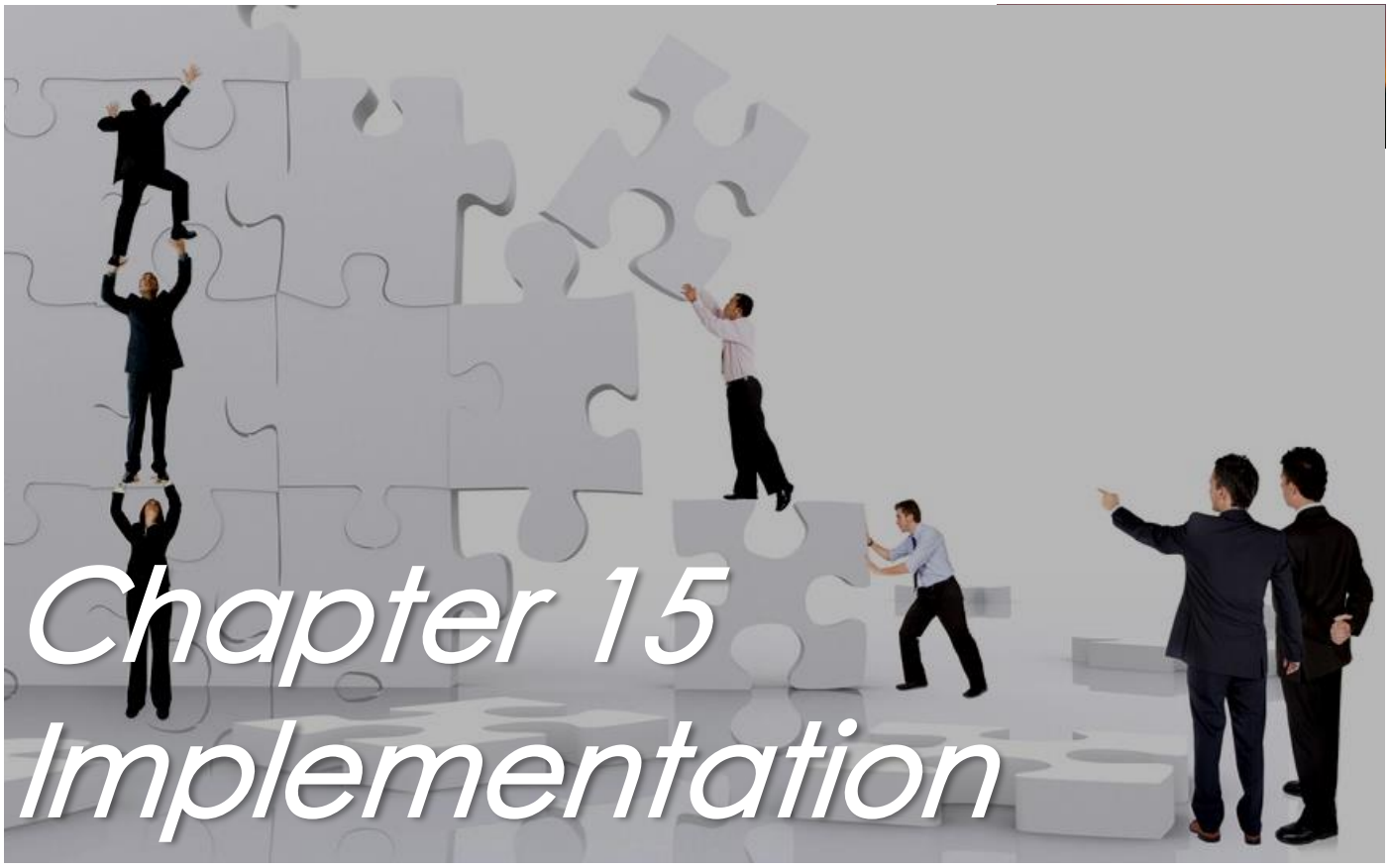

Chapter 15 Implementation

Implementation

Successful community plans have the same key ingredients: "2% inspiration and 98% perspiration." This section of the plan contains the inspiration of the many county officials and residents who have participated in the planning process. However, the ultimate success of this plan remains in the dedication offered by each and every resident.

There are numerous goals and objectives in this plan. We recommend reviewing the relevant goals during planning and budget setting sessions to determine what projects may need to be undertaken during the course of the fiscal year.

Action Agenda

The Action Agenda is a combination of the following:

- Goals and Objectives
- Land Use Policies
- Support programs for the above items

It will be critical to earmark the specific funds to be used and the individuals primarily responsible for implementing the goals and objectives in Ellsworth County.

Support Programs for the Action Agenda

Three tools aiding in the implementation plan are:

1. Housing Study - A Housing Study will be critical to use in direct relationship to the Comprehensive Vision Plan due to the need for housing in the county. The study will help guide the county in the redevelopment and future development of housing throughout the county and all of the communities in Ellsworth County.
2. Vision Plan - A Vision Plan will assist in identifying future economic development strategies that will tie into the overall planning effort of the county. It will be critical to work with this document and the plan in unison.
3. Employment Studies: The relationship between place and economy is constantly evolving, and continually shaping the growth, development, and decay of communities and counties. The study will help guide the county in the recruitment and retainment of employers and employees alike throughout the county and all of the communities in Ellsworth County.