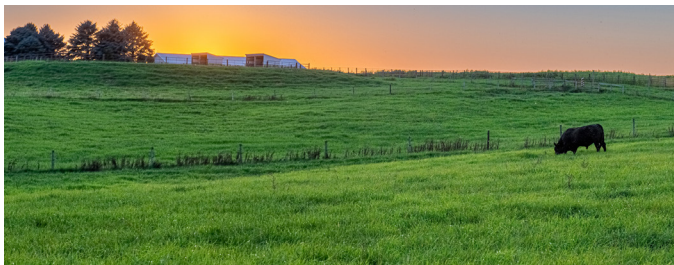


*plan*   
**Jo Daviess**  
 2045 Comprehensive Plan





**Comprehensive Plan 2024 Update  
Jo Daviess County, Illinois**

Adopted by the Jo Daviess County Board on July 9, 2024

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***Jo Daviess County Board***

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***Photography***

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## JO DAVIESS COUNTY 2045 VISION STATEMENT

The following statement, adopted by the Jo Daviess County Board on July 9, 2024, reflects the desired character of the County in the year 2045, as seen by the residents in 2023:

**Jo Daviess County is a uniquely beautiful place.** We, the residents of Jo Daviess County proudly affirm a balanced respect for the past with a spirited determination for our future.

**As stewards, we value the land and our strong agricultural heritage.** Our careful use and protection of natural and historic resources assure their preservation for future generations.

**We encourage responsible growth and planned development.** We accept self-imposed limitations to safeguard and enhance broad county goals, including preservation of the county's rural character, conservation of scenic areas and development of year-round recreational opportunities.

**We celebrate our small town traditions** of hospitality, cultural heritage, neighborliness and community involvement. Our communities have a cooperative spirit where we cheer individual successes and share common challenges. We appreciate our diverse population composed of many ages, races, lifestyles, backgrounds, faiths and gifts. We are enhanced by the arts. As compassionate caretakers, we provide essential social services to those in need.

**Meaningful education opportunities are available for individuals of all ages,** and we continually improve the quality of education so that our students are competitive in the world market. We enthusiastically embrace technologies of the new millennium and provide appropriate infrastructure which strengthens and diversifies our economy. Our quality of life and well-educated workforce attract environmentally-sound and technologically advanced employment opportunities.

*Our county is acclaimed by visitors as a beautiful and dynamic place. We are proud to call Jo Daviess County home.*

## INTRODUCTION

Welcome to the Jo Daviess County, Illinois Comprehensive Plan “2024 Update.” This Comprehensive Plan stands as the cornerstone of our community development planning process, articulating our community’s development goals and outlining public policies to guide future growth. It provides a clear direction for both governmental and private entities, facilitating informed planning and budgeting decisions, thereby ensuring proactive and strategic management of future growth.

Jo Daviess County is located in the mid-western United States, in the northwest corner of Illinois. The county is bounded by the Mississippi River/Iowa border to the west, and the Wisconsin border to the north. Stephenson County lies to the east, and Carroll County lies to the south. The county has an area of 395,850 acres or 618.5 square miles. The primary industries are agriculture, tourism and manufacturing. There are ten incorporated communities ranging in population from 107 (Nora) to 3,308 (Galena). Galena, the largest community, serves as the county seat. According to the U.S. Census Bureau, the County population in the year 2020 was 22,035, a decrease of 643, or -2.8%, from the 2010 population of 22,678. There are also two large unincorporated residential resort communities in the county.

Jo Daviess County is characterized by its picturesque landscape, blending agriculture, small friendly communities, manufacturing, and tourism. Increased rural residential development and the desire to promote job creation in the area prompted County officials to initiate a comprehensive planning process. The desire to encourage development and create better paying jobs in the County is coupled with an understanding that new development should be located to efficiently provide services and infrastructure and to ensure wise use of the County’s many natural resources. The County is challenged to maintain a balance between serving the interests of individual property owners and directing development in ways that will benefit the entire County. The manner in which this balance is achieved will determine the legacy passed on to future generations.

The comprehensive planning process is crafted to establish unified objectives and harmonize them with land use considerations. After the adoption of the comprehensive plan, ordinances and policies governing land use decisions will undergo necessary revisions to uphold these objectives. This ensures that each incremental development decision contributes cumulatively to the optimal utilization or preservation of the County's assets.

The heart of the plan relates to its recommendation to direct residential, commercial and industrial development to communities and the areas immediately surrounding them (contiguous growth areas). This approach supports the vitality of communities, while preserving productive farmland and the rural character of the County. Where residential development in unincorporated areas is allowed, clustering is recommended to minimize land used for residential development in these areas and to design these developments to be inconspicuous in the rural landscape. Cooperative planning between the County, communities, townships, and state and regional entities will be required for success. These approaches will promote well-planned, efficiently served development while protecting the natural, historic and scenic assets of the county that define its character.

To achieve this, the Plan should be:

1. **Comprehensive** - The Plan must address all sections of the community as well as all activities associated with managing development.
2. **Flexible** - The Plan must be structured to summarize policies and proposals and allow for flexibility to facilitate the ever-changing needs of the community
3. **Provident** - The initial requirements of the Plan are to achieve solutions to short term issues, whereas the ultimate goal of the Plan is to provide a perspective of future development and predict possible problems as far as 20 or more years into the future.

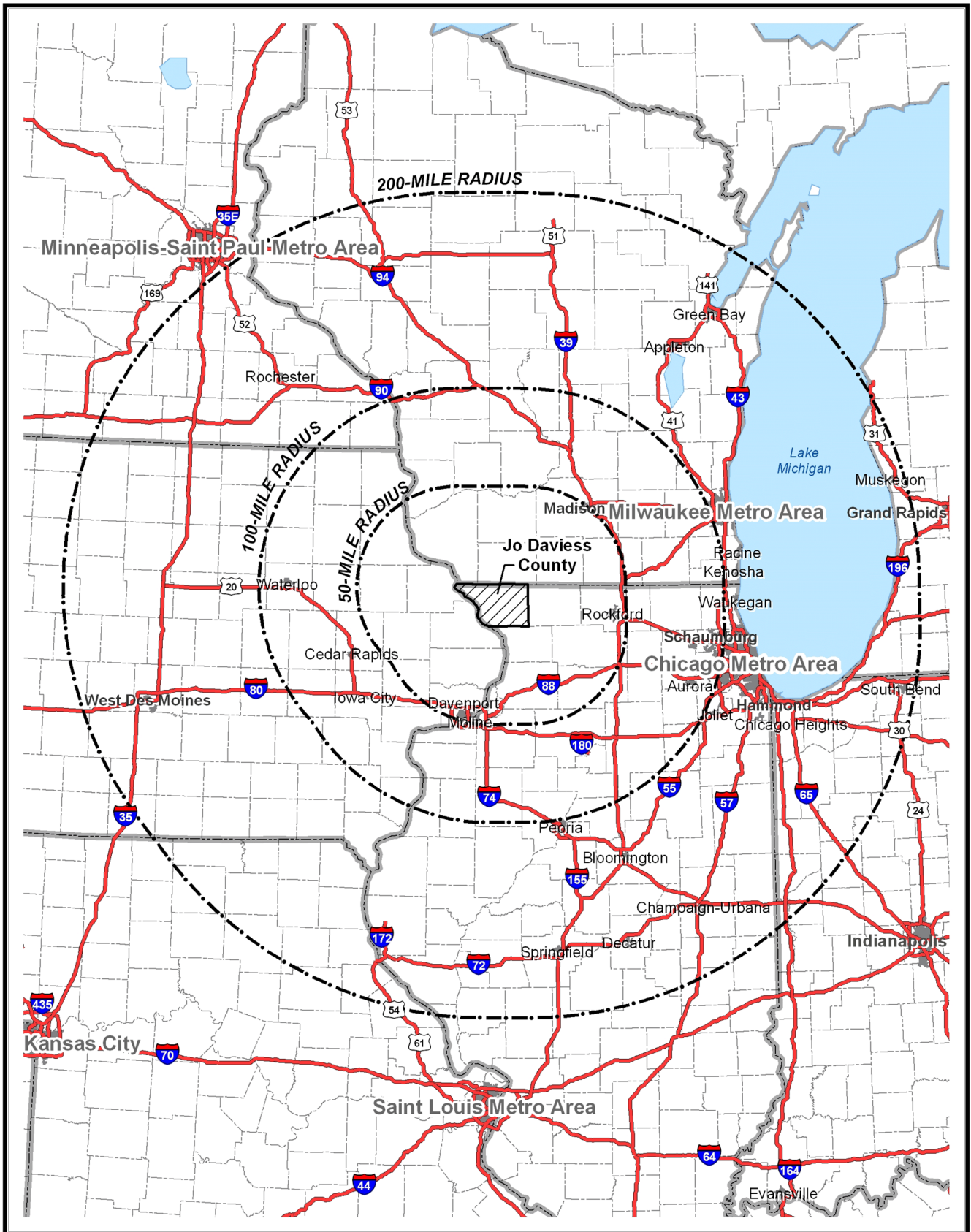
With these general guidelines as a basis, specific issues may be addressed by analyzing the growth patterns and physical features of the County. While a variety of factors influence where and when development takes place, several basic elements can be analyzed to assess the impact of past or future growth. The elements that this plan addresses are: Issues and Opportunities (Chapter 1); History and Cultural Resources (Chapter 2); Housing (Chapter 3); Transportation (Chapter 4); Utilities and Community Facilities (Chapter 5); Agriculture and Natural Resources (Chapter 6); Economic Development (Chapter 7); Land Use (Chapter 8); Goals and Objectives (Chapter 9); and Implementation (Chapter 10).

Citizen input/participation is an important component of the planning process. Numerous citizens have been involved in the development and evolution of this Comprehensive Plan, and their input is reflected in the goals and objectives formulated herein. A summary of public engagement is included as an appendix to this document.

The resulting Jo Daviess County Comprehensive Plan represents the consensus of the County in 2012 and as affirmed in 2024. The plan is a living document which should be reviewed and updated as needs and opportunities present themselves to ensure its validity as a reference point for decision making. It is recommended that the Plan be updated at least every five years.



Figure 1.1: Jo Daviess County in Regional Context







# Chapter 1

Issues and Opportunities

The goal of our comprehensive planning program is to foster orderly and beneficial development, creating a community that offers residents an attractive, efficient, and welcoming environment in which to live. Such an environment can be realized in part by creating a financially sound governmental structure, supporting good schools, a variety of community facilities and services, efficient land use and transportation systems, and encouraging sufficient employment opportunities and adequate, affordable housing.

The planning process involves understanding the various physical, economic, and social issues within the County. It examines where the County has been, where it is now, what goals or targets the community hopes to achieve, and what actions are necessary to reach these goals. A successful planning program can provide the direction needed to manage future growth by offering guidelines to government leaders, private enterprise, and individuals so that the County development-related decisions are sound, practical, and consistent.

## Section 1.1 Issues and Opportunities Summary

Key issues and opportunities for the County have emerged through our planning process:

- There was a decline in the County's population between 2010 and 2020.
- There is a need for more workforce and affordable housing.
- There is interest from the public in improving safety on Highway 20.
- Road maintenance is a challenge due to winding rural roads throughout the county.
- Jo Daviess County Transit is a great asset to the community and there is interest in its expansion.
- High speed internet is more important than ever, connecting residents to critical information and employment.
- Preservation of natural, agricultural, and historic resources remains a priority.
- There is a desire to increase recreational opportunities and public lands in the County.
- Tourism continues to be a driving factor in the development and economy of the County.
- Strategic development in the County is still an important issue including clustered residential development, preservation of environmental corridors, scenic landscape, agricultural resources, and public open space.

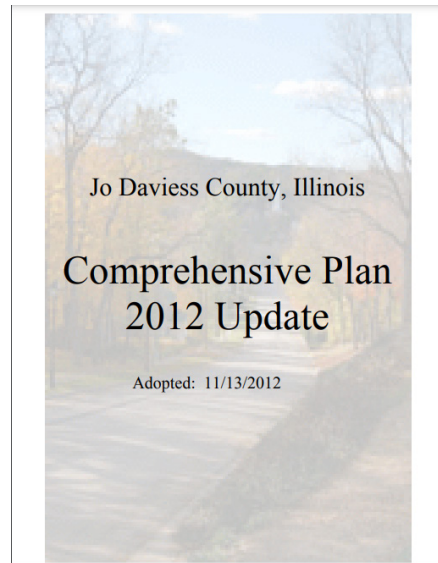
These topics are explored further throughout the plan and are addressed within our goals and objectives, reflecting our collective vision for the future of Jo Daviess County.

## Section 1.2 Past Planning in Jo Daviess County

The Jo Daviess County Board adopted a document titled "Land Use Plan: Jo Daviess County, Illinois," in March of 1990. The Jo Daviess County Board adopted the first County comprehensive plan document (Jo Daviess County Comprehensive Plan) on September 14, 1999. An amendment to the original Comprehensive Plan was adopted on November 14, 2006 (update to Contiguous Growth Area of the City of Galena), and a subsequent amendment to incorporate the Jo Daviess County Greenways & Trails Plan was adopted on March 10, 2009. The previous update of the Comprehensive Plan was adopted on November 13, 2012.

The 2012 Jo Daviess County Comprehensive Plan update was organized into the following categories which formed a foundation for the updated chapters.

- Issues and Opportunities for Planning
- Housing
- Transportation
- Utilities and Community Facilities
- Agriculture, Natural and Cultural Resources
- Economic Development
- Land Use
- Land Use Recommendations
- Goals and Objectives
- Implementation



### Section 1.3 The Comprehensive Planning Process

The comprehensive planning process involves several basic phases. The first phase involves research. Activities include acquiring a thorough knowledge of the existing community setting, identifying problems that require solutions, analyzing critical factors that need to be changed before progress can be made toward community goals, and establishing goals and objectives for growth and development.

The second phase of the comprehensive planning process involves the formation of planning policy. Planning policies recommend a course of action that will accommodate expected change, produce desired change, or prevent undesirable change.

The next phase involves the selection of a preferred alternative for guiding future growth. The Land Use Element relates how the County is expected to grow, identifying in general terms how development should proceed in the future to achieve community goals.

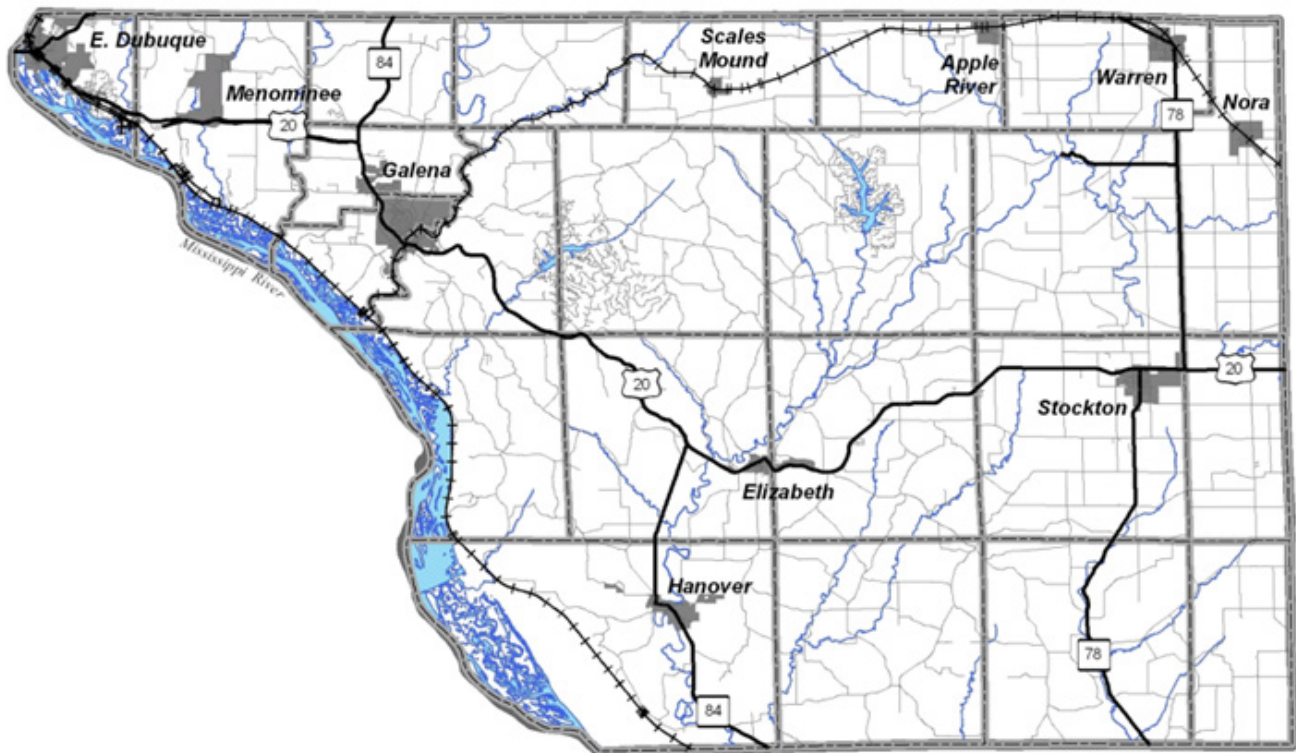
The final phase focuses on implementing the plan and programs that influence day-to-day decisions made by government officials, private enterprises, and individuals. Implementation mechanisms, such as zoning ordinances, subdivision regulations, and capital improvements programs, serve as crucial tools to achieve community goals. Zoning regulations control growth and development to ensure harmony with the Comprehensive Plan's proposals, promoting orderly development and preserving property values. Subdivision regulations ensure new land divisions are designed efficiently and in line with the Comprehensive Plan. The capital improvements program serves as a long-term financial strategy for major public improvements, optimizing available resources to provide necessary facilities and services to residents.

The Comprehensive Plan is the primary link between the past, the present, and the future, making it perhaps the best resource for achieving continuity over a period of time. It is to be used as a guide by those making decisions with regard to development. The Comprehensive Plan must also remain flexible so that it can be modified to reflect the processes of actual development and the changing attitudes and priorities of the community. To maintain an updated Comprehensive Plan, new information must be continually gathered and studied to determine trends and re-evaluate projections, forecasts, and plans. Even policy recommendations, which are relatively permanent statements, may require periodic review to determine their appropriateness and suitability in relation to the direction and character of community development at that time. A well thought-out and updated Comprehensive Plan, with a solid base of public involvement, is one of the most fruitful investments a County can make. It serves as a collection of policies and plans designed to steer future growth and development, ensuring continuity amid changes within Jo Daviess County.

Figure 1.2: Jo Daviess County, Illinois

## Jo Daviess County, Illinois

Population 2010: 22,678  
Population 2020: 22,035  
Population % Change 2010 to 2020: -2.8%  
Area (Sq. Mi.): 618.5



## Section 1.4 Demographic Trends

### A. Population Growth

Every 10 years the Federal government performs the National Census, and these Census results are the primary source of the information used to understand how communities change over time. As indicated in Table 1.1 below, the population of Jo Daviess County showed a downward trend from 1900 to 1940. However, since 1940, the population has shown a general upward trend in population with the exception of the 1960-1970 Census period and the 1980-1990 Census period. Since 1900, the County registered its most significant growth in terms of overall population increase and population percentage increase between 1970 and 1980, growing by 1,754 persons, or 8.1%, during this 10-year period.

It's important to note that the population trends observed in Jo Daviess County since 1900 differ from those of the State of Illinois as a whole. While Illinois has witnessed a consistent increase in population during each Census period since 1900, Jo Daviess County's population trends have varied. However, the percentage increases in population for Jo Daviess County during Census periods since 1940 have generally aligned with those of the State as a whole. This trend is likely due to increase in population in two large resort communities in unincorporated areas

**Table 1.1**  
**1900-2020 Population, Population Change and Population % Change**  
**Jo Daviess County and State of Illinois**

Year	Jo Daviess Co.			Illinois		
	Population	Change	% Change	Population	Change	% Change
1900	24,533	---	---	4,821,550	---	---
1910	22,657	1,876	-7.6%	5,638,591	817,041	16.9%
1920	21,917	740	-3.3%	6,485,280	846,689	15%
1930	20,235	1,682	-7.7%	7,630,654	1,145,374	17.7%
1940	19,989	246	-1.2%	7,897,241	266,587	3.5%
1950	21,459	1,470	7.4%	8,712,176	814,935	10.3%
1960	21,821	362	1.7%	10,081,158	1,368,982	15.7%
1970	21,766	55	-0.3%	11,113,976	1,029,127	10.2%
1980	23,520	1,754	8.1%	11,426,518	317,129	2.9%
1990	21,821	1,699	-7.2%	11,430,602	3,188	0%
2000	22,289	468	2.1%	12,419,293	415,942	3.6%
2010	22,678	389	1.7%	12,830,632	411,339	3.3%
2020	22,035	643	-2.8%	12,812,508	114,468	-0.1%

Source: U.S. Bureau of the Census 2020

As seen in Table 1.2 below, the six-county area of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties (Northwest Illinois) decreased by 4.2% between 2010 and 2020. During this period, Carroll County was the only county in the six-county area to register population increases.

**Table 1.2**  
**2000 - 2020 Population, Population Change and Population % Change**  
**Northwest Illinois Counties**

	<b>Carroll County</b>	<b>Jo Daviess County</b>	<b>Lee County</b>	<b>Ogle County</b>	<b>Stephenson County</b>	<b>Whiteside County</b>	<b>NW IL Counties</b>
<b>2000 Pop.</b>	16,674	22,289	36,062	51,032	48,979	60,653	235,689
<b>2010 Pop.</b>	15,387	22,678	36,031	53,497	47,711	58,494	233,798
<b>Pop. Change</b>	-1,287	389	-31	2,465	-1,268	-2,159	-1,891
<b>Pop % Ch.</b>	-7.7%	1.7%	-0.1%	4.8%	-2.6%	-3.6%	-0.8%
<b>2020 Pop.</b>	15,702	22,035	34,145	51,788	44,630	55,961	223,991
<b>Pop. Change</b>	315	-643	-1,886	-1,709	-3,081	-2,803	-9,807
<b>Pop. % Ch.</b>	2.0%	-2.8%	-5.2%	-3.2%	-6.5%	-4.8%	-4.2%

Source: U.S. Bureau of the Census 2020

It is interesting and revealing to examine the differences in population change between the municipalities and the unincorporated area of the County. As seen in Table 1.3 below, since 1970, the unincorporated County population has seen an upward population growth trend, and the combined population of municipalities within the County has seen a downward population growth trend. Correspondingly, the ratio of the County unincorporated population to the population within municipalities has become increasingly in favor of the unincorporated area of the County. In 2020, the percentage of the County's population in the unincorporated areas topped 50% (52.2%) compared to 40.3% in 1970. This trend is likely due to increase in the populations of two large resort communities located in unincorporated areas. In 2020, the unincorporated population saw its first negative population change since 1990, decreasing by 0.2%.

**Table 1.3**  
**2000-2020 Population, Population Change and Population % Change**  
**Jo Daviess County Unincorporated Area Population and Jo Daviess County Population**  
**Within Municipalities**

Year	Jo Daviess County Unincorp.			% Ratio Uninc. Pop. / Municipal Population	Jo Daviess County Municipal		
	Population	Change	% Change		Population	Change	% Change
1970	8,769	---	---	40.3 / 59.7	12,997	---	---
1980	10,907	2,138	24.4%	46.4 / 53.6	12,613	-384	3.0%
1990	10,139	-768	7.0%	46.5 / 53.5	11,682	-931	7.4%
2000	10,759	620	6.1%	48.3 / 51.7	11,530	-152	1.3%
2010	11,539	780	7.3%	50.9 / 49.1	11,139	-391	3.4%
2020	11,513	-26	-0.2%	52.2 / 47.8	10,522	-617	-5.5%

Source: U.S. Bureau of the Census 2020

As seen in Table 1.4 below, Hanover and Scales Mound increased in population between 2010 and 2020, whereas Apple River, East Dubuque, Elizabeth, Galena, Menominee, Nora, Scales Mound, Stockton and Warren decreased in population during the same period. Scales Mound demonstrated the most dramatic increase in population between 2010 and 2020, growing by 60 persons or 16%, followed by Hanover (growing by 19 persons or 2.3%). Menominee demonstrated the most dramatic decrease in population between 2010 and 2020, losing 37 persons or 14.9% of its population, followed by East Dubuque (losing 199 persons or 11.6%), and Nora (losing 14 persons or 14.5%).

**Table 1.4**  
**1970-2020 Population, Population Change and Population % Change**  
**Jo Daviess County Municipalities**

	1970	1980	1990	2000	2010	2020
Apple River Pop.	482	472	414	379	366	347
Pop. Change	---	-10	-58	-35	-13	-19
Pop. % Change	---	-2.10%	-12.30%	-8.50%	-3.40%	-5.19%
East Dubuque Pop.	2,408	2,194	1,914	1,995	1,704	1,505
Pop. Change	---	-214	-280	81	-291	-199
Pop. % Change	---	-8.90%	12.80%	4.20%	-14.60%	-11.68%
Elizabeth Pop.	707	772	641	682	761	694
Pop. Change	---	65	-131	41	79	-67
Pop. % Change	---	9.20%	-17.00%	6.40%	11.60%	-8.80%
Galena Pop.	3,930	3,876	3,647	3,460	3,429	3,308
Pop. Change	---	-54	-229	-187	-31	-121
Pop. % Change	---	-1.40%	-5.90%	-5.10%	-0.90%	-3.53%
Hanover Pop.	1,243	1,069	908	836	844	863
Pop. Change	---	-174	-161	-72	8	19
Pop. % Change	---	-14.00%	-15.10%	-7.90%	1.00%	2.25%
Menominee Pop.	217	231	187	237	248	211
Pop. Change	---	14	-44	50	11	-37
Pop. % Change	---	6.50%	-19.00%	26.70%	4.60%	-14.92%
Nora Pop.	175	185	162	118	121	107
Pop. Change	---	10	-23	-44	3	-14
Pop. % Change	---	5.70%	-12.40%	-27.20%	2.50%	-11.57%
Scales Mound Pop.	382	347	388	401	376	436
Pop. Change	---	-35	41	13	-25	60
Pop. % Change	---	-9.20%	11.80%	3.40%	-6.20%	15.96%
Stockton Pop.	1,930	1,872	1,871	1,926	1,862	1,728
Pop. Change	---	-58	-1	55	-64	-134
Pop. % Change	---	-3.00%	-0.10%	2.90%	-3.30%	-7.20%
Warren Pop.	1,523	1,595	1,550	1,496	1,428	1,323
Pop. Change	---	72	-45	-54	-68	-105
Pop. % Change	---	4.70%	-2.80%	-3.50%	-4.50%	-7.35%

Source: U.S. Bureau of the Census 2020

## B. Age Distribution

Table 1.5 below details the number of Jo Daviess County residents that occupied specific age groups in the past two Census years. Insight into the nature of the County population's change over time can be gained through examining how these age groups change as they move through their life cycles. The age groups (or "cohorts" as they are called when tracking a group of same-aged people) have been displayed within Table 1.5 in ten-year increments, to more easily see how their numbers increase or decline over different Census years. The diagonal series of gray or white boxes within Table 1.5 indicate the path of each age cohort through the two Census periods.

**Table 1.5**  
**Distribution of Population by Ten-Year Age Groups (Cohorts)**  
**Jo Daviess County, Illinois**

	<b>2010</b>	<b>2020</b>	<b>Cohort Change 2010-2020</b>	<b>Cohort % Change 2010-2020</b>	<b>Class Change 2010-2020</b>	<b>Class % Change</b>
<b>Under 5-9 years</b>	2,471	2,024	-65	-2.63%	-447	-18.09%
<b>10-19 years</b>	2,678	2,406	-839	-31.33%	-272	-10.16%
<b>20-29 years</b>	2,006	1,839	82	4.09%	-167	-8.33%
<b>30-39 years</b>	2,239	2,088	40	1.79%	-151	-6.74%
<b>40-49 years</b>	2,951	2,279	65	2.20%	-672	-22.77%
<b>50-59 years</b>	3,629	3,016	-23	-0.63%	-613	-16.89%
<b>60-69 years</b>	3,384	3,606	-656	-19.39%	222	6.56%
<b>70-79 years</b>	2,036	2,728	-593	-29.13%	692	33.99%
<b>80-90 years and over</b>	1,284	1,443	---	---	159	12.38%
<b>Median Age (Jo Daviess)</b>	47.1	50.4	---	---	3.3	7.01%
<b>Median Age (Illinois)</b>	36.6	38.3	---	---	1.7	4.64%

Source: U.S. Bureau of the Census 2020



Table 1.5 provides insights into the age distribution of Jo Daviess County residents over the past two Census years. The data reveals an aging population, with all age groups below 40 experiencing declines between 2010 and 2020. Particularly noteworthy is the decline in the 10-19 age cohort, indicating both an exodus of school-age individuals upon reaching adulthood and a general decrease in the County’s school-age population.

In 2010, 41.4% of the County population was under 40 years of age; in 2020, 37% of the County population was under 40 years of age. This is reflected in the increasing median age as indicated in the above Table 1.5, which increased from 41.6 in 2000 to 47.1 in 2010. The “median age” is the point where ½ of the population lies above and ½ lies below; the older this age is, the older the overall population for a place is becoming. For comparison, Jo Daviess County’s 2020 median age of 50.4 is 12.1% higher than the 2020 median age of the State of Illinois (38.3).

### C. Education Levels

Table 1.6 below compares the educational attainment information for Jo Daviess County residents age 25 and above. Between 2010 and 2020 the County population shows an increase in the level of formal education. The percentage of persons with “some college education, no degree”, an “Associate’s degree”, a “Bachelor’s degree”, or a “Graduate or professional degree” increased from 49.8% in 2010 to 57.6% in 2020. This percentage compares to 58.2% of the persons in the State of Illinois as a whole who attained some level of college education in 2020.

**Table 1.6**  
**Educational Attainment of Persons 25 Years and Over**  
**Jo Daviess County, Illinois**

	2010	2020	Change (+/-)	% Change
<b>Less than 9th Grade</b>	630 3.80%	568 3.53%	-62	-9.84%
<b>9th - 12th Gr., no diploma</b>	1,177 7.10%	655 4.08%	-522	-44.35%
<b>High School Graduate</b>	6,514 39.30%	5,587 34.76%	-927	-14.23%
<b>Some college, no degree</b>	3,249 19.60%	3,419 21.27%	170	5.23%
<b>Associate’s degree</b>	1,193 7.20%	1,599 9.95%	406	34.03%
<b>Bachelor’s degree</b>	2,403 14.50%	2,643 16.44%	240	9.99%
<b>Graduate or professional degree</b>	1,409 8.50%	1,602 9.97%	193	13.70%
<b>Total</b>	16,575	16,073	-502	-3.03%

Source: U.S. Bureau of the Census, 2010-2020 American Community Survey 5-Year Estimates

## D. Households and Income

The Jo Daviess County residential community is made up of different types of households. Table 1.7, below, details the changes in the make-up of County households between 2010 and 2020. Family households have seen their number increase, although family households as a percentage of total households has decreased between 2010 and 2020. Non-family households have increased from 2010 to 2020 in both number (from 3,239 to 3,540) and percentage of total households (from 33.2% to 35.16%). Husband-wife family households decreased in both number and as a percentage of total family households between 2010 and 2020. Single-mother family households (female householder, no husband present) have increased from 10.5% of family households in 2010 to 12.4% in 2020. Both Average Household Size and Average Family Size have decreased slightly. A trend of increased Work from Home (WFH) employment followed the COVID-19 pandemic which was also realized in Jo Daviess County. This trend further emphasizes the need for improved internet infrastructure to support this trend.

**Table 1.7**  
**Households, Average Household Size and Household Type**  
**Jo Daviess County, Illinois**

	2010	2020	Change (+/-)	% Change
Households	9,753	10,069	316	3.24%
Average Household Size	2.31	2.11	-0.2	-8.66%
Average Family Size	2.81	2.59	-0.22	-7.83%
Households by Type: (% of Total Households)	6,514 66.79%	6,529 64.80%	15	0.23% -1.99%
Husband-Wife Families (% of Family Households)	5,448 83.64%	5,431 83.18%	-17	-0.31% -0.45%
Female Householder, no husband present (% of Family Households)	83.64% 10.50%	83.18% 12.42%		-0.45% 1.92%
Non-Family Households (% of Households)	10.50% 33.20%	12.42% 35.16%		1.92%
Male Householder (% of Total Non-Family Households)	1,587 49.00%	No Data		
Female Householder (% of Total Non-Family Households)	1,652 51.00%	No Data		

Source: U.S. Bureau of the Census 2020

[1] A household that has at least one member of the household related to the householder by birth, marriage, or adoption is a "Family household." Same-sex couple households are included in the family households category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. Responses of "same-sex spouse" were edited during processing to "unmarried partner." [2] "Nonfamily households" consist of people living alone and households which do not have any members related to the householder. [3] "Families" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couples are included in the families category if there is at least one additional person related to the householder by birth or adoption. Responses of "same-sex spouse" were edited during processing to "unmarried partner." Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households.

Another instructive piece of information on the state of households within the County is the level of income that each household achieves. Again, the Census provides insight into the range of incomes present within Jo Daviess County.

**Table 1.8**  
**Household Income 2010-2020**  
**Jo Daviess County, Illinois**

<b>Household Income (\$)</b>	<b>2010</b>	<b>2020</b>	<b>Change (+/-)</b>	<b>% Change</b>
<b>Less than 10,000</b>	562 5.6%	413 4.1%	-149	-26.5%
<b>10,000 - 14,999</b>	522 5.2%	342 3.4%	-180	-34.5%
<b>15,000 - 24,999</b>	1,035 10.3%	987 9.8%	-48	-4.6%
<b>25,000 - 34,999</b>	1,321 13.2%	1,118 11.1%	-203	-15.4%
<b>35,000 - 49,999</b>	1,540 15.4%	1,390 13.8%	-150	-9.7%
<b>50,000 - 74,999</b>	2,163 21.6%	2,024 20.1%	-139	-6.4%
<b>75,000 - 99,999</b>	1,444 14.4%	1,601 15.9%	157	10.9%
<b>100,000-149,999</b>	930 9.3%	1309 13.0%	379	40.8%
<b>150,000-199,999</b>	317 3.2%	514 5.1%	197	62.1%
<b>200,000 or more</b>	167 1.7%	373 3.7%	206	123.4%
<b>Total Households</b>	10,001 100%	10,069 100%	68	0.7%
<b>Jo Daviess County Median Household Income (\$)</b>	50,279	59,223	8,944	17.8%
<b>State of Illinois Median Household Income (\$)</b>	52,972	68,428	15,456	29.18%

Source: U.S. Bureau of the Census; American Community Survey 2020

Table 1.8, above describes how household incomes have changed between 2010 and 2020. The percentage of households making greater than \$50,000 per year has increased from 50.2% in 2010 to 57.8% in 2020. Median household income has increased from \$50,279 to \$59,223 over the same period, a 17.8% increase. This percentage increase in median household income is less than the State of Illinois as a whole (29.18%) over the same time period; also, the median household income for Illinois was 5.4% higher than Jo Daviess County in 2010, and 15.5% higher than Jo Daviess County in 2020. These are indicators that median household income is increasing at a more rapid pace in the State of Illinois compared to Jo Daviess County.

Table 1.9 below outlines poverty thresholds for years 2010 and 2020. Table 1.10 lists the Census and American Community Survey information on poverty for the total number of residents, children and adults 65 years of age and older within Jo Daviess County.

**Table 1.9**  
**Weighted Average Property Threshold - 2010-2020 (Unchanged)**

<b>Size of Family Unit</b>	<b>2010</b>	<b>2020</b>
<b>One Person</b>	\$11,139	\$11,139
<b>Two Persons</b>	\$14,218	\$14,218
<b>Three Persons</b>	\$17,374	\$17,374
<b>Four Persons</b>	\$22,314	\$22,314
<b>Five Persons</b>	\$26,439	\$26,439
<b>Six Persons</b>	\$29,897	\$29,897
<b>Seven Persons</b>	\$34,009	\$34,009
<b>Eight Persons</b>	\$37,934	\$37,934
<b>Nine Persons or more</b>	\$45,220	\$45,220

Source: U.S. Bureau of the Census 2020

**Table 1.10**  
**Poverty Status - 2010 and 2020**  
**Jo Daviess County, Illinois**

	<b>2010</b>	<b>2020</b>	<b>Change (+/-) 2010-2020</b>	<b>% Change 2010- 2020</b>
Individuals*	22,416	21,241		
Below Poverty Level	1,881	2,031	150	27.60%
% Below Poverty Level	8.40%	9.60%	1.20%	
Children under 18 years	4,607	4,026		
Below Poverty Level	528	495	-33	35.40%
% Below Poverty Level	11.50%	12.30%	0.80%	
65 years and over	4,518	5,905		
Below Poverty Level	287	435	148	0.7%
% Below Poverty Level	6.40%	7.40%	1.00%	

Source: U.S. Bureau of the Census; American Community Survey 2020  
All individuals for whom poverty status is determined.

**Poverty status increased within Jo Daviess County between 2010 and 2020 among individuals (from 8.4% to 9.6% of the population) and children under 18 years (from 11.5% to 12.3%). Poverty status among persons 65 years of age and older increased (from 6.4% to 7.4%).**

## E. Employment Characteristics

Table 1.11 below summarizes employment by industry data provided for the last two Census years. This information represents what type of industry that the working residents of the County were employed by and is not a listing of the employment currently located within Jo Daviess County. The discussion of the County economy will take place within the Economic Development Element of this Comprehensive Plan.

The “public administration” industry registered the greatest loss in terms of percentage decrease (-32.4%) between 2010 and 2020, followed by “arts, entertainment, recreation, accommodation, and food services” (-25.4%), “other services” (-20.9%), “information” (-15.2%), “agriculture, forestry, fishing and hunting, and mining” (-14.7%), “professional, scientific, management, administrative, and waste management services” (-11.3%), “manufacturing” (-11.1%), “construction” (-6.1%), “finance, insurance, real estate, and rental and leasing” (-5.5%), and “retail trade” (-4%). All other industry classifications increased in number and percent, the greatest percentage increases being registered in “wholesale trade” (20.3%), “transportation and warehousing, and utilities” (9.9%), and “educational, health and social services” (1.8%).

**Table 1.11**  
**Summary of Employment by Industry**  
**Jo Daviess County, Illinois**

Industry	2010	2020	Change (+/-)	% Change
<b>Agriculture, forestry, fishing and hunting, and mining</b>	706	602	-104	-14.7%
<b>Construction</b>	863	810	-53	-6.1%
<b>Manufacturing</b>	1,782	1,585	-197	-11.1%
<b>Wholesale trade</b>	227	273	46	20.3%
<b>Retail trade</b>	1,213	1,164	-49	-4.0%
<b>Transportation and warehousing, and utilities</b>	496	545	49	9.9%
<b>Information</b>	243	206	-37	-15.2%
<b>Finance, insurance, real estate, and rental and leasing</b>	654	618	-36	-5.5%
<b>Professional, scientific, management, administrative, and waste management services</b>	785	696	-89	-11.3%
<b>Educational, health and social services</b>	2,200	2,240	40	1.8%
<b>Arts, entertainment, recreation, accommodation, and food services</b>	1,623	1,211	-412	-25.4%
<b>Other services (except public administration)</b>	597	472	-125	-20.9%
<b>Public administration</b>	380	257	-123	-32.4%
<b>Total Employed Persons 16 Years and Over</b>	11,769	10,679	-1,090	-9.3%

Source: U.S. Bureau of the Census; American Community Survey 2020

## Section 1.5 Population Projections

Projections are estimates of future populations based on statistical models that extrapolate past and present trends into the future. Projections can be created through very simple or very complex calculations. The type of calculations used is based on the available data and desired use of the projection.

Forecasts are also estimates of a future population based on statistical models. Forecasts, however, include additional adjustments made to reflect assumptions of future changes.

Targets express desirable future populations based on policies and goals.

Developing population projections is a complex process. There is always a greater difficulty in deriving population projections for small geographic areas such as townships and small cities or villages. Projections for larger geographic areas are more reliable, since the large population base will be less likely to exhibit short term variations. Likewise, any projection results that extend for periods longer than ten years become statistically less reliable as inputs to the projection are based on calculations rather than actual numbers. In summary, the smaller the area and the longer the period, the less likely a projection will be accurate.

The population of Jo Daviess County showed a downward trend from 1900 to 1940. Since 1940, the population has shown a general upward trend in population with the exception of the 1960-1970 Census period and the 1980-1990 Census period. Since 1900, the County registered its most significant growth in terms of overall population increase and population percentage increase between 1970 and 1980, growing by 1,754 persons, or 8.1%, during this 10-year period. Between 2000 and 2010, the County population increased by 389 persons, or 1.7%. According to the Census data displayed in Table 1.7 above, in 2000 Jo Daviess County averaged 2.40 persons per household (PPH) in 9,218 households. In 2010, the estimated number of PPH declined to 2.31 in 9,753 households. It is anticipated that this trend of a gradually increasing number of households and a declining number of persons per household will continue into the future.

To estimate the Jo Daviess County population for 2030, 2040 and 2050, two different methodologies were employed, as follows:

### **Population Projection Methodology A:**

The number of households and persons per household within the County was projected out to 2030, 2040 and 2050 using a simple mathematical progression projection assuming a 7.96% increase per 10-year period for housing units and a 5.44% decrease per 10-year period for persons per household. The projected number of housing units was multiplied by the projected number of persons per household to yield a projected population in households. Since an average (over the past Census period) of 0.7% of the population does not live in a household, the estimated population in households was then increased by 0.7% to yield the total projected population.

### **Population Projection Methodology B:**

The 10-year growth rates from 1990-2000 and 2000-2010 were averaged to yield an average growth rate per Census period. This average growth rate was then used to project the population for 2030, 2040 and 2050.

It's important to note that these projections do not include any large-scale development of vacant land for residential uses within the planning period

**Table 1.12A  
Methodology A Projected Population  
Jo Daviess County, Illinois**

Year	2030	2040	2050
Population	21,575	21,152	20,737

**Table 1.12B  
Methodology B Projected Population  
Jo Daviess County, Illinois**

Year	2030	2040	2050
Population	21,914	21,793	21,673

**Table 1.12C  
Projected Population  
Based on Average Projected Population of Methodology A and Methodology B  
Jo Daviess County, Illinois**

Year	2030	2040	2050
Population	21,744	21,473	21,205

The Illinois Department of Commerce and Economic Opportunity (IDCEO) provides population projections for Illinois counties. The IDCEO population projections for Jo Daviess County are below in Table 1.12D

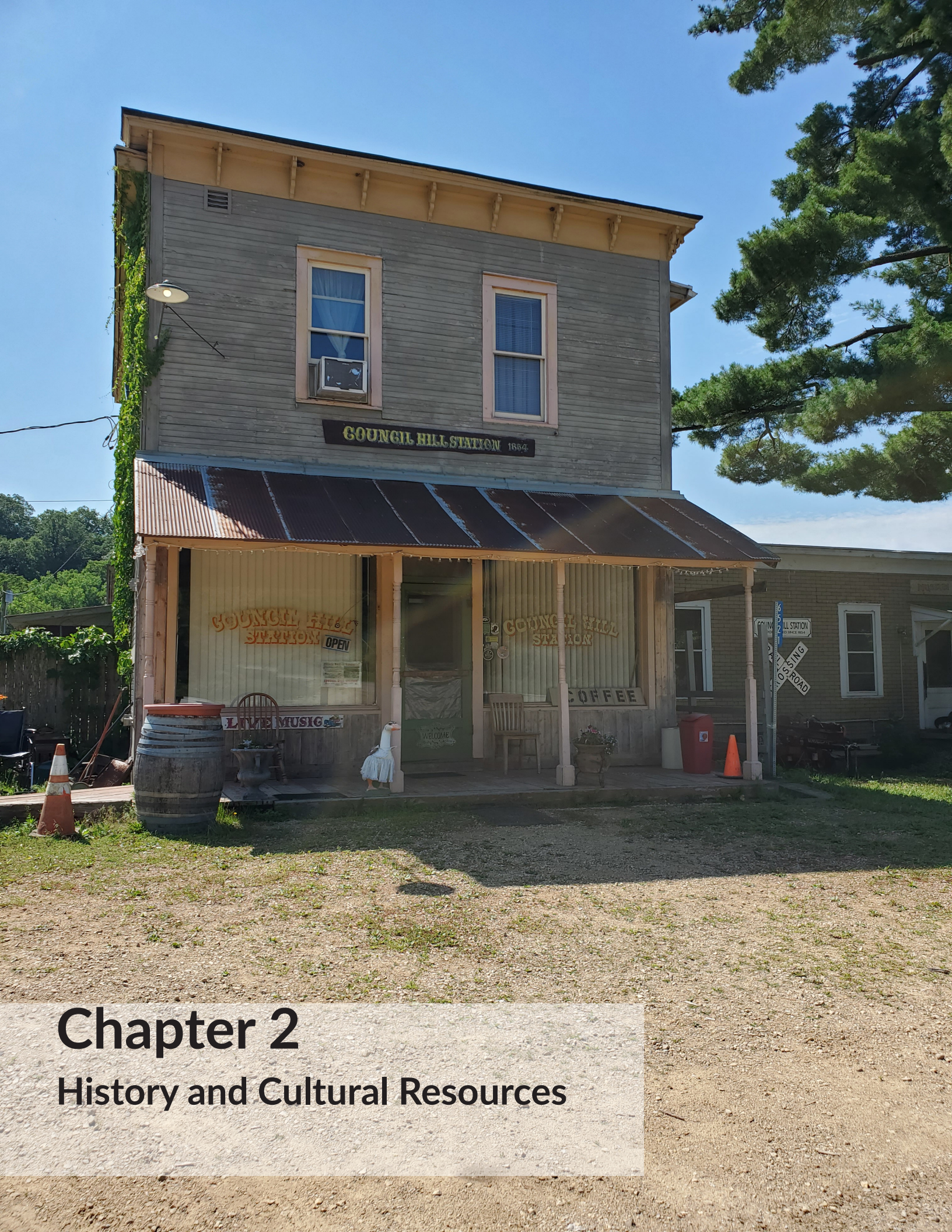
**Table 1.12D  
Projected Population by IL Dept. of Commerce and Economic Opportunity  
Jo Daviess County, Illinois**

Year	2020	2030	2040
Population	27,932	29,574	Not Calculated

Source: Illinois Department of Commerce and Economic Opportunity (Not updated since 2017)







# Chapter 2

## History and Cultural Resources

# The History of Jo Daviess County

## A. Human Prehistory of Jo Daviess County

The human prehistory of Jo Daviess County spans the time period from 10,000 B.C. to the 1600s when the first Europeans entered the area. The long-term occupation of the area has left a rich archaeological record that includes village sites, rock shelters and burial mounds. These sites are a valuable historic testament to the people who occupied the area for many millennia prior to European contact.

Continental ice sheets had retreated from the perimeter of the Driftless Area by 12,000 years ago, ushering in the Paleo-Indian Period. The driftless area is an 8,500 square mile area located in Illinois, Wisconsin, Iowa and Minnesota named for the absence of glacial drift of silt, gravel and rock left behind by receding glaciers. The Paleo-Indians were nomadic hunters and gatherers, who hunted large game animals, including the mammoth and mastodon. Examples of Paleo Indian points have been found in the county indicating that people were moving through the area at a very early date.

About 9,000 years ago the Archaic Period began, which lasted approximately 7,000 years. During this time the climate as well as flora and faunal communities began to represent a more modern situation. Archaic people began to settle in more localized areas and use projectile points that identify distinct regional cultures. During this time people also began to mark territories with visible cemeteries and experiment with plant domestication. These peoples often spent the colder months in upland rock shelters, moving down to the Mississippi River during the summer to fish and harvest various plants and animals. This seasonal cycle would be continued by later cultures for many millennia.

The Woodland Period dates from 2,000 years ago to roughly 1200 A.D. During this time, complex cultures appeared with elaborate burial practices and extensive inter-continental trade networks. The mounds that dot the bluffs of the Mississippi River and its tributaries are from this period. The Indian mounds of Gramercy Park in East Dubuque are burial mounds from the Hopewell phase, which occurred roughly from 100-200 A.D. Other burial mounds, and later effigy mounds, were constructed during the late Woodland period, or 600 to 1200 A.D. effigy mounds were made in the shape of mammals, birds or snakes. Some were for burial, but others may have been territorial markers or totem symbols. The Thunderbird and Bear effigy mounds are the last in the state of Illinois, as the rest were either plowed or grazed over. Jo Daviess County has hundreds of Indian mounds, but a systematic survey has never been undertaken.

Archeologists next define the Mississippian Period, which overlaps the late Woodland Period, running from about 1000 A.D. to 1500 A.D. The Mississippian Indians were farmers and lived in large villages. Their influence spread into the upper Midwestern tribes, and is characterized by distinctive pottery and reliance upon agriculture and the growing of corn, beans and squash. For reasons not fully understood, the period ended about 1500 A.D., when modern-day tribes began moving into the region.

## B. Fox and Sauk History

Various tribes moved through Jo Daviess County during the 1500s and 1600s. The Miami temporarily occupied northwestern Illinois and had several villages and lead mines along the Galena River in the late 1600s. It was the Miami who convinced Frenchman Nicholas Perrot to establish a post near East Dubuque to trade for lead. Pressure from Europeans farther east, disease, and inter-tribal warfare all played a part in the complex migrations that took place during this unsettled time. The Fox (or Meskwaki) and Sauk (or Sac) were originally from Michigan and northwestern Ohio, respectively. They were forced, however, for the reasons mentioned, to relocate in northeastern Wisconsin. The two tribes were allies and eventually united. They built large towns with wide streets and large bark-covered lodges. Agriculture was heavily practiced during the growing season, while hunting occupied them during the fall and winter months.

By the 1760s, the Fox and Sauk had begun to establish villages along the Mississippi River from Rock Island to Prairie du Chien. The total population of the Sauk was about 4,000-5,000, while the Fox may have had 2,000-3,000 members. Saukenuk, the single largest Sauk village, located at Rock Island, had a population of over 2,000 with 100 lodges. There was a heavy Meskwaki and Sac presence on the Galena River where they had several settlements, mined and smelted lead, and bartered with traders at the small village that would become Galena. The Native American mining, smelting and trading of lead was large scale and drew the attention of the Americans. An additional Meskwaki village under Wapello was present at Hanover in the early 1820s.

A questionable treaty between some of the tribes' leaders and Governor William Henry Harrison was signed in 1804. With this treaty, the Sauk and Fox gave up their lands east of the Mississippi, but retained the right to live there until the U.S. Government sold the land.

The federal government was very aware of the lead mines in the region, particularly along the Fever (now Galena) River. They began issuing leases for mineral lands in 1822, thus initiating a rush to the lead fields. Settlers quickly began squatting on Indian lands and tensions increased. The rush of lead miners had largely pushed the Meskwaki out of the Galena River area by the mid-1820s, although a band under The Buck was still camped along the Sinsinawa River in 1829.

### C. Black Hawk War

As wars go, the Black Hawk War was not a large one (being more of a conflict), but it did mark the end of Indian resistance to white encroachment east of the Mississippi River. It also opened wide the doors to settlement of the upper Midwest.

Black Hawk was a Sauk leader who thoroughly disliked the Americans. He had fought against them with the British in the War of 1812. Things heated up in 1828 when the government offered the lands in and around Saukenuk for sale. Most of the Fox and Sauk left for Iowa under the leadership of Keokuk. Black Hawk (and his followers) refused to follow, and continued for several years to cross back over to the Illinois side to hunt, farm, and visit their sacred mounds. Things came to a head after the winter of 1831-32 when the tribes found themselves short of food. Black Hawk collected about 500 warriors and about 1,000 women and children and moved back into Illinois just above present-day Rock Island. He hoped to plant corn, but must also have known that his action would provoke another incident with the American government. It did.

Illinois Governor Reynolds called for 2,000 volunteer militia, who joined 1,000 federal troops to pursue Black Hawk. An attempt by Black Hawk to surrender was botched by ill-trained and drunken militia at Stillman's Run. Enraged and emboldened, Black Hawk sent out raiding parties while retreating up the Rock River. Thus began a series of skirmishes and a wave of panic which spread throughout the region. Many settlements built stockades, the largest being at Galena. At the site of Elizabeth, then a small lead mining settlement, a hastily constructed fort was attacked by Black Hawk and a raiding party of 150 warriors. After a brief siege that cost the life of one defender, the Indians then raided and destroyed the cabins and livestock around the fort and left. Two months later, American troops caught up with Black Hawk's band at the Battle of Bad Axe in Wisconsin. The ensuing battle ended Black Hawk's dreams and all claims by the Fox and Sauk to lands east of the Mississippi River. Thus began a torrent of Euro-American immigrants into the region, with most coming to Galena and the lead mines in the region.



## D. Galena History

During the earliest years, the history of Jo Daviess County is largely the history of Galena. "Galena" is the Latin name for lead sulfide and was given to the small lead mining settlement in 1826 by its mining population.

Lead had been sporadically mined along the Fever (now Galena) River for thousands of years prior to the arrival of Europeans. The Native Americans used it for ceremonial powder, paint and sometimes magical charms. The French noted their shallow mines as early as 1690 and quickly moved to gain control of the lead trade. Julien Dubuque, through a treaty with the Fox and Sauk Indians in 1788, either mined or encouraged the mining of lead on both sides of the river. Dubuque, Iowa is named after him.

The Americans began moving into the Galena area in large numbers following the first government issued leases in 1822. Aware of the value of lead, the federal government would only lease mineral lands, thus retarding permanent improvements in the lead region. The law was changed to permit private ownership in 1836-7 for Galena and several other towns, but not until 1846-7 for the rest of Jo Daviess County.

Because of the value of lead, which was used for musket balls, paint, roofing and flashing, water pipes, pewter and tin, a rush for the lead region began. It peaked in 1845, when the region (with Galena as the hub) produced 55,000,000 pounds, or 85 percent of the nation's lead.

During this time, Galena gained state and national prominence. The lead rush here was the first major mineral rush in U.S. history and preceded the California Gold Rush by 20 years. Because of the lead trade, Galena entrepreneurs were able to establish a near monopoly on the Upper Mississippi River steamboat trade that lasted until the Civil War.

**Although three miles from the Mississippi, Galena was the largest port north of St. Louis for 30 years.**

The town's business interests had invested heavily in every sector of the economy, from smelting to wholesaling and retailing stores that serviced the present states of Iowa, Wisconsin, Minnesota and beyond.

It was during this time that fortunes were amassed and mansions of all types and sizes were built. Galena became a "must see" place for the early travelers of the period. Its population peaked at 12,000 in 1857, but declined steadily thereafter. Immigration also peaked then. The first miners and settlers were from southern Illinois, Missouri, Kentucky and other Ohio River states. Many of them had strong ties to southern traditions and beliefs. These connections gave Galena, an otherwise "northern" city, a somewhat "southern" quality, particularly as it related to politics. These people tended to be Protestants, Democrats and States' Rights advocates. Many had no particular problem with slavery, provided it was kept in the southern states.

With time, however, Galena became home to many other groups as well. A relatively large number of free Blacks (perhaps 250 by the time of the Civil War) lived in town. Their numbers decreased rapidly after the War, as they left to find jobs. Many Germans (often highly skilled) came in the 1840s and 50s. They came because of political and economic conditions in Europe. Large numbers of Irish came, too, particularly with the potato famines of the 1840s. Cornish and English miners came hoping to work the mines. And large numbers of New Englanders and New Yorkers came, too, many looking for farms, not mines.

Into this mix came Ulysses S. Grant in April of 1860, with his wife and four children. Grant's father was in the tannery business in southern Ohio. He was involved in a leather goods store in Galena as early as 1841. Business was so good that he sent Grant's two younger brothers, Simpson and Orvil, to manage the store in Galena. Meanwhile, Ulysses had resigned from the Army and gone to St. Louis to be with his wife and her family. After failing at several business ventures, Grant's father finally sent him to Galena to help his brothers. One year later the Civil War erupted. U.S. Grant, a West Point graduate, left Galena a little-known private citizen, but returned in 1865 as the victorious general of the Union Armies. Eight other Galenians also achieved the rank of General for services rendered during the War, more than any other town of Galena's size.

Upon his return, Grant was given a new home on the east side of town. Although he was able to spend little time there, he maintained Galena as his official residence for 20 years (1860-1880). His home, always open to the public, was given to the City in 1904 and then to the State of Illinois in 1931. The State also owns the City's Old Market House and the Congressman Elihu B. Washburne Home. Washburne was one of the founders of the Republican party in Jo Daviess County in 1855-56 and also one of the most powerful lawmakers in Washington at the outbreak of the Civil War. He was a central figure in furthering the military and political careers of U.S. Grant.

Galena declined rapidly with the Civil War. Low lead prices and reduced production were the rule after 1847 when all mineral lands were put up for sale. Agriculture had become dominant in Jo Daviess County. The Galena River had silted in so badly (from soil loosened by picks and plows), that steam boats were avoiding it. The coming of the Illinois Central Railroad in 1854 further weakened Galena's trade monopolies. The Illinois Central was controlled by Chicago investors; over the next few years they successfully challenged Galena's trade. The Panic of 1857--a nationwide depression--hurt Galena further at a critical time. This, combined with the Civil War which disrupted Galena's river trade with St. Louis and beyond, hurt the town even more. Finally, increasingly bitter politics between Democrats and the new Republicans weakened City government. They found themselves unable to effectively address the City's problems. Following the War, Galena became a small, increasingly agricultural trade center.

**Today, Galena is nationally recognized for its history and architecture. Over 85 percent of the town was listed in the National Register of Historic Places in 1969.**

Original historic district boundaries were modified in 2013 resulting in a smaller but purer district, now at over 61 percent. Its location within the Driftless Area--with its unglaciated hills, valleys, ridges and scenic vistas--adds to its attractiveness. Over one million people visit the community annually. Other communities and sites have tied into this phenomenon, such that the entire county now represents a strong tourist destination.

## **E. Jo Daviess County Beyond Galena**

While lead mining and Galena dominate the story of early Jo Daviess County, they are by no means the only story. The County was established in 1827 and included all or parts of nine present-day counties. It was named after Col. Joseph Hamilton Daveiss (this is the correct spelling of "Daviess," the original legislation in Kentucky misspelled it but then years later other family members changed it to Daviess (for unknown reasons). Daveiss was a prominent Kentucky lawyer who married the sister of U.S. Chief Justice John Marshall. In 1811 he was appointed a Colonel in the Kentucky militia and achieved considerable fame by leading a gallant charge against the Indians at the Battle of Tippecanoe (Indiana). Unfortunately, he died in the process, but his name lived on, given to counties in Kentucky, Indiana, Illinois and Missouri--wherever Kentuckians migrated. Because early Illinois and Jo Daviess County were settled by so many with Kentucky roots, our county was so named. The name was originally pronounced "Davis".

Following the initial migration from the southern part of the State, Jo Daviess County attracted other groups as well. Tin miners from Cornwall and lead miners from the Yorkshires of northeast England came. Many Irish came, most as unskilled laborers who worked in the mines, on the farms and elsewhere. Most of the Irish were Catholic, but some were Protestants, most from what is now Northern Ireland. The largest numbers of Irish came during the 1840s because of the potato famines.

Huge numbers of Germans also came during the 1840s and 1850s, often because of political and economic unrest in Europe. Galena took in large numbers, but so, too, did farming areas like Menominee, Guilford and Elizabeth townships. In addition to farming, the Germans came as furniture makers, cobblers, carpenters and professionals. Some of the farmers who bought up land in the eastern side of the county moved there from southeastern Pennsylvania, where they had lived for generations.

Perhaps the largest influx of new residents prior to the Civil War were those from New England and New York. With the opening of the Erie Canal and Great Lakes to steam boat travel, they flooded northern Illinois and Southern Wisconsin. As a result, the County became more like the rest of northern Illinois in terms of its outlook and institutions. Southern traditions were still strong, however, and it took three tries before the County gave up its southern county commissioner form of government and adopted the New England Township and County Board of Supervisors form of government in 1853.

The new Republican party, in place by 1856, was overwhelmingly adopted by these northern settlers--New England was traditionally anti-slavery and this central tenant of the new Republican party caused most of Jo Daviess County to vote overwhelmingly Republican. Congressman Elihu Washburne, Robert Norris, Augustus Chetlain, Simeon Miner and brothers Halstead S. and George N. Townsend were key players in the formation of the party in the county.

There were two exceptions to this trend, still evident in the county today in the Galena and the Dunleith-Menominee areas. Many Galenians still had economic, if not social, ties to the South. While not pro-slavery, many believed in the Democratic party's "go slow" attitude on the slavery issue and many felt that individual states should have the right of self-determination. The Republicans were too radical for them.

The Dunleith-Menominee area, like Galena, received large numbers of Irish and German Catholics. They were part of a larger movement that saw the early Catholic Church actively soliciting Catholic immigrants to come to Dubuque and the surrounding area. Due to the efforts of Church leaders like Father Samuel Mazzuchelli and Bishop Loras, the Dubuque area became a welcoming destination for the Catholics on an otherwise Protestant frontier. The Democratic party, after a slow start, began to actively court the Irish and Catholic vote, making much progress by the time of the Civil War. Thus, the ethnic and political nature of Jo Daviess County was largely in place by 1861 and has largely remained so to the present day.

**It was out of this wealth of peoples, occupations and values that came the self-reliance, thrift, independence and enterprise that have traditionally characterized the county's population.**

The Civil War marked the end of new migrants coming into Jo Daviess County. The land had all been taken up--new settlers had to go west to find more. Agriculture was the overwhelmingly dominant industry in the county, as it had been since 1850. The coming of the Illinois Central Railroad in 1854 had given an incredible boost to commercial, market-oriented agriculture with wheat becoming the number one cash crop. By the time of the Civil War, the northern Illinois counties that lay along the Illinois Central Railroad represented the largest single wheat producing region in the world. After the War, stock raising took precedence.

Jo Daviess County's population peaked in the 1870s. Thereafter, most townships slowly declined in population as agriculture became increasingly mechanized and efficient, a trend still going on today. The towns and villages grew somewhat, particularly those along the railroad. Agriculture has continued as the dominant industry in most of the county, but with larger farm units and fewer farmers.

## **F. Outline of Community Histories**

### **Apple River:**

- 1854** Village platted in response to the coming of the Illinois Central Railroad. Population swells when people living in Millville (Apple River Canyon State Park) move to Apple River (and Warren) to be near the railroad and its commerce. William Hoskins Lumber Yard established.
- 1868** Village of Apple River incorporated.
- 1873** First High School.
- 1880** Population peaks at 626; listed as 347 in 2020.
- 1900** A number of manufacturing enterprises present: plows wagons and brooms produced. Large lumber yard and stock yard present. Stock raising, particularly Hereford cattle, is very important to the area.
- 1947** Stagecoach Trail ("Galena-Scales Mound Road") hard surfaced.

## **East Dubuque:**

- 1832** With conclusion of the Black Hawk War, settlers began moving into this part of Jo Daviess County. Eleazor Fren-tress takes up residence on 320 acres of land.
- 1854** “Dunleith” officially laid out in anticipation of the coming of the railroad.
- 1855** Illinois Central Railroad arrives from Galena.
- 1856** Town incorporated; flurry of business activity in response to the railroad.
- 1868** Illinois Central Railroad bridge crosses the Mississippi River, thus slowing Dunleith’s rapid growth.
- 1879** Dunleith name changed to East Dubuque.
- 1894** East Dubuque Register began.
- 1902** Severe flood.
- 1914** Prohibition in the State of Iowa makes East Dubuque a “watering hole” for Dubuque and eastern Iowa, changing the nature of the downtown business district.
- 1916** Severe flood.
- 1923** Severe flood.
- 1938** Civilian Conservation Corps (CCC) improves Gramercy Park, Hopewell Indian Mounds (200-500 A.D.) overlooking the Mississippi River.
- 1943** The Julien Dubuque Bridge completed; at 7,392 feet, it’s still one of the longest tied arch and cantilevered spans ever built.
- 1951** Severe flood.
- 1969** Severe flood.
- 1993** Severe flood.

## **Elizabeth:**

- 1825** Lead miners moving into the area from Galena; A.P. Van Matre establishes a smelter.
- 1830s** John D. Winters establishes one of the first stagecoach lines in northern Illinois.
- 1832** Black Hawk War and battle of Apple River Fort take place; settlement is named Elizabeth.
- 1839** Village is platted; mining on the decline, farmers moving to the area in large numbers.
- 1868** Village incorporated.
- 1887** Chicago Great Western Railroad comes to Elizabeth; town gets first newspaper, first bank and first lawyer; building boom results.
- 1910** Population hits 700, remains stable to present day.
- 1914** First electric street lights.
- 1915** "Grant Highway" (U.S. 20) planned (190 miles for \$3,160,000), would go through Stockton, Elizabeth, Galena. Road completed in the 1920s.
- 1920** Jo Daviess County Farm Bureau, organized the previous year, locates first office here.
- 1996** The Apple River Fort was reconstructed near the original foundation; an Interpretive Center added later, open to the public as a state historic site.

## **Galena:**

- 1818** John Tyler Armstrong builds cabin on east bank of Fever River, probably in vicinity of present information center (Illinois Central Depot). First recorded permanent settlement on the Fever River.
- 1822** First mining lease granted by federal government to Col. James Johnson, who brings 20 white miners and as many slaves from Kentucky to work his claim. Winnebago Indians resist Johnson's landing, insisting they had not ceded land to the United States, as had the Sauk and Fox tribes.
- 1823** The VIRGINIA becomes the first steamboat to ascend the Mississippi River.
- 1826** First post office in northern Illinois is established at the corner of Main and Perry Streets. The name "Galena" is chosen for the growing community.
- 1834** First printing of the Galena Gazette
- 1841** State legislature grants charter of incorporation to the City of Galena.
- 1844** Jo Daviess County courthouse completed on Bench Street
- 1845** Lead ore production in Galena area and adjacent Wisconsin peaks at 54 million pounds.
- 1846** Market House opens for business.
- 1854** Name of Fever River changed to Galena River by state legislature. Illinois Central Railroad arrives in Galena. Fire causes extensive damage to wooden buildings on Main Street.
- 1855** The DeSoto House opens for business.
- 1856** Abraham Lincoln speaks from balcony of the DeSoto House. Worst fire ever devastates many Main Street buildings. Ordinances now prohibit buildings constructed of wood downtown.
- 1858** Galena's population reaches an all time high of roughly 14,000.
- 1860** Ulysses S. Grant moves to Galena with his family so he can work as a clerk in his father's leather goods store.
- 1861** War between the States breaks out. Jo Daviess Guards formed and drills on Congressman Washburne's lawn. Ulysses S. Grant trains troops, departs with militia for Springfield.
- 1865** Grant returns from Civil War in triumph and is given huge reception and a home in Galena.
- 1868** Grant runs for president. Campaign headquarters at the DeSoto House. Receives election returns in library of Elihu B. Washburne's house.
- 1874** Turner Hall built by the Turner Society for community events.
- 1888** At 2,500 feet long, the Winston Tunnel was the longest railroad tunnel in the state for many years. It's closed now, but there is a hiking trail that leads to it at the Winston Tunnel State Natural Area south of Galena.
- 1893** Economic depression nationwide. Many Galena businesses fail.
- 1951** Construction completed on dike and floodgates, finally protecting Galena from flood waters.
- 1965** Galena becomes first community after Springfield to adopt a local historic preservation ordinance which established a local historic district.
- 1969** Over 85% of Galena is listed on the National Register of Historic Places.
- 1973** 22 farms were developed into a 6,800-acre semi-private recreational and residential lake community named The Galena Territory, anchored by national acclaimed Eagle Ridge Resort and Spa.
- 2010** Survey of the historic district by Ball State University resulted in an online database of more than 1,450 structures.
- 2013** Boundaries of the originally approved National Historic District were modified to remove underdeveloped areas and non-contributing properties resulting in a smaller (61%) but purer district.



### **Hanover:**

- 1828 James Craig erects saw mill, grist mill and dam.
- 1836 Village platted.
- 1849 Name changed to Hanover.
- 1864 Hanover Woolen Mill organized.
- 1877 Village incorporated.
- 1917 13,000 acres purchased for the Savanna Proving Grounds.
- 1921 New Woolen Mill completed (closed 1949).
- 1930 Highway 84 getting hard surfaced north to Il Rt. 5 (Hwy 20).
- 1960 Chestnut Mountain Ski Resort opens.
- 1965 Eaton Corporation opens in old woolen mill site (now closed).

### **Menominee:**

- 1830s Miners and farmers begin moving into the area, including many German and Irish.
- 1838 Father Samuel Mazzuchelli begins serving the needs of the large number of Catholic settlers.
- 1853 Township named Menominee.
- 1864 Nativity of the Blessed Virgin Mary Parish established. BVM church building erected in 1877.
- 1935 Village of Menominee incorporated; population about 125 (now 211).

### **Nora:**

- 1853 Platted in response to the coming of the Illinois Central Railroad. Develops in a manner similar to other small agricultural trade centers along the railroad.
- 1880 Population peaks at 333. Drops to 107 for 2020.
- 1883 Village of Nora incorporated.

### **Scales Mound:**

- 1820s First lead miners move into the area, including some farmers.
- 1828 Elijah Charles, a permanent settler, built a log cabin at the base of what is now Charles Mound, highest point in Illinois at 1235' elevation.
- 1830 Samuel Scales settled at the base of a nearby mound (now called Scales Mound) and established a tavern and served travelers and miners coming up from Peoria and westward from Chicago. The latter route is now called Stagecoach Trail in recognition of the Frink and Walker Stage Line which ran regular stages through the county from 1841-1856.
- 1853 Village of Scales Mound platted in response to the coming of the Illinois Central Railroad, a magnet for farmers.
- 1877 Village incorporated, has become an important local trade center for farmers, but nearby lead and zinc mining are also important. Three hotels, warehouses and stockyards are present. Two story Allen Warehouse is a focal point for community. Second floor of this structure serves as a community hall.
- 1890 Creamery constructed in response to growth of the dairy industry in the area.
- 1900 Scales Mound peaks in population at about 420; the population dipped but has risen slightly to 436 in 2020.

### **Scales Mound Continued:**

- 1916 “Cement” sidewalks became universal and electricity comes to the village.
- 1925 Village motion “that six signs be printed to read ‘Scales Mound Tourist Camp’ and erected in conspicuous places heading into village.”
- 1990 Scales Mound Historic District added to the National Register of Historic Places with 100% of its properties..

### **Stockton:**

- 1887 Village laid out on land adjacent to new Chicago Great Western Railroad Line. Area noted for rich soils, corn, cattle, horses and tobacco.
- 1890 Village of Stockton incorporated.
- 1909 Chicago Great Western established just east of town one of the largest railroad workshops on the line. Employs 150 people with a \$300,000 payroll by 1929.
- 1914 J.L. Kraft and Bros. Co. started when they purchased a creamery in town.
- 1950 Atwood Manufacturing Co. opens Stockton plant, providing seat adjusters and hood hinges to the automotive industry. (Now closed)
- 1969 Construction began on a dam to create Apple Canyon Lake on 2,700 acres of what was previously considered by farmers as marginal pasture land. Lake vacation lots are heavily marked in the Chicago area.

### **Warren:**

- 1843 Founded by Alexander Burnett.
- 1851 Freeman Tisdell builds stone hotel (Warren Community Building), anticipating the coming of the railroad.
- 1854 Illinois Central Railroad passes through Warren, insuring the success of the new community and dooming its rival, Millville (Apple River Canyon State Park).
- 1857 Village of Warren incorporated; first newspaper started.
- 1858 Mineral Point Railroad comes to Warren bringing lead and zinc trade to Warren and the Illinois Central. Warren quickly becomes Jo Daviess County's second largest community.
- 1895 Water works installed with 102 foot tower.
- 1913 First electric light plant.
- 1916 The first female mayor in the State of Illinois, Rose Canfield served until 1920.
- 1990 Warren has 1,550 residents; listed as 1,323 in 2020.
- 1995 Warren Commercial Historic District listed on the National Register of Historic Places.

### **Woodbine (unincorporated):**

- 1887 Coming of Chicago Great Western Railroad. Woodbine, consisting of only a few buildings south of the new tracks, gets a lift.
- 1894 Creamery established in town, which has become a small local trading center tied to the railroad.

## History of Agriculture

Agriculture began to gain importance in the Jo Daviess County area around 1829, partly due to a depression in mining caused by overproduction of lead. By 1840, the number of farmers surpassed that of miners in the region. Unlike settlers in the southern part of the state, who were primarily subsistence farmers of the hunter-farmer type, the agricultural pioneers of northern Illinois, including thrifty New Englanders, Germans, and Irish, brought with them their customs, educational ideals, and religious values. These diverse immigrant groups played a significant role in shaping the strong conservative values that are still largely held in the county today.

The traditional 19th-century Illinois farm unit was generally a diverse and productive landscape, in many respects a simplified version of the mixed woodland-grassland ecology it replaced. In the area now known as Jo Daviess County, corn was the leading crop, with about 2,500 acres planted in 1829. Corn was popular because of its high yields, easy cultivation, and its value for both human and livestock consumption. The grass on the prairies and steeply sloping hillsides were available for pasturage, and this led to the development of beef production and then to dairying by the 1880s.

Historically, agricultural products were primarily processed locally. The region was fortunate in having abundant mill sites. The first sawmill in the county was established in 1827. The first grist mill, run by waterpower, was built north of Galena in 1828. In 1857 Galena had three sawmills and a steam flour mill. Waterpower on the Apple River at Hanover was used as early as 1829 to grind wheat and corn. Galena was an important meat-packing center since the farmers found it profitable to convert their bulky corn into meat before sending it to market. Stock was often driven many miles to Galena to be slaughtered. By 1900, many farmers drove their cattle to railroad sidings to ship it to Chicago packing plants.

New England and European farmers settling in the area brought with them the practices that had been successful in their homelands. Unfortunately, these practices were not well-suited to the soils and topography of the Driftless Area. Over time the lack of adequate crop rotations, deep tillage on slopes perpendicular to the contours, and overgrazing led to catastrophic erosion, flooding and siltation. The Soil Conservation Service (now the Natural Resource Conservation Service - NRCS) was created in 1935 to address soil erosion issues throughout the country by working with farmers to change practices. Dramatic improvements were achieved in the decades that followed.

Beginning in the 1880s and continuing into the 1930s, a succession of innovations came into wide use, transforming the Illinois farmscape. Commercial fertilizers and hybrid varieties of corn made higher yields possible. Low-cost commercial nitrogen has made it possible to plant twice the once-standard number of rows of corn plants per acre. Since World War II, chemical weed killers have made labor-intensive field cultivation unnecessary.

However there have been unintended consequences. In addition to ongoing erosion issues, the loss of soil structure and associated reduction in infiltration has resulted in significant run-off of applied nutrients (e.g. nitrogen and phosphorous) into the Mississippi River - which is expensive for farmers and largely responsible for the algal blooms causing a hypoxic zone (often referred to as the "Dead Zone") in the Gulf of Mexico. States draining into the Mississippi River have been charged with implementing Nutrient Loss Reduction Strategies and farmers are currently being asked to voluntarily change practices to meet the strategy goals.

## Cultural Resources

Cultural and historic resources often help link the past with the present and can give a community a sense of place or identity. These resources can include historic buildings and structures along with ancient, historic and archeological sites.

Jo Daviess County is incredibly rich in historical and cultural resources.

**Prehistoric archaeological sites are to be found throughout the county. These include camp and settlement sites along the river valleys, Indian mounds on the bluff-tops, and rock shelters in the uplands.**

Significantly, these Indian groups were the first miners in the county, some having mined and traded lead for over 6,000 years. It was the presence of lead that caused the first American settlers to move into the area. The resultant mineral rush of the 1820s and 30s made Galena the largest river port north of St. Louis. The town became a mecca for easterners, southerners, Germans, Irish, English and others. They created a wealth of residential and commercial architecture that has survived to the present day. Ulysses S. Grant also came, and his subsequent military and political career gave Galena national recognition. Agriculture flourished throughout the county as new communities blossomed; today, Galena, Warren and Scales Mound all have historic districts.

Early trails were important to the settlement and development of Jo Daviess County. Many trails that later became wagon roads and stage routes were originally Indian trails. As settlers moved to the area, many trails were blazed across the County to make travel and marketing of agricultural products easier and safer.



The Illinois Historic Preservation Agency (IHPA) manages the National Register program in Illinois. In general, sites selected for inclusion in the National Register of Historic Places, in addition to being at least fifty years old, must meet one of the following four criteria:

- It is associated with significant historic events or activities (history).
- It is associated with important persons (history).
- It possesses distinctive design or physical characteristics, or high artistic value (architecture).
- It has the potential, through physical investigation to provide important information about prehistory or history (archeology).

Table 2.1 below summarizes the sites and districts in Jo Daviess County that are listed on the National Register of Historic Places.

**Table 2.1**  
**Sites Listed on the National Register of Historic Places**  
**Jo Daviess County, Illinois**

<b>Site</b>	<b>Location</b>	<b>Historic Significance (Period)</b>	<b>Architectural Style</b>	<b>Historic Function</b>
Galena Historic District - added 1969	Galena and environs (+/- 1,000 buildings)	Politics/ Government, Commerce, Community Planning and Development, Transportation, Military, Industry (1850-1874, 1825-1849, 1800-1824)	Greek Revival, Late Victorian	Agriculture/ Subsistence, Commere/ Trade, Domestic, Education, Social
Scales Mound Historic District - added 1990	Roughly bounded by village corporate limits, Scales Mound (960 acres, 184 buildings, 1 structure)	Commerce, Agriculture, Architecture (1925-1949, 1900-1924, 1875-1899, 1850-1874)	Queen Anne, Greek Revival, Stick/ Eastlake	Agriculture/ Subsistence, Commerce/ Trade, Domestic, Education, Social
Warren Commercial Historic District - added 1995	102-165 E. Main St., 204-210 E. Burnett, 102-108 S. Railroad, Warren (90 acres, 35 buildings, 1 structure)	Commerce, Architecture (1925-1949, 1900-1924, 1875-1899, 1850-1874)	Classical Revival, Late Victorian	Commerce/ Trade, Education, Government, Social
Apple River Fort Site - added 1997	0.25 mi. ESE of jct. of Myrtle and Illinois Sts., Elizabeth	Historic - Non-Aboriginal, Agriculture, Military (1825-1849, 1800-1824)	N/A	Defense (battle site, fortification)

<b>Site</b>	<b>Location</b>	<b>Historic Significance (Period)</b>	<b>Architectural Style</b>	<b>Historic Function</b>
Chapman, John, Village Site - added 2009	Western side of Illinois Route 84, south of Hanover	Prehistoric (1499-1000 AD)	N/A	Village Site
Chicago Great Western Railroad Depot - added 1996	Myrtle St. between N. Madison and Vine Sts., Elizabeth	Transportation (1925-1949, 1900-1924, 1875-1899)	N/A	Rail-related transportation
East Dubuque School (a/k/a Esther Hillman House) - added 1982	Montgomery Ave., East Dubuque	Architecture/ Engineering, Event (1975-2000, 1950-1974, 1925-1949, 1900-1924, 1875-1899)	Romanesque	School
Grant Ulysses S., House -added 1966 (National Historic Landmark)	511 Bouthillier St., Galena	Person; politics, government (1867, 1879, 1865)	N/A	Single dwelling
Millville Town Site - added 2003	Apple River Canyon State Park, 8663 E. Canyon Rd., Apple River	Social History, Historic - Non-Aboriginal Period of Significance (1975-1899, 1850-1874, 1825-1849)	N/A	Commerce/Trade, Domestic, Industry/ Processing/ Extraction, Transportation
Old Market House - added 1973	Market Square - Commerce St., Galena	Politics/ Government; Architecture (1825-1849)	No style listed.	Commerce/Trade; Government, Social
Old Stone Hotel (a/k/a Warren Community Building) - added 1975	110 W. Main St., Warren	Architecture, Transportation (1850-1874)	Other, Georgian	Hotel, Medical, Business/Office
Townsend House - added 2005	117 N. Canyon Park Rd., Stockton	Architecture (1850-1874)	Other, Greek Revival	Secondary Structure, Single Dwelling

<b>Site</b>	<b>Location</b>	<b>Historic Significance (Period)</b>	<b>Architectural Style</b>	<b>Historic Function</b>
Washburne, Elihu Benjamin, House - added 1973	908 3rd St., Galena	Politics/ Government , Architecture (1875-1899, 1850-1874, 1825-1849)	Greek Revival	Single Dwelling
Wenner, Charles, House - added 1984	Rocky Rd., Galena	Exploration/ Settlement, Architecture (1850-1874)	No style listed.	Single Dwelling
White, W. E., Building - added 1997	100 N. Main St., Stockton	Architecture (1875 - 1899)	Queen Anne, Late Victorian	Department Store
Miller, Henry W. House - added October 13, 2010	11672 W. Norris Ln., Galena	Architecture, Agriculture (1847)	N/A	Single Dwelling
Frentress, Henry N., Farmstead - added 2011	19140 U.S. Route 20 West, East Dubuque, IL	Agriculture (1880-1899)	Italianate	Farmstead
Bishop's Busy Big Store-Lyrie Opera House - added August 15, 2022	137 North Main St., Elizabeth, IL	Architecture (1905-2007)	N/A	Commercial; Entertainment/ Recreation

Source: National Register of Historic Places 2023

## G. Preserving Local History

A number of nonprofit organizations preserve local history by collecting artifacts and making them available to the public for education and research. Sustainability is often a challenge, but they serve a critical role in telling the story of Jo Daviess County.

**Galena-Jo Daviess County Historical Society**, 211 S. Bench St., Galena (will break ground in spring 2024 for a new museum building at 513 Bouthillier St.). Operates the Galena & U.S. Grant Museum which is open to the public daily year-round except for several major holidays, and the Old Blacksmith Shop at 245 N. Commerce open F-M seasonally. Covers all of Jo Daviess County.

**Elizabeth Historical Society** operates two museum sites which are open seasonally: The Elizabeth History Museum at 110 E. Myrtle St. and the Chicago Great Western Railway Depot Museum at 111 E. Myrtle St. in Elizabeth.

**Hanover Historical Society**, 500 Fillmore St., Hanover, includes many Native American artifacts collected at the Wapello site near Hanover. Open seasonally.

**Stockton Heritage Museum**, 107 W. Front St., Stockton. Open seasonally.

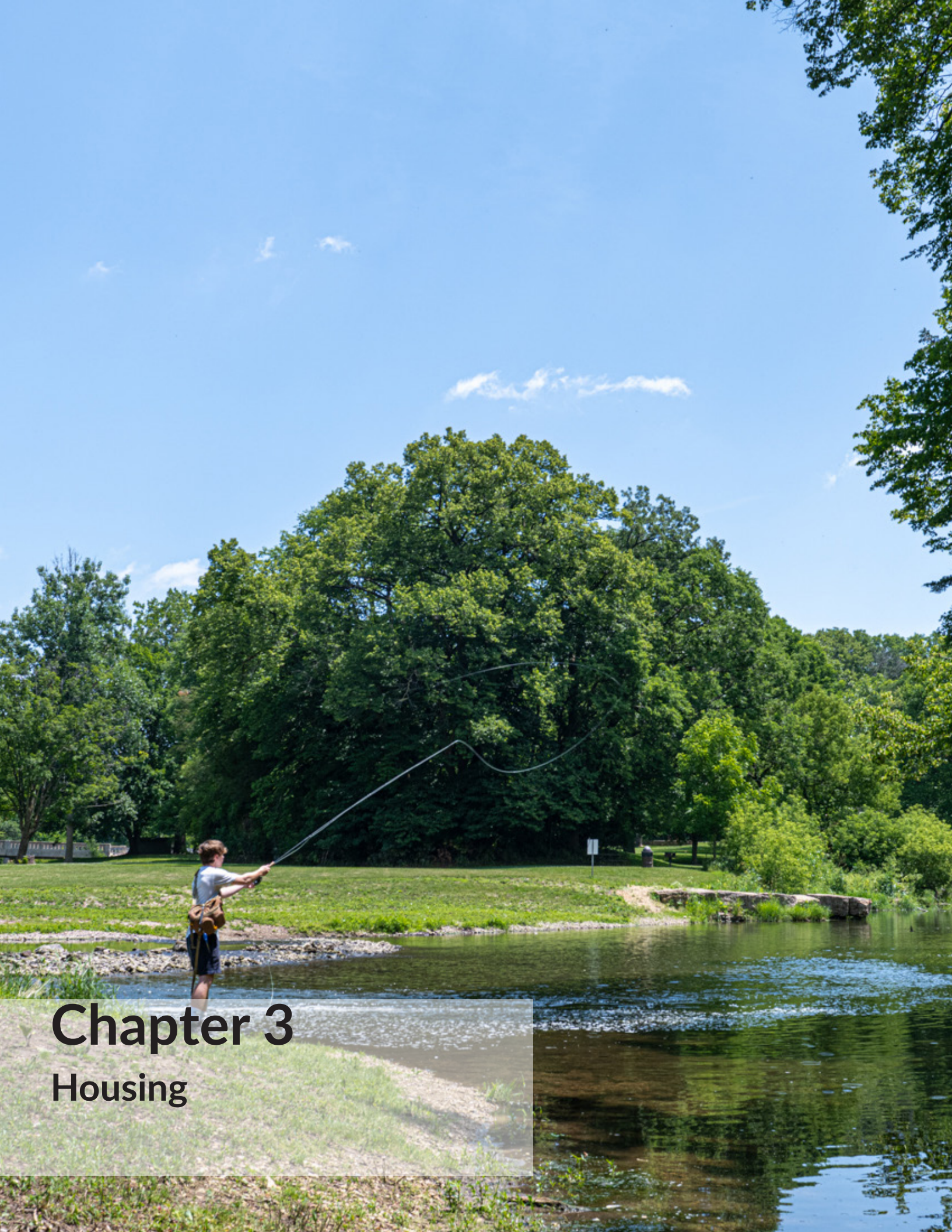
**Alfred Mueller Historical Collections Room** at the Galena Public Library, 601 S. Bench St., Galena, open most weekday afternoons.

The **Illinois Historic Preservation Agency** also collects local history and operates these Jo Daviess County sites:

- U.S. Grant Home, 500 Bouthillier St., Galena. Open Wed-Sun year-round.
- Washburne House, 908 Third St., Galena. Open seasonally on Fridays.
- Old Market House, 123 N. Commerce St., Galena. Closed to the public.
- Apple River Fort, 311 E. Myrtle St., Elizabeth. Open Friday and Saturday year-round and used as a tourist site in the warm months.







# Chapter 3

## Housing

## Section 3.1 Introduction

The definition of the county's population is open to interpretation, influenced by three distinct population segments: full-time residents, second-home owners, and tourists. Census figures record individuals whose primary residence is in Jo Daviess County, with the 2020 census population recorded at 22,035. Second-home owners, most accurately quantified by the number of "seasonal, recreational, or occasional use" housing units in the census data, represent a population with partial responsibilities and rights in the county. The 2020 census recorded 2,656 such housing units, which, assuming an average of 2 persons per household, equates to 5,312 people. Additionally, the Galena/Jo Daviess County Convention and Visitors Bureau conservatively estimates that over one million people visit the county each year, bringing revenue and requiring facilities and services. Often, tourists transition into second-home owners or even full-time residents, creating a linked population with diverse backgrounds and interests. This diversity presents both challenges and opportunities, shaping the county's character and future development.

## Section 3.2 Housing Inventory

### A. Housing Tenure

Housing tenure information sheds light on how residents live in the community. Occupancy and vacancy characteristics can help indicate if the current amount of housing stock is sufficient to meet existing demand. Between 2010 and 2020, Jo Daviess County experienced a net increase of only 149 units to its housing stock (Table 3.1) as compared to the 1,571 housing unit increase between 2000 and 2010. Over the past decade, Jo Daviess County owner-occupied housing units decreased by 0.3%, while renter-occupied housing units increased by 16.8%. This represents a change in trend as in the previous decade owner occupied housing increased by 8.6% and renter occupied decreased by 3.7%. For another comparison, Illinois overall had a lower percentage of owner-occupied housing units in the 2020 Census year (66.29% to 76.7%), and a higher percentage of renter-occupied housing units (33.7% to 23.4%).

The U.S. Department of Housing and Urban Development has established a minimum target rate for overall unit vacancy of 3% to assure an adequate choice of housing for consumers. An acceptable vacancy rate for owner-occupied housing is 1.5%, while a vacancy rate of 5% is acceptable for rental units. According to Census data, Jo Daviess County has a homeowner vacancy rate of 3.4% and a rental vacancy rate of 4.7%, indicating an adequate supply of housing choices for homeowners, but a relative lack of options for renters.

Table 3.1 shows that Jo Daviess County had an overall year 2020 vacancy rate of 26.63%, a rate significantly higher than Illinois as a whole. However, 72.7% of the vacant housing units are "for seasonal, recreational, or occasional use" (i.e. summer/weekend homes), compared to 9.86% in Illinois as a whole, and 36.9% for the six-county Northwest Illinois region comprised of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties. This high percentage of summer/weekend homes inflates the overall vacancy rate for the County. Summer/weekend homes account for 19.4% of the total number of housing units in the County, compared to 0.9% of the total number of housing units in Illinois as a whole, and 4.6% for the six-county Northwest Illinois region.

Between 2010 and 2020, Jo Daviess County experienced a net increase of only 149 units to its housing stock, compared to 1,571 units between 2000 and 2010.

**Table 3.1**  
**Comparison of Housing Occupancy, Jo Daviess County and State of Illinois**

	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>Occupied Housing Units</b> <i>% of Total Housing Units</i>	9,753 71.90%	10,069 73.37%	4,836,972 91.30%	4,884,061 90.89%
<b>Owner-occupied</b> <i>% of Occupied Units</i>	7,740 79.40%	7,718 76.65%	3,263,639 67.50%	3,237,778 66.29%
<b>Renter-occupied</b> <i>% of Occupied Units</i>	2,013 28.10%	2,351 23.35%	1,573,333 32.50%	1,646,283 33.71%
<b>Vacant Housing Units</b> <i>% of Total Housing Units</i>	3,821 28.10%	3,654 26.63%	459,743 8.70%	489,324 9.11%
<b>For seasonal, recreational, or occasional use</b> <i>% of Vacant Housing Units</i>	2,734 71.60%	2,656 72.69%	47,289 10.30%	48,264 9.86%
<b>Total Housing Units</b>	13,574	13,723	5,296,715	5,373,385

Source: U.S Bureau of the Census 2020

72.7% of the vacant housing units are “for seasonal, recreational, or occasional use” (i.e. summer/weekend homes), compared to 9.9% in Illinois as a whole.

## B. Structure Type

Structure type information (single family, duplex, multi-family, etc.) is a common method used for describing the physical characteristics of housing stock. The following “number of units in structure” information provides insight into the mix of housing types in the County. Table 3.2 below compares the distribution of structure types within Jo Daviess County with the State of Illinois as a whole, over two Census periods. In the year 2020, single-family homes (1-unit detached) made up 80.7% of Jo Daviess County housing units, a significantly higher percentage than Illinois (58.9%). The single-family detached homes within Jo Daviess County increased in number but decreased in percentage of total units over the last ten years. Illinois as a whole has also seen the number of single family homes increase, and single family homes as a percentage of total units increase. Jo Daviess County has seen an increase in the number 1-unit attached but a slight decrease in 1 unit detached. The County has seen a significant increase in the number of 3 or 4 unit structures, a slight increase in in 5-9 unit structure, a slight decrease 10 to 19 unit structures, and a significant increase in 20 or more units. Illinois as a whole has seen increases in the number of 1-unit (both attached and detached), 5 to 9 unit, 20 or more unit, boat, RV, van, etc housing structure types. The State saw decreases in 2-unit, 3 or 4 unit, 10 to 19, and mobile home housing structure types over the same period.

**Table 3.2**  
**Comparison of Total Housing Units and Structure Type**  
**Jo Daviess County and State of Illinois**

	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>1-unit, detached</b>	11,037 82.20%	11,069 80.66%	3,080,828 58.50%	3,161,971 58.85%
<b>1-unit, attached</b>	633 4.70%	631 4.60%	304,782 5.80%	311,584 5.80%
<b>2 units</b>	296 2.20%	271 1.97%	316,577 6.00%	301,404 5.61%
<b>3 or 4 units</b>	399 3.00%	674 4.91%	357,363 6.80%	342,842 6.38%
<b>5 to 9 units</b>	301 2.20%	322 2.35%	327,237 6.20%	339,044 6.31%
<b>10 to 19 units</b>	134 1.00%	112 0.82%	214,592 4.10%	204,840 3.81%
<b>20 or more units</b>	166 1.20%	242 1.76%	520,702 9.90%	580,042 10.79%
<b>Mobile home</b>	455 3.40%	402 2.93%	144,150 2.70%	129,855 2.42%
<b>Boat, RV, van, etc.</b>	0 0.00%	0 0.00%	1,383 0.03%	1,803 0.03%
<b>Total Housing Units</b>	13,421 100%	13,723 100%	5,267,614 100%	5,373,385 100%

Source: U.S. Bureau of the Census; American Community Survey (2016-2020 ACS 5-Year Estimates)

**In the year 2020, single-family homes (1-unit detached) made up 80.7% of Jo Daviess County housing units, a significantly higher percentage than Illinois (58.9%)**

## C. Housing Conditions: Age and Value

Age is often used as a measure of a house's condition. It should, however, not be the sole criterion since many older homes are either remodeled or kept in a state of good repair to maintain their value. Table 3.3 below shows a comparison of housing age between Jo Daviess County and the State of Illinois as a whole.

In 2010, 63.8% of the homes in Jo Daviess County were constructed prior to 1980 (compared to 70.4% in Illinois as a whole), and in 2020, 57.6% of the homes in Jo Daviess County were constructed prior to 1970 (compared to 65.7% in Illinois as a whole). In 2020, 28.6% of the homes in Jo Daviess County were constructed prior to 1940, a significantly higher percentage than Illinois as a whole (21.0%).

The county has a rich supply of older housing stock which enhances the historic ambiance of the area. While restored historical homes may be expensive, it is also true that older housing stock and “fixer-uppers” may provide opportunities for home ownership in a lower price range. These older homes also play an important role in defining the ambiance of the County. A common challenge with older homes is that they can fall into disrepair as population ages in place and struggles to maintain properties.

**In 2020, 57.6% of the homes in Jo Daviess County were constructed prior to 1970 (compared to 65.7% in Illinois as a whole)**

**Table 3.3  
Comparison of Housing Age  
Jo Daviess County and State of Illinois**

<b>Year Structure Built</b>	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>2014 or newer</b>	---	169 1.23%	---	88,931 1.66%
<b>2010-2013</b>	---	175 1.28%	---	79,005 1.47%
<b>2000-2009*</b>	1,320 9.84%	1,746 12.72%	530,429 10.07%	582,470 10.84%
<b>1990-1999</b>	1,881 14.02%	2,109 15.37%	560,625 10.64%	604,683 11.25%
<b>1980 to 1989</b>	1,652 12.31%	1,613 11.75%	468,049 8.89%	488,946 9.10%
<b>1970 to 1979</b>	1,917 14.28%	1,729 12.60%	775,239 14.72%	775,744 14.44%
<b>1960 to 1969</b>	660 4.92%	1,004 7.32%	635,128 12.06%	622,943 11.59%
<b>1950 to 1959</b>	937 6.98%	635 4.63%	707,982 13.44%	678,060 12.62%
<b>1940 to 1949</b>	753 5.61%	618 4.50%	372,084 7.06%	326,088 6.07%
<b>1939 or earlier</b>	4,301 32.05%	3,925 28.60%	1,218,078 23.12%	1,126,515 20.96%

\*2010 data for Houses build 2000-2009 is sum of 2000 to 2004 and 2005 or later data from 2006-2010 vintage

Source: U.S. Bureau of the Census; American Community Survey (2006-2010 ACS 5-Year Estimates and 2016-2020 ACS 5-Year Estimates) (B25034)

Housing value is another important aspect for gauging the overall condition of the current housing stock. The value of housing has risen significantly since 2010 in Jo Daviess County and in the State of Illinois as a whole. In addition to the national influence of rising home costs, the growing number of visitors to Jo Daviess County who have purchased homes in the County at near Chicago market prices have been a factor in driving up housing prices.

Table 3.4 shows the distribution of specified housing values across various price ranges, as well as the median home price, for Jo Daviess County and the State of Illinois. In 2010 Jo Daviess County had 34.9% of its owner-occupied houses valued at less than \$100,000; by 2020, only 28.5% of owner-occupied houses remained valued at less than \$100,000. In 2010 Jo Daviess County had 31.2% of its owner-occupied houses valued at \$200,000 or more; in 2020 39.6% were valued at \$200,000 or more. The 2020 median value for owner-occupied housing within Jo Daviess County was \$156,300, representing an increase of 13.3% over the median value in the 2010. The 2020 Jo Daviess County median value of owner-occupied housing was 22.6% lower than the median value for Illinois as a whole (\$202,100).

**The 2020 Jo Daviess County median value of owner-occupied housing was \$156,300, 22.7% lower than the median value for Illinois as a whole (\$202,100)**

**Table 3.4  
Comparison of Owner-Occupied Housing Values  
Jo Daviess County and State of Illinois**

	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>Less than \$50,000</b>	604 7.70%	553 7.17%	216,017 10.30%	196,149 6.06%
<b>\$50,000 - \$99,999</b>	2,126 27.20%	1,644 21.30%	450,834 13.70%	432,566 13.36%
<b>\$100,000 - \$149,999</b>	1,567 20.10%	1,503 19.47%	455,950 13.80%	467,538 14.44%
<b>\$150,000 - \$199,999</b>	1,082 13.80%	964 12.49%	505,936 15.30%	506,232 15.64%
<b>\$200,000 - \$299,999</b>	1,156 14.80%	1,660 21.51%	723,366 21.90%	720,797 22.26%
<b>\$300,000 - \$499,999</b>	763 9.80%	1,128 14.62%	643,537 19.50%	608,318 18.79%
<b>\$500,000 - \$999,999</b>	463 5.90%	218 2.82%	250,844 7.60%	246,949 7.63%
<b>\$1,000,000 or more</b>	52 0.70%	48 0.62%	54,217 1.60%	59,229 1.83%
<b>Median Value</b>	\$138,000	\$156,300	\$202,500	\$202,100

Source: U.S. Bureau of the Census; American Community Survey (2016-2020 ACS 5-Year Estimates)

## D. Housing Affordability

According to the U.S. Department of Housing and Urban Development, no more than 30% of household income should be spent on monthly housing costs in order for that home to be considered affordable. The U.S. Census provides data on housing costs as a percentage of household income for homeowners (Table 3.5) and renters (Table 3.6). The following information was taken from the U.S. Census Summary File 3, which is based on a sample of households within a community and not a total count of all households, and the American Community Survey 2015-2020 5-Year Estimates, which are also based on a sample and are subject to sampling variability. The “not computed” category represents units occupied by households reporting no income or a net loss, or for which no cash rent was paid, and is excluded from to counts and percent of total calculation in Tables 3.5 and 3.6.

Table 3.5 below shows monthly housing costs for homeowners as a percentage of their household income for Jo Daviess County and Illinois as a whole. In 2020, 73.0% of the homeowner households within Jo Daviess County paid less than 30% of their monthly income toward housing costs (compared to 67.8% in 2010 and 82.6% in 1999), and those units were therefore considered affordable to those living in them. This percentage is about the same as Illinois as a whole (72.9%).

**Table 3.5**  
**Monthly Owner Costs as a Percentage of Household Income**  
**Jo Daviess County and State of Illinois**

	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>Less than 20.0%</b>	1,762 40.60%	2,020 49.73%	733,286 32.10%	948,567 46.66%
<b>20.0% to 24.9%</b>	712 16.40%	600 14.77%	369,874 16.20%	322,713 15.88%
<b>25.0% to 29.9%</b>	467 10.80%	344 8.47%	295,295 12.90%	211,543 10.41%
<b>30.0% to 34.9%</b>	298 6.90%	256 6.30%	217,434 9.50%	132,374 6.51%
<b>35.0% or more</b>	1,101 25.40%	834 20.53%	671,472 29.40%	408,279 20.08%
<b>Not Computed</b>	15 ---	8 ---	9,011 ---	9,320 ---

Source: U.S. Bureau of the Census; American Community Survey (2016-2020 ACS 5-Year Estimates)

(Note: Some columns may not total exactly 100% due to rounding.)

**In 2020, 73.0% of the homeowner households within Jo Daviess County paid less than 30% of their monthly income toward housing costs as compared to 67.8% in 2010 indicating an increase in affordability for homeowners.**

Table 3.6 below shows gross rent as a percentage of household income for renters in Jo Daviess County and Illinois as a whole. In 2020, 54.0% of renters in Jo Daviess County were paying a monthly rent which was affordable to them (compared to 63.9% in 2010 and 59.7% in 1999). This percentage is higher than that of Illinois (49.4%) as a whole.

**Table 3.6**  
**Gross Rent as a Percentage of Household Income**  
**Jo Daviess County and State of Illinois**

	<b>Jo Daviess County 2010</b>	<b>Jo Daviess County 2020</b>	<b>Illinois 2010</b>	<b>Illinois 2020</b>
<b>Less than 20%</b>	698 35.30%	652 27.73%	348,647 25.50%	435,717 26.47%
<b>20.0% to 24.9%</b>	381 19.20%	273 11.61%	176,020 12.90%	203,190 12.34%
<b>25.0% to 29.9%</b>	187 9.40%	345 14.67%	152,973 11.20%	173,807 10.56%
<b>30.0% to 34.9%</b>	249 12.60%	207 8.80%	119,068 8.70%	134,257 8.16%
<b>35.0% or more</b>	465 23.50%	596 25.35%	570,805 41.70%	585,096 35.54%
<b>Not Computed</b>	208 ---	278 ---	101,747 ---	114,216 ---

Source: U.S. Bureau of the Census (Note: Some columns may not total exactly 100% due to rounding.) (2016-2020 ACS 5-Year Estimates)

**In 2020, 54.02% of renters in Jo Daviess County were paying a monthly rent which was affordable to them, as compared to 63.9% in 2010 indicating a decrease in affordability for renters.**



## Section 3.3 Housing Demand

### A. Population Trends

The population of Jo Daviess County showed a downward trend from 1900 to 1940. Since 1940, the population has shown a general upward trend in population with the exception of the 1960-1970 Census period and the 1980-1990 Census period. Since 1900, the County registered its most significant growth in terms of overall population increase and population percentage increase between 1970 and 1980, growing by 1,754 persons, or 8.1%, during this 10-year period followed by a significant decrease in population between 1980 and 1990 by 1,699 persons, or -7.2%. According to the Census data displayed in Table 1.7 of Chapter 1 Issues and Opportunities for Planning, in 2010 Jo Daviess County averaged 2.31 persons per household (PPH) in 9,753 households. In 2020, the estimated number of PPH declined to 2.11 in 10,069 households. It is anticipated that this trend of a gradually increasing number of households and a declining number of persons per household will continue into the future.

### B. Household Trends

Jo Daviess County has seen the average number of residents that inhabit each home or apartment decrease over time. This statistic as identified by the U.S. census as “average household size” or persons per household (PPH), and it is calculated by dividing the number of residents living in occupied housing units (those not living in group or institutional quarters) by the number of occupied housing units (those not classified as vacant). In order for the County to begin to approximate the future needs for housing units, an assumption must be made on how the units will be occupied. An analysis of the PPH and the vacancy rate trend over time suggests a future average occupancy rate of 1.74 persons per household and an average vacancy rate of 26% by the year 2050. When PPH is combined with the anticipated future population of 21,673 persons, we can project a total of 16,832 housing units in 2050. If the number of housing units in 2020 (13,723) is subtracted from the anticipated number of housing units in 2050 (16,832) we can anticipate that there will be a need for approximately 3,109 new housing units over the next thirty years. Or an average of 104 housing units per year. These units can be contained in either single-unit or multiple-unit structures.

**Projections indicate that there will be a need for approximately 3,109 new housing units over the next thirty years, an average of 104 per year.**

### C. Jo Daviess County Housing Study (2023)

Jo Daviess County recently developed a housing study with the intent to assess existing conditions, challenges, demands and market restrictions. The study also includes recommendations based on its findings. Some key takeaways are as follows:

1. There is a need for housing that workforce households can afford.
2. 42.3% of all households are housing cost-burdened (paying 30% or more of their income for housing)
3. Median home value is expected to increase from \$169,773 in 2020 to \$187,733 by 2027.
4. A lack of vacant rental housing makes it difficult for homeowners looking to downsize and those seeking short-term options when deciding where they want to establish roots. This indicated a demand for developers to invest in higher-density multifamily housing.
5. The study anticipates a total demand for an average of 185 units per year over 2023-2027.

A copy of the study can be found at:

<https://www.nwiled.org/pdf/doc-jo-daviess-county-housing-study-2022-1674159758.pdf>



**Chapter 4**  
**Transportation**

## Section 4.1 : Transportation Facilities Inventory

Jo Daviess County enjoys convenient access to a diverse range of transportation options. Currently, there are significant plans and ongoing construction projects to improve some of these transportation facilities. The completion of these improvements is expected to bring about new development opportunities and challenges within the County. The County, including government officials, staff, and residents, actively participates in planning activities associated with these projects to the fullest extent possible, ensuring that the transportation enhancements align with the community's needs and goals.

### A. Roads & Highways

The road classification system in Jo Daviess County serves two primary purposes: traffic mobility and land access. Arterials facilitate vehicle movement, while local roads and streets provide access to adjacent land, including farms and residential areas. Collectors connect arterials and local roads, serving both local and through traffic. As of 2022, the Jo Daviess County public road system comprises approximately 1,107.14 miles of public roadway. State highways account for approximately 92.88 miles; County highways account for approximately 175.22 miles; and township/road district roads and streets account for approximately 724.96 miles. Municipal-jurisdiction roads and streets account for approximately 114.08 miles.

#### 1. Arterials

IL Route 35, IL Route 84 (except portion between U.S. Route 20 and Wisconsin state line) and U.S. Route 20 serve as principal arterial transportation routes both to and through the County. Badger Road, IL Route 78, and IL Route 84 (portion between U.S. Route 20 and Wisconsin state line) serve as minor arterial routes to, through and within the County. The Illinois Department of Transportation (IDOT) periodically collects information on the average daily traffic volume (ADT) and average daily truck traffic volume (ADTT) for U.S. Highways and State Routes. Refer to Appendix I Maps, Map 3.2 Average Daily Traffic (ADT) on U.S. and State Routes and Map 4.3 Average Daily Truck Traffic (ADTT) on U.S. and State Routes. Traffic mobility is the major function of these highways, although land access is important for the farms, businesses and residences along them (with the exception of the interstate highways). There are approximately 77.42 miles of arterial highways in Jo Daviess County (59.14 miles principal arterial; 18.28 miles minor arterial) (2022 Illinois Highway and Street Mileage Statistics).

#### 2. Collectors

Jo Daviess County has a network of major and minor collectors, which serve as significant roads within the area. Major collectors include Albrecht Road, Bethel Road, Blackjack Road, and others, totaling approximately 149.36 miles (2022 Illinois Highway and Street Mileage Statistics). Minor collectors, such as Council Hill Road, Fiedler Road, and others, add up to about 54.05 miles.

#### 3. Local Roads and Streets

The remaining roads in Jo Daviess County are classified as local streets, mainly serving as access routes. Including municipalities, there are around 826.31 miles of local roads and streets (2022 Illinois Highway and Street Mileage Statistics).

## 4. Bridges

The Julien Dubuque Bridge connects the Cities of Dubuque, Iowa and East Dubuque, Illinois across the Mississippi River. The bridge was constructed in 1943 and is currently listed on the National Register of Historic Places. As of 2022, it will need to be replaced within the next 20 years and is listed in Iowa Department of Transportation's 10 major bridge projects, requiring special planning and coordination efforts due to the impact it will have financially.

Three miles north of the Julien Dubuque Bridge is the Dubuque-Wisconsin Bridge which connects Dubuque, Iowa to Grant County, Wisconsin. The bridge is four lanes, limited access, and carries US Highway 61/ US Highway 151.

The Dale Gardner Veterans Memorial Bridge crosses the Mississippi River to connect the Cities of Savanna, Illinois and Sabula, Iowa. The original bridge, called the Savanna-Sabula Bridge, was constructed in 1932 and replaced in 2017 and renamed. The bridge carries U.S. Route 52 across the river.



Photo: NWLED

## 5. Future Highway Improvements

The Illinois Department of Transportation (IDOT) is planning future highway improvement projects on U.S. Highways, State Routes, and Interstate Highways. The following projects (Table 4.1 below) are planned for Fiscal Years 2024-2029:

**Table 4.1  
Planned IDOT Highway Improvement Projects 2024 through 2029  
Jo Daviess County, Illinois**

Route Street Name	Location/Improvement	Estimated Cost
U.S. Route 20	Reconstruction of 4.1 miles, bridge replacement, horizontal and vertical realignment, culvert replacement, culvert removal, new culvert, truck-climbing lane, land acquisition and construction engineering from 0.2 mile west of Logemann Road to Rush Street in Stockton.	\$28,900,000
U.S. Route 20	Reconstruction of 2.7 miles, engineering for contract plans, land acquisition, utility adjustments and construction engineering from 0.1 mile east of Illinois 78(N) to 0.2 mile west of the Stephenson County line.	\$15,200,000
U.S. Route 20	Mississippi River in East Dubuque / Bridge painting / Bridge Deck Overlay.	\$7,500,000*
U.S. Route 20	Mississippi River in East Dubuque / P.E. (Phase I).	\$4,500,000
U.S. Route 20/IL Route 35	Illinois 35 ramps to 0.1 mi E of Butternut Dr & Illinois 35: U.S. 20 to Sinsinawa Ave in East Dubuque.	\$550,000
U.S. Route 20	0.1 mi W to Frentress Lake Road & 0.2 mi W to 0.6 mi E of Barge Terminal Road & US 20 (WB): 0.4 mi W to 0.1 mi E of Barge Terminal Road / Standard Overlay / Intersection Reconstruction.	\$8,534,000
U.S. Route 20	0.1 mi W to Frentress Lake Road & 0.2 mi W to 0.6 mi E of Barge Terminal Road & US 20 (WB): 0.4 mi W to 0.1 mi E of Barge Terminal Road / Construction Engineering.	\$960,000
U.S. Route 20/IL Route 84	0.1 mi E of Golf View Dr to N of Industrial Dr in Galena / P.E. (Phase I).	\$700,000
U.S. Route 20/IL Route 84	0.1 mi E of Golf View Dr to N of Industrial Dr in Galena / P.E. (Phase II).	\$700,000
U.S. Route 20/IL Route 84	0.1 mi E of Golf View Dr to N of Industrial Dr in Galena / Land Acquisition.	\$600,000
U.S. Route 20/IL Route 84	0.1 mi E of Golf View Dr to N of Industrial Dr in Galena / Utility Adjustment.	\$100,000

<b>Route Street Name</b>	<b>Location/Improvement</b>	<b>Estimated Cost</b>
U.S. Route 20/IL Route 84	0.1 mi E of Golf View Dr to N of Industrial Dr in Galena / P.E. (Row).	\$200,000
U.S. Route 20/IL Route 84	Smallpox Creek at Glen Hollow Road 3.8 mi SE of Galena / Bridge Replacement / Horizontal & Vertical Alignment.	\$6,000,000
U.S. Route 20/IL Route 84	Smallpox Creek at Glen Hollow Road 3.8 mi SE of Galena / Land Acquisition.	\$150,000
U.S. Route 20	Drainage 0.4 mi E of Galena Ridge Dr / Erosion Control / Culvert Repair.	\$175,000
U.S. Route 20	Drainage 0.4 mi E of Galena Ridge Dr / Land Acquisition.	\$21,000
U.S. Route 20	0.2 mi of W Logemann Road to Rush St in Stockton / Reconstruction / Realignment / Replacement / Culvert	\$26,000,000
U.S. Route 20	0.2 mi of W Logemann Road to Rush St in Stockton / Land Acquisition.	\$280,000
U.S. Route 20	0.2 mi of W Logemann Road to Rush St in Stockton / Construction Engineering.	\$2,600,000
U.S. Route 20	0.1 mi E of ILL 78 (N) to 0.2 mi W of Stephenson Co Line / Reconstruction.	\$1,200,000
U.S. Route 20	0.1 mi E of ILL 78 (N) to 0.2 mi W of Stephenson Co Line / Land Acquisition.	\$675,000
U.S. Route 20	0.1 mi E of ILL 78 (N) to 0.2 mi W of Stephenson Co Line / Utility Adjustment.	\$100,000
U.S. Route 20	0.1 mi E of ILL 78 (N) to 0.2 mi W of Stephenson Co Line / Construction Engineering.	\$1,200,000

Source: Illinois Department of Transportation District 2, FY 2024-2029 Highway Improvement Program

\*Iowa lead agency; Illinois share of total project cost

## B. Rail

Jo Daviess County is served by two rail lines: the Burlington Northern/Santa Fe and Canadian National railroads.

The Burlington Northern Santa Fe Railroad (BNSF) is one of North America's largest railroad networks, boasting over 24,000 miles of directly owned and operated track. When considering additional tracks like yard, siding, and others, the railway's total track control exceeds 50,000 miles. Furthermore, BNSF holds trackage rights on more than 8,000 miles of track in the United States and Canada. These rights enable BNSF to run its own trains with its crews on competing railroads' main tracks.

BNSF's extensive trackage spans 28 states and two Canadian provinces, covering the western two-thirds of the United States. It connects major ports in the Pacific Northwest and Southern California to various regions such as the Midwest, Southeast, Southwest, and even reaches from the Gulf of Mexico to Canada.

The Canadian National Railway Company, based in Montreal, Quebec, is a major Class I railway in Canada. Known as "North America's Railroad," it acquired the Illinois Central Railroad and several smaller U.S. railways, expanding its extensive track network along the Mississippi River valley from the Great Lakes to the Gulf of Mexico. Covering approximately 21,000 route miles, CN connects the Atlantic, Pacific, and Gulf of Mexico, transporting various freight like coal, forest products, petroleum, chemicals, grain, and fertilizers. It operates about 21 intermodal terminals and 80 warehousing facilities, providing international freight forwarding services. CN, once a privatized Canadian crown corporation in 1995, became a publicly owned company, employing 22,600 people with a market capitalization of \$90 billion CAD in 2019.

Though previously offering passenger services, the existing CN lines now focus solely on freight transport. Additionally, these routes generally fail to offer substantial service to local industrial producers due to reduced reliance on rail transportation, except in the East Dubuque area. Although the decline in rail usage aligns with national trends, the existing rail lines still offer a readily available infrastructure for specific industrial users. Amtrak's "Black Hawk Route" aims to reintroduce passenger rail service to Jo Daviess County in Illinois, contingent on the availability of sufficient funds from the state. In 2015, Governor Rauner announced a temporary hold on the project due to insufficient funds, with \$3 million already spent out of the \$223 million plan.

This proposed route intends to service between Chicago and Rockford, with stops in Elgin, Huntley, and Belvidere. The travel time is estimated to be a little less than two hours, with round trips per day planned. \$275 million is being allocated to re-establish this service and is expected to start being operable by 2027. The Chicago to Rockford route is expected to attract 136,900 riders annually.

In 2022 a feasibility study was conducted for a Rockford to Dubuque route. Four alternative routes were studied, all on Canadian National rails. The preferred alternative was through Freeport, Lena, Warren, Galena, Portage, and East Dubuque. It estimated 85-95K riders per year with annual revenue in the \$2-2.4 million range. The study is online at: <https://www.blackhawkhills.com/wp-content/uploads/2022/05/2022-05-Rockford-toDubuque-Passenger-Rail-Extension-Feasibility-Study.pdf>

Since 2023 a local effort has been mounted to support a feasibility study for reviving the Twin Cities Zephyr Amtrak route from Chicago to East Dubuque. This route would be from Chicago through DeKalb, Rochelle, Oregon, Savanna, West Galena, and East Dubuque. More than a dozen cities and organizations along this proposed route have endorsed a feasibility study using state or federal funding.

## Bridges

The Dubuque Rail Bridge crosses the Mississippi River between Dubuque, Iowa and East Dubuque, Illinois. The bridge is currently operated and maintained by Canadian National Railroad. Opening in 1868 the bridge has undergone a few changes, being rebuilt in 1890 and its most recent rehabilitation in 2012.

## C. Truck Transportation

In Jo Daviess County, semi-truck shipments are primarily concentrated on arterial highways. The Jo Daviess County Highway Department designates several highways as truck routes, and local townships, cities, and villages may also have their designated truck routes to direct truck traffic towards industrial and business areas.

## D. Air Transportation Facilities

The airports located in Jo Daviess County are what could be considered private or semi-private turf strips. These fields have limited potential for providing any kind of service other than presenting individuals with commuting options or personal recreational opportunities.

Nearby public-use airports include Dubuque Regional Airport in Dubuque, IA; Platteville Municipal Airport in Platteville, WI; Tri-Township Airport in Savanna, IL; Iowa County Airport in Mineral Point, WI; and Monroe Municipal Airport in Monroe, WI.

### 1. Heinen Brothers Airstrip

Heinen Brothers Airstrip (Identifier: IL12) is located at 6144 N. Lake No. 1 Road north of Apple Canyon Lake. It is a privately owned airstrip on approximately 12 acres. The one runway is a hard surface (seal coated) airstrip (runway is 18/36 - North/South) that is 2996' long by 30' wide with the surface in good condition (resurfaced in 2020). There are currently 10 aircraft based at Heinen Brothers Airstrip which are single engine aircraft, lighter than air aircraft, and 3 turbo prop aircraft's used for Ag operations. Heinen Brothers use this strip for aerial application of herbicides and fungicides for surrounding farms within a 30 miles radius of this strip. Average operations per year are mostly in spring/summer/fall months with over 30 take offs and landings per week. With 75% usage supporting agriculture and 25% general aviation. No fuel or mechanic services are available at this time. Adjacent hangar complexes are used to house the single engine aircraft based at the strip.

### 2. Dubuque Regional Airport

Dubuque Regional Airport (FAA identifier "DBQ") is approximately 7 miles southwest of Dubuque, IA, and is owned by the City of Dubuque. It features two runways: Runway 13/31 is 6,502' x 100' with a concrete/grooved surface, and Runway 18/36 is 6,327' x 150' with a concrete/grooved surface. The airport accommodates 83 aircraft (63 single-engine, 5 multi-engine, and 12 jet aircraft, and 3 helicopters). Daily aircraft operations average 192, with 97% being local general aviation and 3% air taxi.

### 3. Platteville Municipal Airport

Platteville Municipal Airport (FAA identifier "PVB"), owned by the City of Platteville, is approximately 3 miles southeast of Platteville, WI. The airport boasts two runways: Runway 15/33, measuring 3,999' x 75', surfaced with fair-condition asphalt, and Runway 7/25, 3,599' x 75', also surfaced with fair-condition asphalt. The facility houses 22 aircraft, including 20 single-engine aircraft, 1 multi-engine aircraft, and 1 helicopter. On average, there are 43 aircraft operations per day, with 51% being local general aviation, 45% transient general aviation, 3% air taxi, and less than 1% military.

### 4. Tri-Township Airport

Tri-Township Airport (FAA identifier "SFY") is located approximately 3 miles southeast of Savanna, IL, and is under the ownership of the Tri-Township Municipal Airport Authority. The airport features one runway, designated 13/31, with dimensions of 4,001' x 75', surfaced with well-maintained asphalt. The facility houses 4 single-engine aircraft, and weekly aircraft operations average 77, comprising 50% transient general aviation and 50% local general aviation.



## E. Water Transportation Facilities

Newt Marine Service in Dubuque, Iowa on the Mississippi River, handles 30 million bushels of corn and soybeans per year. The facility, comprised of about 10 acres, has truck, rail, and barge access, and a load/unload capacity of 200 tons/hour. Continental Grain Co., also in Dubuque, Iowa has truck, rail, and Mississippi River barge access, and a load/unload capacity of 150 tons/hour. Consolidated Grain & Barge Co. in Savanna, IL is comprised of about 1/3 acre. The facility handles grain (corn and soybean) and offers 120,000 bushels of storage area, truck access, Mississippi River barge access, and a load/unload capacity of 500 tons/hour.

Logistics Park Dubuque, located on the Mississippi River in East Dubuque, Illinois is a facility used for storing, handling, and loading bulk commodities to and from barge, rail, and truck. The facility itself has 100 acres of land, including a 20-acre protected harbor. Two barge loading docks make accessing the 250,000 square feet of interior storage easy, with the help of portable conveying equipment. The site handles bulk fertilizer, grain, steel products, animal feed ingredients, cottonseed, project cargo, super sacks, tallow, corn oil, propane, and other bulk materials as requested.

The Upper Mississippi River International Port District was created to bring some economic relief to Jo Daviess and Carroll Counties after the loss of the Savanna Army Depot. A Strategic Marine and Port Master Plan is currently underway and is looking to develop the remaining land of the former Savanna Army Depot into a River Port. With the areas easy connections to railroad and barge transportation, this development has the potential to bring about more opportunities for the two counties.

## F. Greenways and Trails

The Jo Daviess County Board adopted the Greenways & Trails Plan as an amendment to the County's comprehensive plan in Spring 2009. This plan is a valuable reference tool for communities and entities in Jo Daviess County at the state, County, and municipal levels interested in greenway and trail development. The plan was updated in 2022 and serves to help identify existing and potential opportunities in the County.

A greenway is a corridor of open land that is designated for conservation and/or recreation. Greenways may follow natural land or water features such as rivers, shorelines or ridges, or human landscape features such as abandoned railroad corridors, trails or canals. Greenways may form connections between communities, parks, historic and cultural sites, and nature preserves. Greenways differ in their location and function. Overall, a greenway can provide:

- Recreational benefits,
- Protect natural areas,
- Protect water quality,
- Enhance natural beauty and quality of life in neighborhoods and communities,
- Buffer incompatible or adjacent land uses, and
- Stimulate economic development opportunities.

A trail or path is a type of greenway that is separated from vehicular traffic and is dedicated to the use of pedestrians, bicyclists, roller skaters, wheelchair users, etc. Trails can be used for recreational purposes as well as to connect different sites and facilities. Greenways and Trails:

- Are not all owned by the government,
- Do not need to be fenced,
- Do not take land from people,
- Do not require public access on all the land.

## G. Public Transportation

Public transportation in Jo Daviess County is provided by Jo Daviess County Transit (JDCT) located at 710 S. West Street in Galena and operated by Jo Daviess County. JDCT offers transportation services to the public and all vehicles are equipped with lifts or ramps for handicapped accessibility.

The transit service covers various transportation needs within the County:

- **Inter-Community General Public Services:** Midday transportation is available within specific towns on designated days and has been expanded for the City of Galena from 7am – 5:30pm, Monday-Friday. Routes run Monday through Friday, 6am to 6 pm between all communities in Jo Daviess County.
- **General Public Medical Transportation:** Transportation is available for medical appointments to hospitals, clinics, and doctor's offices within the expanded 100-mile Jo Daviess County Transportation radius.

All General Public Medical Transportation is non-emergency medical transportation, provided 100 miles from Jo Daviess County Transit (710 S. West Street in Galena).

Jo Daviess County Transit operating hours are 6 am – 6 pm.

Jo Daviess County Transit Office Hours (Business Hours) are 7 am - 4 pm.

Demand Response services run on Saturdays and Sundays, June to October.

Current information on Jo Daviess County Transit can be found at <https://jodaviesscountytransportation.com/>

Since the 2012 plan update, regional bus service between Dubuque and Chicago provided by Trailways was discontinued. There may be potential to reestablish this service in the future.





# Chapter 5

## Utilities and Community Facilities

## Section 5.1 Public Utilities Inventory

The physical well-being of Jo Daviess County is dependent upon the adequacy of its public utilities and services. A safe and sufficient source of water, an adequate means of disposing of solid and liquid waste, and reliable energy supplies are essential in maintaining the public health, economy and natural resource base of the County.

### A. Water Supply

Most residents in Jo Daviess County receive their domestic water from a community water supply, while the remaining population is served by private wells. For more in-depth information on the quantity and quality of the County's groundwater supply, refer to Chapter 6: Agricultural and Natural Resources

#### Community Water Supplies

In Jo Daviess County, Illinois, there are nineteen (19) "community water supplies." A "community water supply" serves at least 15 service connections used by year-round residents or regularly serves 25 year-round residents. The community water supplies in the County include various locations like Apple River, Galena, Stockton, and others.

#### Non-Community Water Supplies

There are fifteen (15) "non-community" water supplies, all relying on groundwater from wells. "Non-community water supplies" can be either "Non-Transient Non-Community water supplies," serving at least 25 non-residential individuals during 6 months of the year, or "Transient Non-Community water supplies," regularly serving at least 25 non-residential individuals (transient) for 60 or more days per year (Illinois Environmental Protection Agency Source Water Assessment Program). The non-community water supplies consist of places like Eagle's Nest, Moonlight Reflections, and others.

### B. Sanitary Sewer Service/Private On-Site Wastewater Disposal Systems (POWDS)

Apple Canyon Utilities Company (Apple Canyon Lake subdivision development), Village of Apple River, City of East Dubuque, Village of Elizabeth, City of Galena, Galena Territory (Galena Territory subdivision/planned development), Village of Hanover, Village of Scales Mound, Village of Stockton, and Village of Warren all have municipal wastewater treatment facilities. In other parts of the County's unincorporated areas, the disposal of domestic and commercial wastewater is handled through the use of private on-site wastewater disposal systems (POWDS). These on-site systems, often referred to as septic systems, generally discharge the wastewater to subsurface drainage fields. There are several types of on-site disposal system designs typically used in rural areas including: conventional (septic tank/seepage field), mound, pressure distribution, and sand filter systems. In some cases, alternative waste disposal systems can be used in areas where conventional systems are not feasible due to unsuitable soil conditions. The County regulates septic systems through authority granted by the state. The state's Department of Public Health establishes the statewide code for siting, design, installation, and inspection of POWDS.

## A. Storm Water Management

Stormwater is rainfall and melted snow that flows off surfaces like streets and lawns. In natural areas, it seeps into the ground, filtering and recharging aquifers, or joining streams and rivers. But urban development often creates impermeable surfaces like pavement, causing water to rush into drains, causing problems such as:

- Downstream flooding,
- Stream bank erosion,
- Increased turbidity (muddiness created by stirred up sediment) from erosion,
- Habitat destruction,
- Changes in the stream flow hydrograph (a graph that displays the flow rate of a stream over a period of time),
- Combined sewer overflows,
- Infrastructure damage, and
- Contaminated streams and rivers.

Stormwater resulting from heavy rain or snowfall can cause damage to structures, public infrastructure, and the landscape. Pollutants and sediments are picked up and carried by stormwater flowing over the land and impervious surfaces. More intense and frequent storm events combined with decreased surface permeability result in increased flash flooding, water quality degradation, and damage to stream banks and infrastructure.

The Jo Daviess County Hazards Mitigation Plan was updated in May of 2022. This plan assesses hazard risks, offers mitigation strategies and recommendations regarding hazards in the county as a requirement for emergency funding. The plan notes that Jo Daviess County has been included in 11 federally-declared disasters since 1965, the majority of these being related to severe storms and flooding. From 2010 through 2019 there have been 81 heavy rain events, 60 thunderstorms with damaging winds, 39 severe winter storms, 18 flash flood events, 16 severe storms with hail one inch in diameter or greater, and three riverine flood events.

By managing stormwater runoff, erosion, contamination, and infrastructure damage can be reduced. In 2016, the Jo Daviess County Board approved the Jo Daviess County Water Resource Management Plan. This plan, facilitated by the League of Women Voters of Jo Daviess County and the University of Illinois Extension was updated in 2022. The plan contains information about best management practices for residential and commercial site owners, for land owners/managers of large acreages, and for local governments to enhance stormwater management. The Jo Daviess County Water Resource Management Plan is available at:

[https://extension.illinois.edu/sites/default/files/jdcwrmp\\_2022-1-18-23\\_compressed.pdf](https://extension.illinois.edu/sites/default/files/jdcwrmp_2022-1-18-23_compressed.pdf)

## B. Solid Waste Disposal

Jo Daviess County has no active landfills. A solid waste transfer station located in Elizabeth accepts waste from local haulers for transfer to out-of-County landfills. According to the Jo Daviess and Carroll County Solid Waste Management Plan 10-year Update dated 2012, there is significant regional landfill capacity until 2035.

Nearly all the residences in Jo Daviess County have curbside recycling available to them. Residents are required by ordinance to separate recyclables for pick-up and waste haulers are required to provide recycling services to residential customers. The transfer stations also act as recycling drop-off locations. There are no requirements for commercial or institutional recycling.

Electronic recycling is available monthly at the Galena City Hall and also in the County at the Elizabeth Fair Grounds twice a year.

A glass recycling receptacle is available in the Galena Piggly Wiggly parking lot.

## C. Public Utilities

Natural gas, electricity, television, cable, satellite television, and Internet services are available from a variety of private firms.

## D. Broadband Technology - Fiber

Two companies provide fiber optic technologies to Jo Daviess County: JCE Co-op Fiber and Stratus Networks. The majority of the county is served by JCE Co-op Fiber. Stratus Networks serves the eastern and northeastern parts of the county including the Stockton, Warren, Apple River and Scales Mound.

Stratus Networks (formerly Illinois Fiber Resources Group or iFiber until it changed ownership in June 2024) deploys a 900-mile network across the northwestern Illinois region including all or parts of fifteen (15) counties. Construction was completed in 2013 bringing speeds of 10 Mbps to 10 Gbps to more than 500 community anchor institutions in the region.

JCE Co-op Fiber serves parts of four (4) northwest Illinois counties including Jo Daviess, Carroll, Whiteside and Henry. Within Jo Daviess County, JCE Co-op has constructed more than 1,200 miles of fiber to nearly 7,000 homes, businesses, and farms with speeds from 100 to 5,000 Mbps. The company's strategic fiber buildout plan is to construct an additional 1,500 miles of fiber in their northwestern Illinois service areas by 2030. The entire fiber neighborhood buildout progress map is updated regularly and can be found by visiting the JCE Co-op website and clicking on fiber communities: <https://forms.jcecoop.com/fiber/communities>.

The JCE Co-op Fiber and iFiber maps can be found in Appendix I.

# Section 5.2 Community Facilities Inventory

## A. County Facilities

### County Board

Jo Daviess County operates under the township form of government. The governing body is the County Board. The County Board's primary function is to establish the various budgets of the County funds and to levy taxes for County purposes.



## County Committees

The County Board operates on the committee system. There are currently eight standing committees. Committee appointments are made by the chairman, with the concurrence of the Board. The chairman makes appointments of all special committees and various other boards and commissions, with the concurrence of the Board.

1. Executive Committee
2. Law Enforcement & Courts Committee
3. Social & Environmental Committee
4. Legislative Committee
5. Development & Planning Committee
6. Public Works Committee
7. Information & Communications Technology Committee
8. Finance, Tax, & Budget Committee
9. Liquor Commission (ad hoc)
10. Labor Negotiating Committee (ad hoc)

## Government Offices

Jo Daviess County's government offices operate out of several facilities in Galena; East Dubuque; Hanover; and Stockton. The government offices include the Jo Daviess County Courthouse (which houses the County Board, County Administrator, County Clerk/Recorder, Treasurer/Collector, Sheriff's Office, Emergency Telephone System (E 9-1-1) Board, State's Attorney, Public Defender, Probation Department, Clerk of the Circuit Court, Circuit Court 15th Judicial Circuit, Court Security, GIS/Information Technology, and the Assessment Office); the Jo Daviess County Coroner's Office; the Carroll, Jo Daviess & Stephenson Regional Superintendent of Schools; the Jo Daviess County Highway Department; Jo Daviess County Building and Zoning Office; the Jo Daviess County Animal Control Department; and the Jo Daviess County Health Department.

### B. Parks, Recreation Facilities, and Conservation Land/Open Space

The 2022 Jo Daviess County Greenways and Trails Plan, incorporated herein by reference (see Chapter 4 Transportation), contains a County-wide inventory of existing parks, outdoor recreation areas, and other open spaces.

For an inventory of the Jo Daviess County Greenways and Trails plan, see:  
[jodaviesscountyil.gov/community/greenways\\_trails.php](http://jodaviesscountyil.gov/community/greenways_trails.php)

### C. Police, Fire, Emergency, and Health Care Services

#### 1. Police Service

The Jo Daviess County Public Safety Building (330 N. Bench St., Galena, IL) houses the County Sheriff's Office, County Jail, and County Sheriff's Office Communications Center / 911 Center. The Sheriff's Office is the main law enforcement agency for rural County residents. It also supports social service agencies like Riverview Center, DCFS, and oversees the Jo Daviess County Jail and 911 Center.

## 2. Fire and Emergency Services

The Jo Daviess County Emergency Management Agency is responsible for the safety, welfare, and evacuation of the citizens of Jo Daviess County in time of all hazardous material incidents, acts of terrorism, and all types of natural disasters such as severe storms, earthquakes, tornadoes, and floods. The EMA helps to coordinate the efforts of fire and EMS.

There are fifteen (15) fire/emergency services in Jo Daviess County a part of MABAS (Mutual Aid Box Alarm System) that service Jo Daviess. MABAS offers a statewide mutual aid response system for fire, EMS and specialized incident operational teams. Sharing the effort are representatives from the Office of the State Fire Marshal, Department of Public Health – EMS Division and Illinois Fire Chiefs Association. The system defines a resource response plan to any location within the state when the Governor orders a Declaration of Disaster.

- Apple Canyon Lake Fire Station
- Apple River Fire Protection District
- East Dubuque Fire Department
- Elizabeth Ambulance
- Elizabeth Community Fire Protection District
- Galena Area EMS
- Galena Fire Department
- Galena Territory Fire Station
- Hanover Community Fire Protection District
- Menominee-Dunleith Fire Protection District
- Scales Mound Fire Protection District
- Stockton Ambulance
- Stockton Fire Protection District
- Warren Fire Department
- Warren Area Ambulance Service

There are seven (7) emergency medical service/ambulance providers that serve the County. Some fire districts also provide support to EMS services:

- East Dubuque Ambulance
- Elizabeth Ambulance
- Galena Ambulance
- Menominee-Dunleith Fire Department
- Stockton Ambulance
- Warren Ambulance

Jo Daviess County has in place an All Hazards Mitigation Plan which was updated in 2021. This plan provides a comprehensive review of hazards and their potential impact to the County as well as potential actions to mitigate those hazards. Having a FEMA approved Hazard Mitigation Plan is a requirement to access FEMA's pre-disaster mitigation program funding. In order to maintain eligibility, the County must update the plan every 5 years. The next plan update is due January, 2026. This plan and other information on the County's emergency management may be found at: [https://jodaviesscountyil.gov/departments/emergency\\_management.php](https://jodaviesscountyil.gov/departments/emergency_management.php)



### 3. Health Care Services

There is one hospital located in the County (Midwest Medical Center, One Medical Center Dr., Galena).

Other hospitals serving the residents of Jo Daviess County include:

- MercyOne Dubuque Medical Center, 250 Mercy Dr., Dubuque, IA
- UnityPoint Health - Finley Hospital, 350 North Grandview Ave., Dubuque, IA
- Southwest Health Center, 1400 Eastside Rd., Platteville, WI
- Monroe Clinic, 515 22nd Ave., Monroe, WI
- Memorial Hospital of Lafayette County, 800 Clay St., Darlington, WI
- MercyOne Clinton Medical Center, 1410 N. 14th St., Clinton, IA
- FHN Memorial Hospital, 1045 West Stephenson Street, Freeport, IL
- Swedish American Hospital, 1401 East State Street, Rockford, IL
- OSF Saint Anthony Medical Center, 5666 East State Street, Rockford, IL
- Rockford Memorial Hospital, 2400 North Rockton Avenue, Rockford, IL

There are six (6) medical clinics located in the County:

- Midwest Health Clinic, One Medical Center Dr., Galena
- Galena Clinic, Inc., 939 Galena Square Dr., Galena
- Medical Associates Physical Therapy, 10988 Bartell Blvd., Galena
- Medical Associates Clinic, P.C., 560 Pleasant St., Elizabeth
- FHN Family Healthcare Center, 600 N Rush St., Stockton
- Midwest Health Clinic, 117 N. Main St., Elizabeth.

The County offers two nursing homes: Galena-Stauss Nursing Home in Galena and Allure of Stockton in Stockton; four assisted living complexes: AHVA in East Dubuque, Galena-Stauss Assisted Living in Galena, Allure of Stockton in Stockton, and Prairie Ridge in Galena; and one adult day care facility: Galena-Stauss Adult Day Care in Galena. Most of these senior facilities have waiting lists, so it is not unusual for the elderly who require more care to seek housing in facilities outside the county.

The Jo Daviess County Health Department, based in Galena, offers a variety of health-related services. These services include, but are not limited to: Home Health Care, Public Health Nursing, Maternal and Child Health, Vital Statistics, Family Planning, Environmental Health, Infectious Diseases, Vision and Hearing, and Health Promotion. Some services, such as child and adult immunization, are provided at various towns throughout the County.

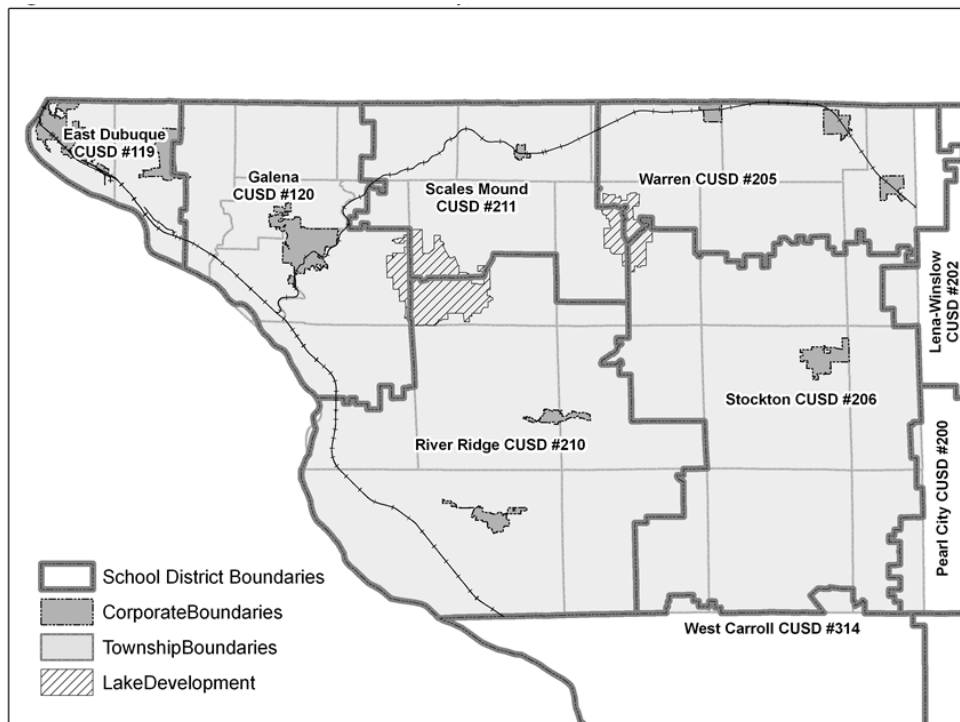
Every five years, the Jo Daviess County Health Department conducts a Community Health Needs Assessment. In the 2019 assessment, the Community Review Panel identified the following three health needs for the County to address over a five-year period from 2019-2024, listed in order of priority: 1) Obesity; 2) Access to Dental Care; 3) Access to Behavioral Health Services. The hope is that best practices and research-based interventions will be used whenever possible for these health issues. This effort will involve many community partners including health and human service agencies, the medical community, law enforcement and government agencies.

For mental health services, the County offers the following resources:

- Midwest Medical Center has a comprehensive list of mental health services available in JDC on their website: <https://www.midwestmedicalcenter.org/behavioral-health>
- An additional resource is the Service Directory compiled by the HOPE Foundation of Galena: <https://www.hopefoundationjdc.org/documents/CommunityServicesDirectory.pdf>
- Rosecrance recently opened a satellite office in the lower level of the JDC Health Department.
- The Senior Resource Center operates out of Freeport now and provides outreach in local communities: <https://www.seniorresourcecenter.net/>

## D. Educational Resources

Figure 5.1 School Districts in Jo Daviess County, Illinois



### School Districts in Jo Daviess County, IL Ranked by Area of District

School District	Size of District (Square Miles)
1. River Ridge Community Unit School District No. 210	171.2
2. Stockton Community School District No. 206	166.5
3. Galena Community Unit School District No. 120	91.6
4. Warren Community Unity School District No. 205	78.1
5. Scales Mound Community Unit School District No. 211	71.6
6. East Dubuque Community Unit School District No. 119	27.6
7. Pearl City Community Unit School District No. 200	5.5
8. Lena-Winslow Community Unit School District No. 202	3.4
9. West Carroll Community Unit School District No. 314	3

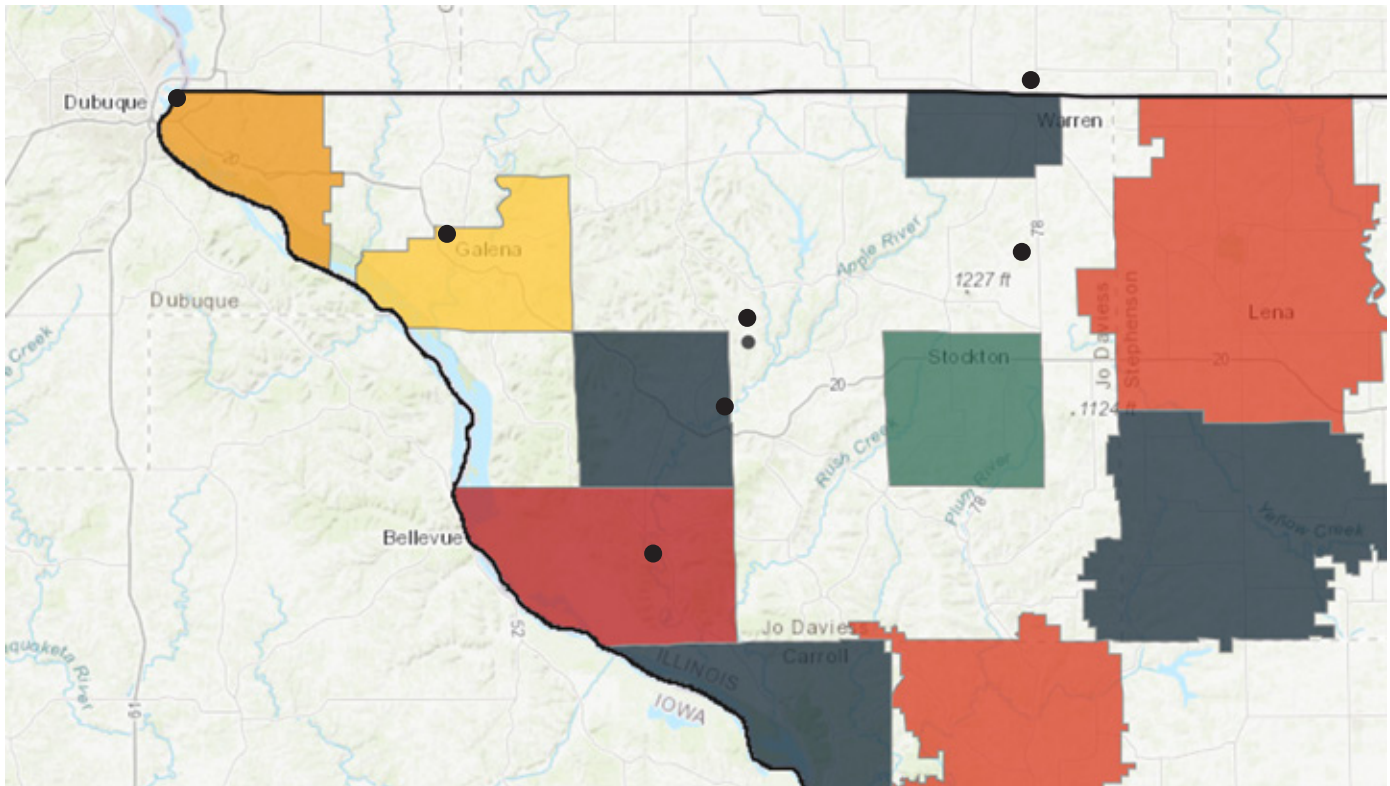
## E. Junior College Facilities

Residents of the Jo Daviess County are served by Highland Community College, a two-year public community college located in Freeport, IL. As a community college, the mission of Highland Community College is built around meeting the needs of the greater northwest Illinois community through quality educational and cultural programs. Highland Community College offers comprehensive academic programming with over 60 degrees and certificates, as well as Adult Basic Education (ABE) and General Educational Development (GED) curricula. The College also provides continuing education courses tailored to specific industry needs. Selected courses are also offered at the Jo Daviess Carroll CTE Academy, a collaborative public education entity.

The CTE Academy, located just outside of Elizabeth, provides vocational courses to both adults and high-school students from the various school systems in Jo Daviess and Carroll Counties. CTE (Career and Technical Education) classes also offer dual credit through Highland Community College for no additional cost.

## F. Libraries

Figure 5.2 Library Districts in Jo Daviess County, Illinois



### Jo Daviess County Library Districts and Buildings

- East Dubuque District Library, 122 Wisconsin Ave., East Dubuque, IL
- Elizabeth Township Library, 210 E. Myrtle St., Elizabeth, IL
- Galena Public Library District, 601 S. Bench St., Galena, IL
- Hanover Township Library, 204 Jefferson St., Hanover, IL
- Lena Community Library District, 300 W. Mason St., Lena
- Pearl City Public Library District, 221 S. Main St., Pearl City, IL
- Stockton Township Library, 140 W. Benton St., Stockton, IL
- Warren Township Library, 210 Burnett Ave., Warren, IL

## G. Park Districts

The following park districts serve the residents of Jo Daviess County:

- Black Hawk Park District
- Derinda Park District
- Dunleith Park District
- Hanover Township Park District
- Pleasant Valley Park District
- Rice Park District
- Stockton Park District
- Thomson Park District
- Woodbine Park District

## H. Cemeteries

There are approximately 76 known cemeteries/burial sites located throughout Jo Daviess County. The detailed locations of most of these sites are available from County plat books, as well as from the Galena / Jo Daviess County Historical Society & Museum located in Galena.

A free online database for Jo Daviess County, searchable by name, is found at [findagrave.com](http://findagrave.com).

## I. Other Community Facilities and Services

### 1. Jo Daviess County Soil & Water Conservation District (227 N. Main Street, Elizabeth, IL)

The Jo Daviess County Soil & Water Conservation District's purpose is to protect and maintain the natural resources of Jo Daviess County and to provide educational opportunities for schools and the public at large.

### 2. Jo Daviess County Fair (Warren, IL)

The Jo Daviess County Fair is sponsored by the Jo Daviess County Agricultural Society. The Jo Daviess County Fairgrounds is located on High Street in Warren.

### 3. Galena / Jo Daviess County Historical Society & Museum (211 S. Bench Street, Galena, IL)

Founded in 1938, the Galena-Jo Daviess County Historical Society operates the Galena & U.S. Grant Museum and the Old Blacksmith Shop. The mission and vision of the Society is to, through its collection, Museum, and other resources, educate and culturally enrich the public about the history and material culture of Galena, Jo Daviess County, and the Upper Mississippi River Lead Mine District of Illinois, Wisconsin, and Iowa and Ulysses S. Grant.

### 4. U.S. Department of Agriculture, Farm Service Agency (225 N. Main Street, Elizabeth, IL)

The mission of the U.S. Department of Agriculture's Farm Service Agency (FSA) is to stabilize farm income, help farmers conserve land and water resources, provide credit to new or disadvantaged farmers and ranchers, and help farm operations recover from the effects of disaster.

### 5. University of Illinois Extension Jo Daviess County (204 N. Vine Street, Elizabeth, IL)

University of Illinois at Urbana-Champaign Extension staff provide practical, research-based education, enhancing lives and communities through knowledge-driven partnerships.

**6. U.S. Department of Agriculture Rural Development (213 W. Pines Road, Oregon, IL)**

The Jo Daviess County office of USDA Rural Development is in Oregon, IL. RD finances vital public facilities like water systems, housing, and clinics. It aids economic growth through business loans, technical support, and community empowerment programs.

**7. Illinois Department of Veteran's Affairs (607 Gear Street, Galena, IL)**

The local office of the Illinois Department of Veteran's Affairs serving veterans of Jo Daviess County is located in Galena, IL. This state agency, known as DVA, is committed to enabling veterans, dependents, and survivors to flourish. DVA aids veterans in accessing benefits, offers long-term healthcare at Veterans' Homes, and collaborates with agencies and non-profits to tackle education, mental health, housing, and employment needs.

**8. Destination Marketing Organization for Galena/ Jo Daviess County (101 Bouthillier St, Galena, IL)**

The Greater Galena Marketing Initiative (GGMI) has a mission to promote, develop, and expand the visitor industry to benefit the local economy and community, including the City of Galena and Jo Daviess County, Illinois. It hosts the Galena County Visitor Center at the Old Train Depot in Galena, with administrative offices on the second floor.

**9. Senior Resource Center (124 S. Main Street, Galena, IL)**

The Senior Resource Center is a branch office of the Jo Daviess-Stephenson Senior Resource Center. It offers diverse programs and services for individuals aged 55 and older, focusing on maintaining independence and quality of life.

**10. The Workshop (706 S. West Street, Galena, IL)**

The Workshop is a private, not-for profit organization that has been providing services to adults with disabilities since 1961. Its mission is enhancing disabled individuals' well-being in Jo Daviess County. The Workshop actively develops and expands local disability services. It offers Developmental Training and Work Services via various businesses, like laundry and janitorial contracts. Support Programs include Senior Program for transitioning out of the workforce, and outings for resource awareness. The Workshop provides educational classes, skills training, crisis counseling, and job services, including Transition, Placement, Supported Employment, and Job Club.

**11. Housing Authority of Jo Daviess County (347 Franklin Street, Galena, IL)**

The mission of the Housing Authority is to offer affordable and secure housing to low-income and elderly families, ensuring their comfort and well-being. Presently, it oversees 110 government-owned housing units and 41 Housing Choice Vouchers. Financial support for operational expenses comes from the U.S. Department of Housing and Urban Development (HUD). The Housing Authority manages five apartment complexes throughout Jo Daviess County.

**12. Jo Daviess County Veterans Assistance Program (VAP) (PO Box 6433, Galena, IL)**

The purpose of the VAP is to alleviate financial burdens that menace the well-being of veterans and their families.

**13. NICAA Golden Meals (524 W. Stephenson Street, Freeport, IL)**

NICAA Golden Meals provides daily balanced lunches for individuals aged 60 and over, including spouses. Home-delivered meals are available for homebound individuals due to illness or disability.

**14. Riverview Center, Inc. - Sexual Assault and Domestic Violence Services (11358 Industrial Dr., Ste 2, Galena, IL)**

Riverview Center provides completely confidential and free services for survivors of sexual assault and domestic violence (and their children). The agency prioritizes survivor needs and rights, shaping planning and decisions. Non-direct services encompass Prevention Education, Professional Training, Volunteer Programs, and Speaking Opportunities

**15. Tyler’s Justice Center (400 W. Front Ave., Stockton, IL)**

Tyler’s Justice Center for Children is dedicated to lessening the child victim’s trauma by providing a sensitive, collaborative response to investigation, prosecution, and treatment of child sexual abuse and serious physical abuse cases.

**16. Hope Foundation of Jo Daviess County**

The mission of the HOPE Foundation is to provide financial assistance to individuals with disabilities and the agencies that serve them in Jo Daviess County, Illinois. They accept grant applications in order to disperse funds. Applications and guidelines are available at [hopefoundationjdc.org](http://hopefoundationjdc.org)

The HOPE Foundation maintains a comprehensive Community Service Directory, a guide to human services serving Jo Daviess County residents, at that same link.

**17. Jo Daviess Local Foods (JDLF)**

Jo Daviess Local Foods (JDLF) began in 2018 as an online farmers’ market with just seven local producers. Since then, they have grown to include about forty producers offering a variety of foods and locally made products. They deliver to pick up locations throughout the county year-round, and they also offer home delivery. In the past six years, JDLF generated over one million dollars in local food sales.

Recently, JDLF was awarded a Local Food Purchasing Assistance grant to help them expand their Farm to Food Pantry program into a three-county area. They also received a Local Food Infrastructure Grant, which will allow them to build a food hub near Elizabeth. This location will serve as food storage for the Farm to Food Pantry program, the online market, and a new retail storefront. JDLF is committed to growing a strong local food system in Northwest Illinois.

**18. The Galena Foundation (PO Box 1, Galena, IL)**

A not-for-profit organization with the mission to initiate and/or provide financial support for community projects which preserve, enhance or nurture Galena’s heritage, culture and quality of life. Matching grants for historical property renovations are available to non-profit and governmental bodies in Jo Daviess County.





# Chapter 6

## Agricultural and Natural Resources

## Section 6.1 : Climate

Jo Daviess County is cold in winter. In summer it generally is hot but has occasional cool spells. Precipitation falls as snow during frequent snowstorms in winter and chiefly as rain showers, which often are heavy, during the warmer periods when warm moist air moves in from the south. Tornadoes and severe thunderstorms strike occasionally. They are of local extent and short duration, and they cause only sparse damage in narrow belts. Hailstorms sometimes occur during the warmer periods in scattered small areas. The amount of annual rainfall usually is adequate for corn, soybeans, and small grain crops. The prevailing wind is from the northwest, and average wind speed is highest in April.

In winter (December, January, February) the average high temperature is 31.1 degrees F and the average low temperature is 13.6 degrees F. In summer (June, July, August) the average high temperature is 81.2 degrees F, and the average low temperature is 58.7 degrees F. The total annual precipitation is about 36.66 inches, and nearly 66.3% of this falls April through September. The average seasonal snowfall is about 32 inches.

Jo Daviess County, like many other regions, is vulnerable to the impacts of climate change, which can manifest in various ways affecting both the environment and the community. Some potential impacts include:

**Temperature Changes:** Rising temperatures are expected, leading to warmer summers and milder winters. This can impact agriculture, altering growing seasons and affecting crop yields.

**Extreme Weather Events:** Increased frequency and intensity of extreme weather events, such as heavy rainfall, storms, and floods, can pose risks to infrastructure, agriculture, and community safety.

**Water Resources:** Changes in precipitation patterns may result in altered water availability. More intense rainfall events could lead to flooding, affecting water quality and increasing the risk of erosion.

**Agricultural Impacts:** Changes in temperature and precipitation patterns can affect crop yields, pest and disease patterns, and overall agricultural productivity. Adaptation strategies may be needed to ensure the resilience of the agricultural sector.

**Ecosystem Changes:** Shifts in climate may impact local ecosystems, affecting plant and animal species. This can have cascading effects on biodiversity, ecosystem services, and recreational opportunities.

**Health Risks:** Climate change can contribute to health risks, including heat-related illnesses, changes in disease vectors, and impacts on air and water quality. Vulnerable populations may face increased health challenges.

**Infrastructure Vulnerability:** Infrastructure such as roads, bridges, and utilities may be at risk due to more frequent and severe extreme weather events. Planning for resilient infrastructure is crucial to withstand these challenges.

**Community Resilience:** Local communities may face challenges in adapting to the changing climate. Planning for resilience, including emergency preparedness and community education, becomes essential. There are potential opportunities for new businesses that specialize in building resiliency in communities.

It's important for Jo Daviess County to consider these potential impacts and integrate climate resilience strategies into local planning and policies. Regular assessments and collaboration with relevant stakeholders can help mitigate the risks associated with climate change and build a more sustainable and resilient community. This assessment is based on the 5th National Climate Assessment published in 2023 and is available at: <https://nca2023.globalchange.gov/>.



## Section 6.2 : Land Cover

Land cover is the physical material at the surface of the earth. Land covers include grass, asphalt, trees, bare ground, water, etc. There are two primary methods for capturing information on land cover: field survey and through analysis of remotely sensed imagery. Land cover is distinct from land use despite the two terms often being used interchangeably. Land use is a description of how people utilize the land and socio-economic activity - urban and agricultural land uses are two of the most recognized high-level classes of use. Chapter 8 Land Use analyzes the County's land use.

The following Table 6.1 details the land cover characteristics of the County.

**Table 6.1**  
**Harvested Crops of Jo Daviess County, Illinois**

<b>Crops Harvested</b>	<b>Farms</b>	<b>Acres</b>	<b>Quantity</b>
<b>Corn for Grain</b>	374	95,562	19,777,556 Bushels
<b>Corn for Silage or Green Chop</b>	74	4,602	100,360 Tons
<b>Soybeans</b>	271	49,593	3,055,973 Bushels
<b>Forage</b>	435	27,892	100,934 Dry Tons
<b>Wheat for Grain</b>	9	668	48,343 Bushels
<b>Oats for Grain</b>	42	977	65,223 Bushels
<b>Land in Orchards</b>	37	142	N/A
<b>Vegetables Harvested for Sale</b>	26	821	N/A

Source: Ag Census 2022

## Section 6.3: Agricultural Resources

The economic activity of agriculture has some very specific land use requirements, depending on the type of farming. The growing of crops for profit necessitates relatively large, contiguous parcels, the slope of which should not be excessive, and the soils fertile and well drained. This is particularly true of grains and soybeans. Other types of agricultural pursuits, such as feed lots, garden farms, and dairies, generally demand increased labor and less land to be profitable. Generally, agricultural units are limited to the physical characteristics of the land and are relatively flexible with respect to location. This is in marked contrast to other economic activities where the location of the activity with respect to others is a very important part of their economic framework.

The character of Jo Daviess County is largely defined by agriculture - as land use, as an industry, and as a way of life. Viewing agriculture from a variety of perspectives provides some indication of how the industry functions and its importance to the County's future.

### Agriculture in Jo Daviess County Today

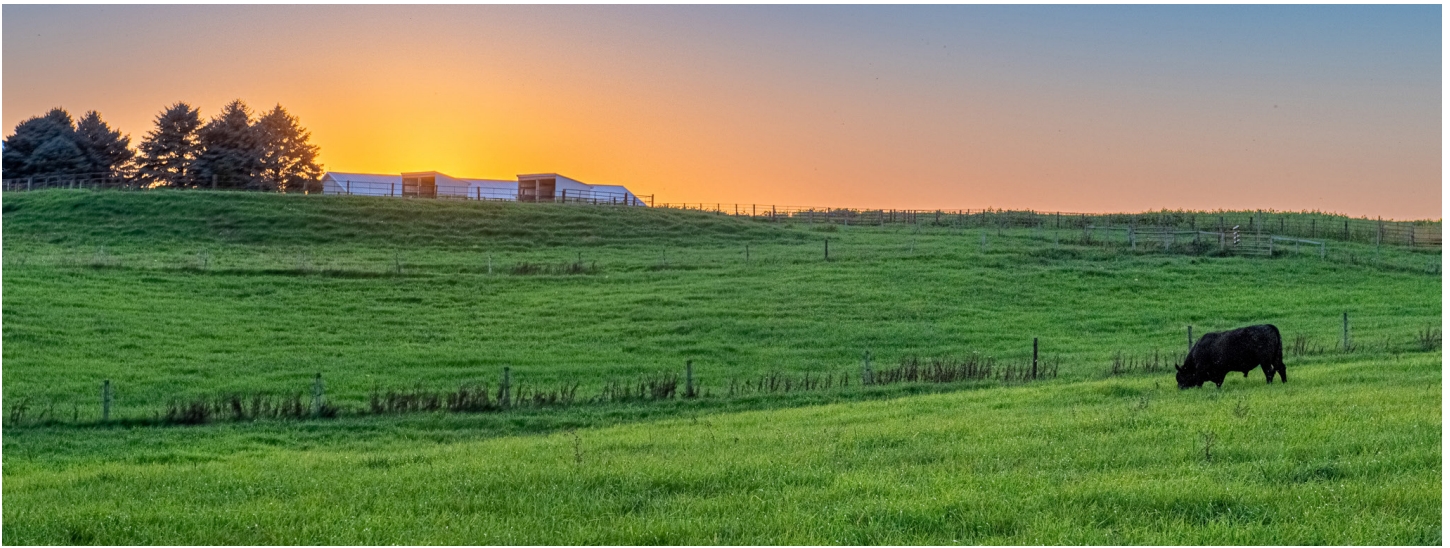
Approximately 84% of the County's land area is in agricultural or agriculturally related uses and rural lands. Grain farming, hay farming and livestock production are the predominant agricultural activities in Jo Daviess County. Agriculture has always been a major industry in Jo Daviess County, and the character of Jo Daviess County is largely defined by agriculture - as a land use, as an industry, and as a way of life.

In 2022, in county had 907 farms comprising of 309,287 acres (2022 Census of Agriculture). In 2022, 87,500 acres of corn was harvested; 52,100 acres of soybeans were harvested, and 23,000 acres of alfalfa hay was harvested (Illinois Agricultural Statistics Service). Livestock is also a major component of the agricultural industry in Jo Daviess County. As of 2022, there were 17,500 beef cows, 4,100 milk cows, and a total of 50,000 cattle and calves in Jo Daviess County (Illinois Agricultural Statistics Service, 2022). The U.S. Department of Agriculture 2022 Census, including data by county, is available online at: [nass.usda.gov/Publications/AgCensus/2022/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_](https://nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_)

**Table 6.2**  
**Farms in Jo Daviess County**

Ag Census Year	No. Farms	Land Acreage in Farms	Average Farm Size
2022	907	309,287	341 acres
2017	947	289,457	306 acres
2012	935	271,793	291 acres
2007	1,016	281,457	277 acres
2002	989	264,493	267 acres

Source: 2022 Ag Census



### **Agri-tourism**

Agri-tourism, a business venture on a working farm or agricultural enterprise, is growing in popularity throughout the United States, including Jo Daviess County. Agri-tourism blends entertainment, education, and tourism together to provide a fun, exciting, and memorable get-away for school trips and family outings and provides an additional revenue source for agricultural operators both large and small.

Agri-tourism in Jo Daviess County and the region has the potential to serve to educate visitors about farm products and services, to serve as an accessory use of farmland and to supplement farm incomes. Agri-tourism also brings economic activity to the area through visitor expenditures on goods and services both on-site and at locations near the County's agri-tourism businesses. Jo Daviess County has several Agri-tourism businesses including wineries, working farms and farm experiences, produce farms, Christmas tree farms, orchards, farm stays, craft breweries and distilleries, farm-to-table restaurants, and farmers markets.

**According to the 2022 Agriculture Census, in just five years Jo Daviess County land used for Vegetables and Vegetables Harvested for Sale jumped from 13 farms with 103 acres (2017) to 26 farms with 811 acres (2022).**

## **Section 6.4: Natural Resources**

This section describes the existing conditions of natural resources in Jo Daviess County. Natural resources include geology and mineral resources, soils, groundwater and water supply, surface water, wetlands and floodplains, natural areas and open space, vegetation, and wildlife. Understanding an area's natural resources is essential to the appropriate use of those resources. Land use directly impacts the availability and sustainability of natural resources.

The natural resources in Jo Daviess County are unique relative to the rest of the state and much of the mid-west because the County is part of the Driftless Region bypassed by continental glaciers of the Ice Age. This region covers parts of southern Minnesota, western Wisconsin, northwestern Illinois, and northeastern Iowa. Glaciated areas were leveled, strewn with glacial debris or "drift" and dotted with lakes and ponds. The driftless areas, on the other hand, have bedrock close to the surface into which deep valleys have been carved by millions of years of weathering and erosional processes. In Jo Daviess County, streams are numerous and the only two lakes are man-made. The relief from the higher ridges to the valley floors is typically 300 feet or more creating a rugged and scenic landscape. Ecosystems can be found in this landscape that are older than those found in glaciated areas.

According to the Illinois Department of Natural Resources, in its study of the Driftless Area in Illinois, a majority of which is Jo Daviess County:

- The Driftless Area-primarily Jo Daviess County and part of Carroll County-escaped the continental glaciers of the Pleistocene Epoch.
- Because of its location the Driftless Area has a typical continental climate with cold winters (Jo Daviess is the coldest County in Illinois), hot summers, and abundant rainfall. The soils are composed mostly of wind-blown loess, disintegrated rock, and, along valley floors, flood- deposited soil (alluvium).
- Nowhere else in Illinois is the bedrock elevation so high, nor is the bedrock so close to the surface.
- Throughout the region the highest hills, regardless of the rock composing them, rise from 1,100 to 1,200 feet high. The most notable are Charles Mound and Benton Mound, rising to heights of 1,235 feet and 1,226 feet respectively.
- The area may have been untouched by glaciers, but it was not unaffected. The stream reversal at Apple River Canyon State Park was caused by the Illinois Episode Glacier.
- A rare prairie community is the dolomite hill prairie, which occurs almost exclusively in Jo Daviess County along the Galena and Apple rivers.
- A forest community not typical of Illinois is the early successional forest of aspen-birch; the Driftless Area is one of the few places in Illinois where large stands of paper birch exist naturally.
- Mesic cliff/talus (broken rock) slope communities are often covered with upland forest up to the vertical cliff. Mesic cliff communities can be found at Apple River Canyon State Park.
- Approximately 271 bird species regularly occur in the Driftless Area. This represents almost 90% of the 100 species of birds that regularly occur in Illinois.
- The species diversity of the area is due to its geographical location and its topographic complexity. Here several species of birds reach or are near their geographical limits.
- The Driftless Area is one of the most rural areas of the state, so its public land holdings are relatively large and contiguous, helping to reduce the negative effects of fragmentation.
- The Driftless Area is one of two sites in Illinois that has the best potential breeding habitat for bobcats.
- Eleven amphibian and 25 reptile species occur here, representing 28% of the amphibians and 42% of the reptiles found in Illinois. The state-threatened western hognose snake and the timber rattlesnake are found here. One other state-listed species, the eastern massasauga, has been extirpated from the area.
- The Driftless Area supports 89 species of fish, 39 species of mussels, and nine species of large crustaceans.
- State-endangered fishes found in the basin include the lake sturgeon, western sand darter, and pallid shiner.
- Four state-threatened and three state-endangered mussels have been reported in the area. Of these, only the butterfly, sheepsnose, and higgins eye still exist here.
- The problems of the Driftless Area echo those of most areas of Illinois - habitat fragmentation, exotic species, loss of habitat, siltation, fire suppression, and flooding.
- While growth has been good for the tax base, contiguous land areas are being broken up for "away-from-it-all subdivisions." At the same time rivers are showing an increase in unwanted chemicals and silt, and wildlife is losing valuable habitat.

## A. Topography and Physiography

Because of its geologic history, Jo Daviess County has among its elevations most of the highest points in the state of Illinois. In the west are Horseshoe Mound (1,074), Dygerts Mound (1,010') and Pilot Knob (1,002'). A few miles to the north are Charles Mound (1,235' and Illinois' highest point) and Scales Mound (1,164'). To the east, Stockton's Benton Mound has an elevation of 1,226', the second highest in Illinois. (Stockton is the highest town in Illinois.) U.S. 20 passes over the southern and lower end of this mound. Called "mounds" locally, these are geologic "outliers," or erosional remnants.

At one time, these mounds were part of a relatively flat plain whose rock layers dipped gently from northeast to southwest. These high areas exist because they are capped with Silurian dolomite, a very hard rock resistant to erosion. Immediately underneath, however, are to be found beds of Maquoketa shale, a relatively soft rock. These beds help form the gentle slopes to be found beneath the steep slopes of the Silurian dolomite. The old railroad tunnel near Rodden was built through the Maquoketa shale. While this formation may be over 150' thick, good outcrops are not visible because these rocks are soft and weather easily.

Instead, what we see are outcroppings at the tops of the ridges. These are the hard, resistant Silurian dolomites. A unique feature of these hills are the large blocks of rock which are found along some of the steep slopes. These are slump blocks, pieces of the more resistant Silurian dolomite that are undercut as the shale beneath erodes and weathers. The blocks, through the force of gravity, slide, or "slump" down the hillside. This process takes thousands of years.

The major streams in the County have for thousands of years cut down through the Silurian dolomite of the ridges, the Maquoketa shales of the gentle slopes, and are now downcutting into the next major formation, the resistant Galena dolomites. These are harder rocks, massively bedded, which erode with steep slopes along streams.

The most pronounced topography of the region lies along the western half of the County, where stream beds are between 700' and 800' above sea level; the Mississippi River is about 600', while surrounding ridges rise to 1,000'. Table 6.3 below is a list compiled from information supplied by the Illinois State Geological Survey. It is not complete, but rather is for relative comparisons. There are many points in Jo Daviess County that exceed, for example, 1,000 feet in elevation.

**Table 6.3**  
**Highest Points in Jo Daviess County**

Elevation (Feet Above Mean Sea Level)	Name
1,235	Charles Mound
1,226	Benton Mound
1,175	Mount Sumner
1,172	Squirrel Grove Mound
1,170	Hudson Mound
1,164	Scales Mound
1,081	Simmonds Mound
1,074	Horseshoe Mound
1,060	Wenzel Mound
1,035	Terrapin Ridge
1,010	Dygerts Mound
1,002	Pilot Knob

Source: 2024 Data from the Jo Daviess County GIS Orthophotography Project of 2001.

Jo Daviess County is divided into two distinct physiographic regions. Most of the County is part of the Driftless Section, which is an area extending from the northwestern corner of Illinois into Iowa, Wisconsin and Minnesota that apparently escaped Pleistocene glaciation. Bordered by the Mississippi River Bottom lands on the west and characterized by rugged terrain that was originally mostly forested, the division contains northern and pre-Ice Age relict species (e.g., Iowa Pleistocene snail), dolomite outcrops and caves. The Driftless area is so named because it has little or no "drift" - the sediments deposited across the remainder of northern and central Illinois by glaciers that bypassed this corner of the state. The rough, unglaciated terrain features wooded uplands, rolling hills, narrow valleys, numerous streams, springs, and cliffs and bluffs.

The extreme eastern edge of the County is in the Rock River Hill Country of the Till Plains Section of the Central Lowlands Province. The Central Lowlands Province is principally the State of Illinois. This area is characterized by its rolling hills, thin glacial drift and narrow valleys. The Rock River Hill Country Division is divided into two sections: Freeport and Oregon. Two distinct bedrock types are recognized in these sections, dolomite and limestone under the Freeport Section and sandstone under the Oregon Section. These different bedrock types have a significant effect on the resultant flora and natural communities of the two sections.

## **B. Geology and Mineral Resources**

### **1. Geology**

The topography of Jo Daviess County is characterized by rugged relief unique to most of Illinois. The County, located in the far northwestern corner of the state, is in an area spared by the major glaciations of the last two million years. It is, accordingly, called the "Driftless Area" by geologists, the term "drift" referring to material deposited by glacial activity.

The visible landscape that we see today began during the Paleozoic Era (570 to 245 million years ago) when shallow seas repeatedly inundated the interior of the continent. Shells of marine animals, along with mud, silt, and sand from eroding highlands, were periodically deposited in those sea bottoms. Gradually, these beds were buried and lithified into rock layers of limestone, dolomite, shale, and sandstone. The result over millions of years was hundreds of feet of sedimentary rocks.

Today, geologists classify layers of rock by their chemical and physical properties. Also critical to their classification are fossilized remains of plants and animals, which give clues to the relative ages of the layers. A geological formation is a set of rock layers that are distinctive enough to be identified in the field. They can be anywhere from a few inches to several hundred feet in thickness.

Jo Daviess County has been repeatedly identified by the Illinois State Geological Survey as having karst conditions and karst aquifers since the mid 1990s. Carbonate bedrock in the area consists of fractured and creviced dolomite and limestone with a relatively thin overburden of unconsolidated sediment. Because of the soluble nature of carbonate rock, and because fractures within these rock bodies are numerous, fractures are easily enlarged by dissolution of the rock itself. The fractures and bedding planes of the carbonate bedrock create an open three-dimensional matrix or enhanced porosity and permeability. It is well known that karst aquifers are easily contaminated by surface borne pollutants. The presence of sinkholes, and the stratified nature of nitrate, sodium, chloride, Pharmaceuticals and Personal Care Products (PCPPs), and microplastics (for example) in the county's groundwater are testament to the open nature and vulnerability of the aquifers in this area.

The oldest formations in Jo Daviess are of Ordovician age, or roughly 450 million years old. These are the rock layers seen along the Apple River, the Galena River, or in the large quarry west of Elizabeth. They are made up largely of beds of dolomite (commonly referred to as "limestone"), a rock composed of calcium and magnesium carbonates. Other common rocks are limestone, a chemical precipitate of calcium carbonate; shale, which comes from layers of mud; and sandstone, from layers of sand.

The youngest rocks we see today are of Silurian age, or just over 400 million years old. These layers are those seen on the tops of high ridges and mounds. They are mostly dolomite, a very hard rock that resists the effects of erosion. They underlie Terrapin Ridge and U.S. 20 from the Long Hollow Scenic Overlook to the Galena Territory. The highest points in the state are capped by these rocks, including Charles, Horseshoe and Benton Mounds.

Our part of Illinois has been relatively stable during the last 250 million years. During this long period, many hundreds of feet of rock layers have eroded away. Because of this the area was reduced to a relatively flat erosional plain with sluggish streams flowing southward in broad valleys. This plain was at the level of the highest mounds and ridges that one sees today.

But then the land was uplifted through tectonic activity (movement of crustal plates) and this caused streams to begin cutting downward with increased activity. This increased erosional activity caused a more rugged topography to develop. Stability ensued and a new plain of low relief began to form, this time at the level of the Galena dolomite, or roughly at the elevation of Warren, Woodbine, and Eagle Ridge Inn. But then came the glaciers.

Geologists refer to the period of continental glaciations as the Pleistocene Epoch, a period lasting from about 2 million years ago to 10,000 years ago. Major periods of ice advance from northern Canada significantly affected Illinois during this period. These were huge sheets of ice, often more than a mile thick, that originated because of climatic change. These glaciers affected Illinois greatly. They destroyed the drainage patterns of streams while leveling hills and filling valleys. In the process some plants and animals became extinct while others were forced to "migrate" farther south.

The glacial movement was neither regular nor uniform. Lobes of ice advanced and receded; some areas were more heavily affected than others. During the last 1.6 million years, as many as 14 glaciations may have invaded Illinois, caused each time by global fluctuations in temperature. In between glaciations, erosion continued, new soils began to redevelop, and new flora and fauna moved in. It is a complex period in our earth's history.

**For reasons that are not yet fully understood, a small area of land in northwest Illinois, southeast Minnesota, southwest Wisconsin, and northeast Iowa was missed by most, if not all these glacial advances. As a result, geologists refer to this area as the "Driftless Area."**

Drift is anything that was glacially deposited, and no drift has been found in this region. Jo Daviess County is at the southern end of this area. Stephenson County was glaciated, but long enough ago to have still developed a landscape similar to Jo Daviess but with a more subtle and gently rolling topography.

Prior to glaciation, the streams and drainage patterns that we see today did not exist. The Mississippi River did not exist. Rather, it originated as meltwater flowing along the margin of the ice sheet. Over several ice advances and thousands of years, the river developed the channel we know today.

Although our area was never covered by ice, it was never-the-less affected greatly. In fact, the rugged topography so characteristic of the Driftless Area is due in part to the nearby glacial activity. As the ice sheets with their pulsating lobes ebbed and flowed, meltwater would alternately erode and then fill in stream channels. The channel of the Mississippi River at Savanna, for example, was close to 200 feet deeper than at present.

As the streams in Jo Daviess County realigned themselves with the deepened Mississippi channel, they began to erode more rapidly. It was the same effect as if tectonic activity had uplifted the land, giving new life to sluggish old streams. As a result, our streams began to cut down with renewed vigor, forming narrow valleys with steep bluffs, as seen along the Apple River and its tributary valleys like Long Hollow and Irish Hollow.

The glaciers affected the land in another way, too. During the winters of glacial periods, westerly winds blew dust from the dry flood plains of the Mississippi Valley onto the uplands to the east. This fine material, called loess, developed a thickness of 25 feet in western Jo Daviess County, gradually thinning to 5-8 feet along the eastern border near Stockton. Our modern soils, developed on this mantle of loess, are richer agriculturally than would otherwise have been the case.

The last glacial advance receded from the surrounding area about 20,000 years ago. The farthest extent of ice to the east was near a line running from Stockton to Warren. In fact, Benton Mound (the second highest point of land in Illinois), the large mound immediately to the west and north of Stockton, is the boundary. It was to the east of this mound that glacial meltwater formed, backing up the South Branch of the Apple River, creating a large lake. The Apple River at that time flowed from the northwest to the southeast and emptied into the Pecatonica. As the water level rose, it breached a small divide where Apple River Canyon State Park is now located. This permitted the lake and meltwater to drain into a small stream flowing southwestward. This torrent of water created the "Apple River Canyon" that we know today, one of the most ecologically significant areas in the state. The rock cliffs and steep valley walls of this stream have provided shelter for a host of threatened and endangered plants and animals.

During the last 20,000 years, the Driftless Area has continued to develop. The streams are still cutting down, the hills and ridges are being eroded, soils are still developing, and the flora and fauna are still adjusting. During the last 200 years the greatest changes have been manmade. But despite vegetation being cut, fields plowed, and streams altered, the land still retains a uniqueness and attractiveness not to be found elsewhere in the state.

## **2. Mineral Resources: Lead Ore and Zinc**

In the mid-1840s, the Galena area had become the nation's primary source of lead ore. After the Civil War, the demand for lead declined, but mining continued with zinc being the primary metal and lead a secondary product. Although ore deposits are still substantial, mining operations have ceased and are not likely to be reactivated. The sealing of abandoned mines is an ongoing project to prevent contamination of groundwater supplies. Piles of mine tailings remain in the western part of the County.

## **3. Mineral Resources: Sand/Gravel and Crushed Stone (Aggregates)**

Crushed stone for construction is an important mineral resource derived by quarrying bedrock in Jo Daviess County, as well as surrounding counties. Dolomite and limestone strata of the Ordovician Galena and Platteville Groups, which crop out or are close to the ground surface throughout much of the County and surrounding region, provide a convenient source of this material (see Appendix II Geological Maps). Most of the rock mined in Jo Daviess County is of the Galena Group and Platteville Group. In addition to aggregate and agricultural lime, cement is an important product derived from the Platteville Group carbonate rocks of the County.

The active mineral industry in Jo Daviess County includes approximately seventeen (17) mines and six (6) quarries distributed throughout the County.

Potential mineral resources in Jo Daviess County include sand/gravel, limestone, and dolomite. Future development, however, depends on the underlying economic factors, the costs and returns. Accessibility to railroads and roads for transportation are important considerations in the development of quarries.

There is potential for dredging sand and gravel from the Mississippi River channel, flood plain, and terraces. Deposits of sand and gravel also occur within various stream valleys; they have fair to low economic potential. The sand and gravel deposits in the County belong mainly to the Cahokia Alluvium and to the well-sorted sand and gravel of the Henry Formation. Some deposits of medium grained Parkland Sand, which occurs in dunes in the County, may be marketable. The deposits along the flood plains of the rivers are mostly poorly sorted sand, silt, or clay and local deposits of sand and gravel that may be underlain by thicker, better sorted deposits of sand and gravel (Illinois Department of Natural Resources). The potential importance of a sand and gravel deposit as an aggregate resource depends on such factors as: (1) the thickness and extent of the deposit, (2) the thickness and variability of the overburden, (3) the particle-size distribution and rock types (quality of material) in the deposit, (4) accessibility of the deposit to heavy-duty roads or railroads, and (5) distance of the deposit from the point of use.



## C. Soils

The present soils of Jo Daviess County are composed mostly of wind-blown loess, disintegrated rock, and, along valley floors, flood-deposited soil (alluvium).

22.4% of the soil types identified in Jo Daviess County (approximately 88,801.3 acres) are classified as being “prime farmland”; 43.3% (approximately 171,564.9 acres) are classified as “farmland of statewide importance”. The remaining soil (135,708.6 acres or 34.3% of the County) are classified as “not prime farmland”, “other land”, “water” or “wetland”. “Prime farmland” is of major importance in meeting the Nation's short- and long-range needs for food and fiber.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied.

In some areas, land that does not meet the criteria for prime or unique farmland is “farmland of statewide importance” to produce food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soil that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable.

The United States Department of Agriculture, Natural Resources Conservation Service (in cooperation with other Federal, State, and local agencies), prepared a soil survey for Jo Daviess County in 1996, which is the most recent survey that the County has undergone. Soil surveys contain information that affects land use planning in the soil survey areas. They include predictions of soil behavior for selected land uses. The survey highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Agricultural governmental agencies, educational institutions, organizations, and corporations are promoting soil health programs to address issues affecting the long-term sustainability of agriculture. A soil health movement, primarily farmer-led, is currently rising in the agricultural community to voluntarily reduce soil erosion and nutrient loss. In Jo Daviess County, there is a renewed focus on in-field practices of no-till, cover crops, and managed grazing. Services and support for transitioning to these practices are available through the Jo Daviess County Soil and Water Conservation District (SWCD) and the local Natural Resource Conservation Service (NRCS) offices in Elizabeth. The Jo Daviess County Farm Bureau and the University of Illinois Extension (also with offices in Elizabeth) provide educational and promotional services to support the efforts. In addition, the Jo Daviess County Soil and Water Health Coalition is a farmer-led group formed in the county to gain information about successful practices through local experimentation and shared experience. It is hoped that the combined efforts of these groups and local producers will be able to reduce soil erosion and nutrient loss while increasing resiliency and profitability on Jo Daviess County farms.

## D. Complex Hydrogeology

Jo Daviess County is a karst area, defined as “a geologically and hydrologically integrated and self-organizing network of landforms and subsurface large scale porosity created by a combination of fractured soluble bedrock, the movement of water into and through the rock body as part of the hydrologic cycle, and physical and chemical weathering” (from Illinois State Geological Survey Circular 586). Because of the area’s fractured carbonate bedrock and shallow soils, there is greater interaction here between surface water and groundwater than in many other settings, and the nature of the relationship between the two is complex, variable, and not entirely understood.

Much work has been done to characterize the nature of the karst in Jo Daviess County, and the resulting degree of vulnerability the area may have to groundwater contamination. The Jo Daviess County Water Resource Management Plan ([https://extension.illinois.edu/sites/default/files/jdcwrmp\\_2022-1-18-23\\_compressed.pdf](https://extension.illinois.edu/sites/default/files/jdcwrmp_2022-1-18-23_compressed.pdf)) contains information and peer-reviewed publication references (e.g. Karst of the Driftless Area of Jo Daviess County, Illinois) that document what is now known about the hydrogeology in Jo Daviess County.

In 2021, a Jo Daviess County Karst Feature Database was completed. The database, a web map, and links to six explanatory videos (including an introduction, summaries on Crevices & Caves, Sinkholes, Springs, and Mining, and a database Tutorial) are currently being hosted by the U.S. Fish & Wildlife Service and available to the public at [https://bit.ly/JDC\\_KarstFeatures](https://bit.ly/JDC_KarstFeatures). The County GIS Department is working to establish the database at the county.

## E. Groundwater and Water Supply

Groundwater quality is a high priority in Illinois. Water quality degradation or contamination resulting from point and nonpoint sources throughout the state is of primary concern. In many industrialized parts of the state (including the metropolitan areas of Chicago, Rockford, and East St. Louis) groundwater in glacial deposits and bedrock aquifers has been degraded by improperly contained or disposed of chemicals. In some agricultural areas, the quality of groundwater in the underlying shallow aquifers has been degraded by the routine application of agricultural chemicals.

Groundwater is water present in that part of the soil, sediment or rock that is saturated with water. Natural and manmade pathways in the bedrock provide conduits that can allow surface water to combine with groundwater. Because of this, contaminants in surface water pose a degree of risk to groundwater quality. The county has an abundant groundwater supply that meets current needs, but withdrawal impacts and sustainable withdrawal maximums are not currently known. Understanding the issues related to groundwater quality and quantity will allow for the responsible use of groundwater resources.

Groundwater quality is a high priority in Illinois. Water quality degradation or contamination resulting from point and nonpoint sources throughout the state is of primary concern. In many industrialized parts of the state (including the metropolitan areas of Chicago, Rockford, and East St. Louis) groundwater in glacial deposits and bedrock aquifers has been degraded by improperly contained or disposed of chemicals. In some agricultural areas, the quality of groundwater in the underlying shallow aquifers has been degraded by the routine application of agricultural chemicals.

Much of Jo Daviess County has a very high aquifer sensitivity because fractured dolomite bedrock aquifers lie beneath thin glacial drift or loess. Areas where dolomite bedrock is exposed are most sensitive. In addition, a high potential for contamination exists where thick coarse-grained unconsolidated sediments occur. In contrast, areas underlain by shale bedrock have a low sensitivity to aquifer contamination. A more moderate sensitivity to aquifer contamination exists in areas where fine-grained unconsolidated deposits overlie dolomite bedrock (such as till-covered landscapes in the east-central portion of the County) or where thin coarse-grained unconsolidated deposits overlie shale.

**12,922 people in Jo Daviess County, or 58.7% the total County population, receive their domestic water from a community water supply. The remainder of the population is served by private wells.**

Groundwater is generally plentiful in Jo Daviess County and the surrounding area. According to the Illinois Environmental Protection Agency's "Source Water Assessment Program" Jo Daviess County has twenty (20) "community water supplies." A "community water supply" serves at least 15 service connections used by year-round residents or regularly serves 25 year-round residents. Supplies regularly serve at least 25 non-residential individuals (transient) during 60 or more days per year. All of the "community water supplies" in the County access ground water via wells.

The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for community wells, which is regulated by IEPA. However, to further minimize the risk to a community's groundwater supply, IEPA recommends that communities consider three additional actions: 1) Enact a "maximum setback zone" ordinance. These ordinances are authorized by the Illinois Environmental Protection Act and allow County and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet from their well; 2) The water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water; and 3) The water supply staff is encouraged to review their cross-connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the community.

Community drinking water systems are inspected and monitored under the supervision of the Illinois Environmental Protection Agency (IEPA), while non-community drinking water systems are the responsibility of the Illinois Department of Public Health (IDPH). In addition, IDPH reviews water well installation plans, issues permits for new well construction, and inspects wells. However, private water well owners themselves have the primary responsibility to test well water for potential contaminants.

An estimated 41.3% of the population of Jo Daviess County receives its domestic water supply via a private well. Groundwater (the source of fresh water for households with a well) can become contaminated in many ways: through contact with natural pollutants, such as arsenic and radon, and by human activities, such as chemical spills and failing septic systems. The degree to which a potential health threat may exist depends on the amount and type of contamination. In some cases, contamination of the water can be detected by sight, taste or smell; however, many of the most serious problems can only be detected through laboratory testing of the water.

In Jo Daviess County, wells draw from the Galena-Platteville and the St. Peter Sandstone aquifers for potable water supply. Private wells in the county draw almost exclusively from the more shallow Galena-Platteville aquifer. Spring and well water sampling conducted in the county indicate that the Galena dolomite is an open karst system where rainwater and snowmelt enter and flow through fractures and crevices with widths ranging from hairline cracks to crevices over one foot wide.

Contaminants have been found at depths of up to 200 feet within this aquifer. Background concentrations of dissolved components of groundwater were calculated using a reliable statistical technique and provide a measure against which water quality samples can be compared. For example, chloride concentrations ranging from 4 to 13 mg/L, and nitrate (as nitrogen) concentrations ranging from 0.5 to 2.0 mg/L represent background levels. Concentrations above those ranges indicate the presence of contaminants.

Deep and shallow aquifer background levels were calculated from all available water-quality data. The shallow aquifer levels have been further separated into ranges characteristic of pristine groundwater before European settlement and in the present. The present-day background ranges are greater than those of pre-settlement times due to sustained activities from human habitation over time. These ranges provide an important reference to evaluate localized contamination when parameter levels are found to be above the bound of the range (referred to as the threshold). These background ranges will also be useful references for evaluating changes in the overall background water quality over time.

**Table 6.4**  
**Background Concentration Thresholds of Selected Ions (in mg/L)**

<b>Ion or Parameter</b>	<b>Deep Aquifer</b>	<b>Pre-settlement</b>	<b>Present-day</b>
Na (Sodium)	≤ 2.7	≤ 6.1	≤ 22
Cl (Chloride)	≤ 1.3	≤ 4.0	≤ 13
NO <sub>3</sub> -N (Nitrate-nitrogen)	≤ 0.04	≤ 0.5	≤ 2.0
o-PO <sub>4</sub> -P (Orthophosphate Phosphorous)	≤ 0.01	≤ 0.01	≤ 0.4
SO <sub>4</sub> <sup>2-</sup> (Sulfate)	≤ 26	≤ 15	≤ 46
F (Fluoride)	≤ 0.3	≤ 0.2	≤ 0.2

Background concentration for selected constituents in the deep aquifer (greater than 150 feet) and the shallow aquifer (less than 150 feet). The shallow aquifer is further examined in terms of estimated pre-settlement levels (based on pristine area samples) and general present-day background levels.

Spring and well samples were also analyzed for plastic microfibers, resulting in the first known documentation of plastic microfibers (particulates) found in groundwater. In addition, analyses for Pharmaceuticals and Personal Care Products (PPCPs) have shown that a variety of these products can be found in the area's groundwater. Both the micro plastic fibers and the PPCPs originate from the discharge of septic effluent entering the karst aquifer.

## **F. Surface Water**

A watershed is defined as the land area that directly drains water, sediment, and other materials to a common stream, river, or lake (often considered synonymous with a drainage basin or catchment). Watershed (drainage basin) boundaries follow topographic highs - land elevation, not political borders, defines watershed boundaries. Watersheds are important as the viability of the watershed directly affects the health of the communities within that watershed. Water for human consumption, wildlife, industry, and recreation are all impacted by activities that occur within the watershed.

Watersheds may be broken down into smaller and smaller units based on drainage area. For example, a large stream's watershed, such as the Mississippi River watershed, may be broken down into smaller watersheds based on the streams that flow into it. In turn, these streams may be broken down into smaller units and so on. In Illinois, watersheds are categorized (from largest unit to smallest) as basins, sub-basins, and local watersheds.

Most of Jo Daviess County is drained by the Upper Mississippi-Maquoketa-Plum River Basin and Apple-Plum River Sub-basin, and portions of the extreme eastern and northeastern portions of the County are drained by the Rock River basin and Pecatonica River Sub-basin. Local watersheds within Jo Daviess County are: Apple River; Beaver Creek-Mississippi River; Camp Creek; Canyon Lake; Crooked Slough-Mississippi River; East Fork Galena River; East Plum Creek; Fretress Lake-Mississippi River; Furnace Creek; Galena River; Headwaters Smallpox Creek; Irish Hollow; Kelsey Branch-Galena River; Lawhorn Creek-Rush Creek; Little Menominee River-Mississippi River; Little Rush Creek; Menominee River; Mill Creek; Mud Run-South Fork Apple River; Muddy Plum River-Plum River; North Fork Plum River-Plum River; Rush Creek Sinsinawa River; Smallpox Creek; South Fork Apple River; Spafford Creek; Spruce Creek-Mississippi River; Upper Yellow Creek; Welsh Hollow-Apple River; and, West Fork Apple River-Apple River.

The Mississippi River is the largest river in the United States, draining about 41% of the entire country. The Mississippi River forms the entire western border of Jo Daviess County. Over the years, the Mississippi ("The father of the waters") has greatly affected the County through river transportation, wildlife, recreation, tourism, and flooding. Water levels in the Mississippi are controlled through a lock and dam system operated by the U.S. Army Corps of Engineers (U.S.A.C.E.).

The two major types of lakes in Jo Daviess County are man-made impoundments of streams, and backwater lakes or navigation pools along the Mississippi River. The two major stream impoundments in the County are Lake Galena and Apple Canyon Lake. Lake Galena is a 213-acre lake constructed in 1975 for recreation/residential development purposes. Apple Canyon Lake is a 419-acre impoundment constructed in 1969 for recreation/residential development purposes. There are many additional small impoundments (lakes and ponds) in the County, most of which are private, unnamed, less than 10 acres in area and are used for agricultural, recreational or erosion control/sediment management purposes.

The Illinois Environmental Protection Agency (IEPA) annually collects chemical, physical, biological, habitat and toxicity data on rivers and streams, inland lakes, Lake Michigan, and groundwater to satisfy reporting requirements found in Section 305(b) of the Federal Clean Water Act (CWA). The primary purpose of Section 305(b) process is to provide an assessment of the overall water quality conditions of Illinois waters. The IEPA provides the following assessment of streams in Jo Daviess County (not all streams are assessed):

### **Five-Part Categorization of Surface Waters**

**Category 1:** Segments are placed in Category 1 if all designated uses are supported, and no use is threatened.

**Category 2:** Segments are placed in Category 2 if all designated uses that were assessed are supported.

**Category 3:** Segments are placed in Category 3 when there is insufficient available data and/or information to make a use support determination for any use.

**Category 4:** Contains segments that have at least one impaired use but a TMDL (total maximum daily load) is not required. Category 4 is further broken down as follows.

**Category 4a:** Segments are placed in Category 4a when a TMDL to address a specific segment/pollutant combination has been approved or established by USEPA.

**Category 4b:** Segments are placed in Category 4b if technology-based effluent limitations required by the Act, more stringent effluent limitations required by state, local, or federal authority, or other pollution control requirements (e.g., best management practices) required by local, state or federal authority are stringent enough to implement applicable water quality standards (40 CFR 130.7(b)(1)) within a reasonable period of time.

**Category 4c:** Segments are placed in Category 4c when the state demonstrates that the failure to meet an applicable water quality standard is not caused by a pollutant, but instead is caused by other types of pollution (i.e., only non-pollutant causes of impairment). Water bodies placed in this category are usually those where Aquatic Life use is impaired by habitat related conditions. (See discussion in Section C-2 Assessment Methodology, Aquatic Life-Streams.)

**Category 5:** Segments are placed in Category 5 if available data and/or information indicate that at least one designated use is not being supported and a TMDL is needed. Water bodies in Category 5 (and their pollutant causes of impairment) constitute the 303(d) List that USEPA will review and approve or disapprove pursuant to 40 CFR 130.7.

**Category 5-alt:** Waters are placed in category 5-alt when alternative restoration approaches are used to address impairments instead of traditional TMDLs. An alternative restoration approach is a plan, or a set of actions pursued in the near-term designed to attain water quality standards. Waters in category 5-alt remain on the 303(d) list until water quality standards are achieved or a TMDL is developed. For this cycle, Illinois has no waters in category 5-alt.

**Table 6.5**  
**Stream Quality Data**  
**IEPA Assessed Streams Within Jo Daviess County**

Stream Segment ID	Stream Segment Name	Category	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
IL_MQB	East Fork Galena River	5	Fully supportive of aquatic life and aesthetic quality use. Not supportive of primary contact use.	Fecal coliform.	Livestock; grazing, feeding, runoff.
IL_MPA	Smallpox Creek	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MN-01	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.		
IL_MN-01	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MN-03	Apple River	5	Fully supportive of aquatic life and aesthetic quality use; not supportive of primary contact.	Fecal coliform	Unknown source(s).
IL_MN-04	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MN-07	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MN-08	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	Unknown cause(s).	Unknown cause(s).
IL_MN-19	Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MN-A	Duke Creek	3	Not assessed.	N/A	N/A

Stream Segment ID	Stream Segment Name	Category	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
IL_MU	Menominee River	2	Fully supportive of aquatic life, fully supportive of aesthetic quality use.	N/A	N/A
IL_MT	Little Menominee River	2	Fully supportive of aquatic life.	N/A	N/A
IL_MS	Sinsinawa River	5	Not supportive of aquatic life, fully supportive of aesthetic quality use.	Sediment /Siltation	Agriculture
IL_MQA	Hughlett Branch	3	Not assessed.	N/A	N/A
IL_MQ-01	Galena River	5	Not supportive of aquatic life, fish consumption, primary contact, secondary contact and aesthetic quality.	Alteration in stream-side or littoral vegetative covers; sedimentation/siltation; total suspended solids (TSS); zinc; polychlorinated biphenyls; fecal coliform.	Channelization; livestock (grazing/feeding); urban runoff/storm sewers; impacts from abandoned mine lands (inactive); other unknown sources.
IL_MN-A	Duke Creek	3	Not assessed.	N/A	N/A
IL_MNB	Wolf Creek	3	Not assessed.	N/A	N/A
IL_MND	Furnace Creek	2	Fully supportive of aquatic life	N/A	N/A
IL_MNDA-01	Long Hollow Creek	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MNE	Mill Creek	2	Fully supportive of aquatic life.	N/A	N/A
IL_MNEA	Hell's Branch	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A

Stream Segment ID	Stream Segment Name	Category	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
IL_MNF-01	Welsh Hollow Creek	2	Fully supportive of aquatic life.	N/A	N/A
IL_MNG	Coon Creek	3	Not assessed.	N/A	N/A
IL_MNK	West Fork Apple River	3	Not assessed.	N/A	N/A
IL_MNJ-01	Kentucky Creek	5	Not supportive of aquatic life.	Unknown cause(s)	N/A
IL_MNIA-11	Clear Creek	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MNIB	Birch Branch	3	Not supportive of aquatic life.	Phosphorus (total); unknown causes.	Municipal point source discharge(s)
IL_MNI-12	South Fork Apple River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_PWN-02	Yellow Creek	5	Not supportive of aquatic life, fully supportive of aesthetic quality use.	Unknown causes.	N/A
IL_ML	Rush Creek	2	Fully supportive of aquatic life and aesthetic quality use	N/A	N/A
IL_MLA	Little Rush Creek	3	Not assessed.	N/A	N/A
IL_MLB	Lawhorn Creek	3	Not assessed.	N/A	N/A
IL_MLC	Rindesbacher Creek	3	Not assessed.	N/A	N/A
IL_MJAA	Scrub Creek	3	Not assessed.	N/A	N/A



Stream Segment ID	Stream Segment Name	Category	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
IL_MJA-02	Camp Creek	3	Not assessed.	N/A	N/A
IL_MJ-02	Plum River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MJD	Davis Creek	3	Not assessed.	N/A	N/A
IL_MJE	Muddy Plum River	2	Fully supportive of aquatic life and aesthetic quality use.	N/A	N/A
IL_MJF	North Fork Plum River	3	Not assessed.	N/A	N/A
IL_MJG	Middle Fork Plum River	3	Not assessed.	N/A	N/A
IL_MJH	Hammond Branch	3	Not assessed.	N/A	N/A
IL_M-12	Mississippi River	5	Fully supportive of aquatic life; not supportive of fish consumption or primary contact.	Aldrin, Dieldrin, Endrin, Heptachlor, Mercury, Mirex, Polychlorinated biphenyls, toxaphene, fecal coliform	
IL_M-12	Mississippi River	5	Fully supportive of aquatic life; not supportive of fish consumption or primary contact.	Aldrin, Dieldrin, Endrin, Heptachlor, Mercury, Mirex, Polychlorinated biphenyls, toxaphene, fecal coliform	Atmospheric deposition - toxics; unknown source(s)
IL_RMJ	Apple Canyon Lake	5	Fully supportive of aquatic life and aesthetic quality; not assessed for fish consumption, primary contact, and secondary contact.	Phosphorus	N/A

Stream Segment ID	Stream Segment Name	Category	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
IL_RMA	Frentress Lake	5	Not supportive of aquatic life and aesthetic quality; not assessed for fish consumption, primary contact, and secondary contact.	Oxygen, dissolved; total suspended solids (TSS); phosphorus (total); aquatic algae	Agriculture; urban runoff/storm sewers
IL_RMM	Lake Galena	3	Not Assessed.	N/A	N/A

Source: Illinois Integrated Water Quality Report and Section 303(d) List – 2020/2022 (IL Environmental Protection Agency) Note: Some streams/stream segments are not entirely within Jo Daviess County. This table does not reflect all Jo Daviess County streams/stream segments, but only those assessed and/or monitored by IEPA.) Information on Jo Daviess County Impaired Water Bodies from Appendix C-2 of the June 2022 Water Quality Report available online at: [epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdls/documents/c2-303d-by-name-final-5-26-22.pdf](https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdls/documents/c2-303d-by-name-final-5-26-22.pdf)

Information on Jo Daviess County Impaired Water Bodies from Appendix C-2 of the June 2022 Water Quality Report available online at: [epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdls/documents/c2-303d-by-name-final-5-26-22.pdf](https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdls/documents/c2-303d-by-name-final-5-26-22.pdf)

Watershed-based plans meeting the requirements of the Illinois Environmental Protection Agency (IEPA) standards have been completed for the Apple Canyon Lake Watershed (in 2016) and the lower Galena River Watershed (2018). The IEPA completed the Galena/Sinsinawa Rivers Watershed TMDL Report in 2018 which sets the “Total Maximum Daily Load” (TMDL) levels for pollutants that the waterbodies can have and still be removed from the list of impaired water bodies considered - in this case the Galena River, the Sinsinawa River, and Frentress Lake.



**Table 6.6**  
**Impaired Waterbodies in Jo Daviess County per June 2022 303(d) List**

Name of Waterbody (I.D.)	Area or Length	Hydrologic Unit Code (HUC 12)	Impaired Use(s)	Cause(s)
Apple Canyon Lake (RM1)	450 acres	7060050601	Aesthetic Quality	Phosphorous (Total)
Apple River (MN-03)	9.01 miles	7060050605	Primary Contact	Fecal Coliform
East Fork Galena River (MQB)	11.74 miles	7060050305	Primary Contact	Fecal Coliform
Frentness Lake (RMA)	92 acres	7060050202	Aesthetic Quality	Total Suspended Solids (TSS)
			Aquatic Life	Total Suspended Solids (TSS)
Galena River (MQ-01)	8.64 miles	7060050307	Aquatic Life	Sedimentation/Siltation, Total Suspended Solids (TSS)
			Fish Consumption	Polychlorinated Biphenyls, Mercury
Galena River (MQ-02)	8.62 miles	7060050306	Primary Contact	Polychlorinated Biphenyls, Mercury
			Fish Consumption	Fecal Coliform
Kentucky Creek (MNJ-01)	2.45 miles	7060050503	Aquatic Life	Cause Unknown
Mud Run (MNID-C4)	4.93 miles	7060050501	Aquatic Life	Amonia (Total), Dissolved Oxygen, Phosphorous (Total)
Sinsinawa River (Ms-01)	3.48 miles	7060050203	Aquatic Life	Sedimentation/Siltration

Information on Jo Daviess County Impaired Water Bodies from Appendix C-2 of the June 2022 Water Quality Report available online at: [epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdl/documents/c2-303d-by-name-final-5-26-22.pdf](http://epa.illinois.gov/content/dam/soi/en/web/epa/topics/water-quality/watershed-management/tmdl/documents/c2-303d-by-name-final-5-26-22.pdf)

In response to concerns about the hypoxic zone in the Gulf of Mexico, the state of Illinois released its USEPA-mandated nutrient loss reduction strategy in July of 2015. The Illinois Nutrient Loss Reduction Strategy documents a collaborative strategy to reduce the amount of nutrients, particularly nitrogen and phosphorous, entering Illinois waterways. The long-term goal is a 45% reduction in total phosphorous and total nitrogen loads. Since the development of the initial strategy, biennial reports have been issued to assess progress and adjust the strategy. Attempts to increase participation and investment in nutrient management practices in agricultural, point source, and urban stormwater sectors continue in an effort to reach state nutrient reduction goals.

## G. Wetlands

In general terms, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. The single feature that most wetlands share is soil or substrate that is at least periodically saturated with or covered by water. The water creates severe physiological problems for all plants and animals except those that are adapted for life in water or in saturated soil. Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of the year. (U.S. Fish & Wildlife Service)

Wetlands found to occur within Jo Daviess County are classified by the U.S. Fish & Wildlife Service as “Lacustrine”, “Palustrine” or “Riverine” wetlands.

The Lacustrine System includes wetlands and deepwater habitats with all of the following characteristics: 1) situated in a topographic depression or a dammed river channel; 2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30% areal coverage; and 3) total area exceeds 20 acres.

The Palustrine System includes all non-tidal wetlands dominated by trees, shrubs, emergents, and mosses or lichens. The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, fen, and prairie, which are found throughout the United States.

It also includes the small, shallow, permanent, or intermittent water bodies often called ponds. Palustrine 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.

The Riverine System includes all wetlands and deepwater habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Upland islands or Palustrine wetlands may occur in the channel, but they are not part of the Riverine System.

The National Wetlands Inventory (U.S. Fish & Wildlife Service) indicates the presence of approximately 20,919.7 acres of wetlands within Jo Daviess County. Approximately 56.8% of these wetlands are classified as Lacustrine; approximately 40.4% are classified as Palustrine; and, approximately 2.8% are classified as Riverine. The descriptive (Cowardin classification system) types of wetlands found in Jo Daviess County are indicated in the following Table 6.7.

**Table 6.7**  
**Wetland Type and Acreage**  
**Jo Daviess County, IL**

Wetland Type	Area (Ac.)
Freshwater Emergent (Palustrine)	708.9
Freshwater Forest/Shrub (Palustrine)	7,241.9
Pond (Palustrine)	499.4
Lake - includes much of Mississippi River, Lake Galena and Apple Canyon Lake (Lacustrine)	11,872.7
Riverine	596.0
Other (Palustrine)	0.8
<b>TOTAL</b>	<b>20,919.7</b>

Source: U.S. Fish & Wildlife Service, National Wetlands Inventory

## **H. Floodplains**

The Federal Emergency Management Agency (FEMA) has designated and mapped floodplains, or “Special Flood Hazard Areas” within Jo Daviess County (for specific information, the Jo Daviess County Flood Insurance Rate Maps and Flood Insurance Study should be reviewed [available from the Jo Daviess County Zoning Administrator / Flood plain Administrator]). Encroachment on flood plains by development, such as structures and fill, reduces the flood-carrying capacity, increases the flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. Development can occur in Special Flood Hazard Areas if structures are constructed above the elevation of the 100-year flood plain, but flood plain development should be discouraged.

In order to have common standards, the National Flood Insurance Program (NFIP) and the State of Illinois adopted a baseline flooding probability called the base flood. The base flood is the one percent chance flood. The one percent chance flood is the flood that has a one percent (one out of 100) chance of occurring in any given year. The one percent chance was chosen as a compromise between excessive exposure to flood risk from using a lower standard (such as a 10 percent chance flood) and applying such a high standard (say, a 0.1 percent chance flood) that it would be considered excessive and unreasonable for the intended purposes of requiring the purchase of flood insurance and regulating new development.

The one percent chance flood has also been called the 100-year flood. The term 100-year flood is often misconstrued. Commonly, people interpret the 100-year flood definition to mean “once every 100 years.” This is wrong. You could have a 100-year flood two times in the same year, two years in a row, or four times over the course of 100 years. You could also not have a 100-year flood over the course of 200 years. To avoid confusion (and because probabilities and statistics can be confusing), the NFIP uses the term base flood. A 100-year flood is defined as having a one-percent chance of being reached or exceeded in any single year.

Thus, the 100-year flood also is called the “one-percent annual chance flood.” To restate, the 100-year flood, the base flood, refers to a flood that the one percent chance of occurring in any given year. The terms base flood, 100-year flood and one-percent annual chance flood are used interchangeably throughout the NFIP. Another term used is the “500-year flood.” This has a 0.2% chance of occurring in any given year. While the odds area is more remote, it is the standard used for protecting critical facilities, such as hospitals and power plants.

Development within Special Flood Hazard Areas is regulated to the “Base Flood.” The land area covered by the floodwaters of the base flood is the base flood plain. On FEMA maps, the base flood plain is called the Special Flood Hazard Area (SFHA). The SFHA is the area where the NFIP’s flood plain management regulations must be enforced by the community and the area where the federal mandatory flood insurance purchase requirement applies. The computed elevation to which floodwater is anticipated to rise during the base flood is the base flood elevation (BFE).

## I. Natural Areas and Open Spaces

The ecology of Jo Daviess County is even older than its hills and valleys. Indeed, living systems have been developing here since before the evolution of flowers. Over the last 10,000 years, the local ecology has been a combination of southern Ozarkian systems (oak, woodpecker, elk) and western Prairie systems (bluestem, meadowlark, bison). Within protected physical recesses, the landscape has also harbored species from the eastern Allegheny systems (maple, thrush, deer) and northern Boreal systems (white pine, yew, primrose).

In spite of general degradation of natural systems, Jo Daviess County retains an impressive array of regionally important natural resources. The Driftless Area in Jo Daviess and Carroll counties is designated as a Resource Rich Area under the Critical Trends Assessment Program and has many unique characteristics. The area is characterized by rolling hills, canyons, mounds, palisades, caves, sinkholes, and talus slopes.

### Nature Preserves

Nature preserves are areas of land or water in public or private ownership that are formally dedicated to receiving maximum protection of significant natural features. The central goal of the nature preserve system is to protect and preserve examples of all significant natural features found in Illinois for the purpose of scientific research, education, conserving biodiversity, and aesthetic enjoyment. Nature preserves are administered by the Illinois Nature Preserves Commission (INPC). Preserves usually are the shared responsibility of the INPC, the Illinois Department of Natural Resources, and the landowners. Three Illinois nature preserves occur within Jo Daviess County: Apple River Canyon, Hanover Bluff and Ward’s Grove. There are thirteen other INPC protected areas in Jo Daviess County as follows:

- Tapley Woods Land and Water Reserve
- Apple River Canyon Land and Water Reserve
- Hanover Forest Land and Water Reserve
- Hanover Bluff Land and Water Reserve
- Wapello Land and Water Reserve
- Casper Bluff Land and Water Reserve
- Eagle’s Nest Land and Water Reserve
- Keough Effigy Mounds Land and Water Reserve
- Rall Woods Land and Water Reserve
- Asgard Natural Heritage Landmark
- Princess Mine Algific Slope Natural Heritage Landmark
- Gramercy Park Natural Heritage Landmark
- Rice Algific Slope Natural Heritage Landmark

## Illinois Natural Area Inventory

The Illinois Natural Areas Inventory (INAI) was conducted by the University of Illinois, the Natural Land Institute, and the Illinois Department of Conservation (now Illinois Department of Natural Resources) over a three-year period in the mid-1970's to document remaining examples of the natural communities of Illinois. Results from the Inventory indicated that, statewide, only 0.07% of Illinois' total land and water area remained in what the INAI described as "high quality, relatively undisturbed" condition at the time. The Inventory established seven categories of natural areas based on significant features. The categories are:

- I - High quality natural communities and natural community restorations.
- II - Specific suitable habitat for state-listed species or state-listed species relocations.
- III - State dedicated Nature Preserves, Land and Water Reserves, and Natural Heritage Landmarks.
- IV - Outstanding geological features.
- V - Category unused currently.
- VI - Unique concentrations of flora or fauna and high-quality streams.
- VII - Category not used at this time.

The INAI established a grading system to designate natural quality. The natural quality of a natural community was graded from A (relatively stable or undisturbed) to D (very early successional or severely disturbed). Grade E was reserved for cropland or other highly developed lands. In general, only A and B communities are designated as significant or exceptional features.

The INAI recognized twenty-three (23) sites totaling 26,081 acres in Jo Daviess County as indicated in the following Table 6.8.

**Table 6.8**  
**Illinois Natural Areas Inventory (INAI) Sites within Jo Daviess County, Illinois**

<b>Natural Area Name</b> <b>-Category: (# of occurrences)</b> <b>*Significant/exceptional features</b>	<b>Categories</b>	<b>Acreage</b>
Apple River	II, VI	51.81
Apple River Canyon	I, II, III, IV	1436.95
Casper Bluff	III	71.03
Dixon Creek North Geological Area	IV	1.28
Eagles Nest	III	N/A
East Dubuque Geological Area	II, IV	4.95
Falling Down Prairie	I, III	294.76
Galena River Bluff	II, IV	25.52
Hanover Bluff	I, II, III, IV	1390.48
Horseshoe Mound Geological Area	IV	12.63
Keough Effigy Mounds	III	29.94
Mississippi River Backwaters - Jo Daviess County	II	7246.07
Pilot Knob Geological Area	IV	6.59
Rice Algific Slope	I, II, III	56.31
Royal Princess Geological Area	IV	3.08

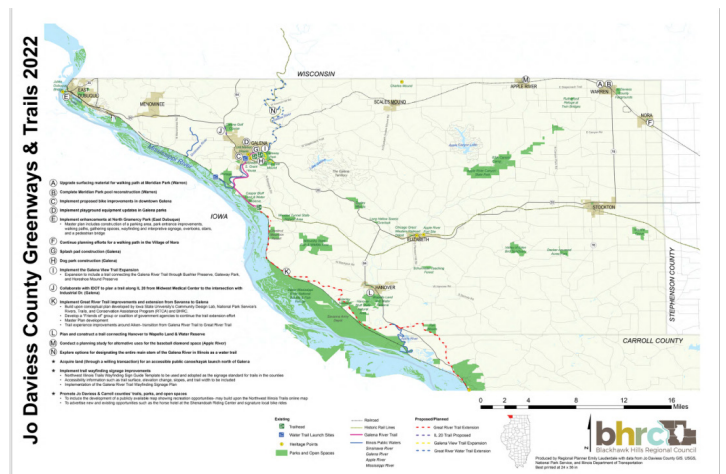
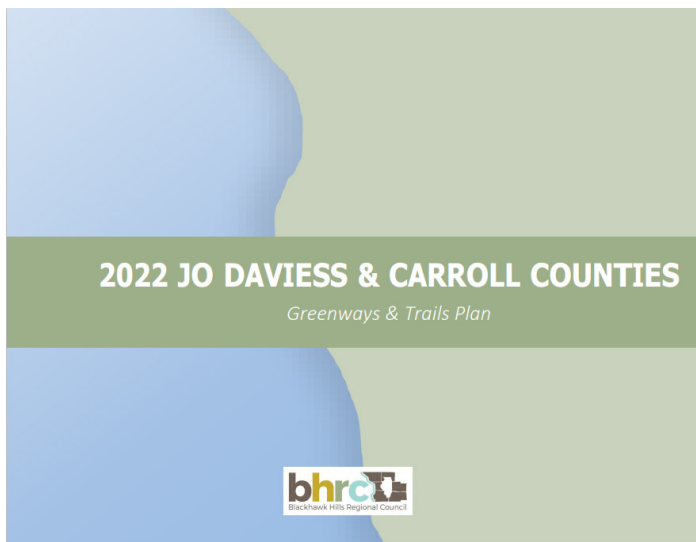
Natural Area Name -Category: (# of occurrences) *Significant/exceptional features	Categories	Acreage
Rutherford Wetland	I-B, III	N/A
Savanna Army Depot	II	14289.33
Scales Mound Geological Area	IV	1.03
Tapley Woods	III	303.58
Wapello	III	63.36
Ward's Grove	I, III	616.09
Wise Lake Geological Area	IV	2.68

Source: Illinois Department of Natural Resources

## 2022 Jo Daviess and Carroll Counties Greenways and Trails Plan

This plan update serves to identify existing and potential opportunities for residents and visitors to recreate and connect with nature. Through a process of inventorying existing trails, parks, and open spaces and collecting public input, a list of initiatives was developed. These initiatives, once implemented, will support the counties' stakeholders' efforts to provide quality recreation and outdoor experiences.

The plan can be found at: [https://jodaviesscountyil.gov/community/greenways\\_\\_\\_trails.php](https://jodaviesscountyil.gov/community/greenways___trails.php)



### 3. Upper Mississippi Wildlife and Fish Refuge

The Upper Mississippi River National Wildlife and Fish Refuge (Refuge) forms the western boundary of Jo Daviess County. For the most part, the Mississippi River shoreline along this 24-mile stretch is owned by the federal government, either the U.S. Army Corps of Engineers or the U.S. Fish and Wildlife Service. This area is managed as public lands within the National Wildlife Refuge System.

The Refuge includes about 240,000 acres and extends 261 miles along the Mississippi River from Princeton, Iowa to Wabasha, Minnesota and includes lands within four states (Iowa, Illinois, Wisconsin and Minnesota). The refuge interfaces with 70 communities and is the most visited national wildlife refuge in the U.S.

## **Driftless Area National Wildlife Refuge**

The Driftless Area National Wildlife Refuge was established in 1989 and is responsible for managing scattered tracts of land in the driftless area in portions of Minnesota, Wisconsin, Iowa and Illinois. These areas are important to the National Wildlife Refuge System because they possess unique physical and climatic conditions that are essential to many the endangered species.

In addition, these areas provide a refuge for a community of other rare plants and snails that have survived since glacial times. Some of these other species are candidates for listing under the provisions of the Endangered Species Act.

The Driftless Area derives its name from the fact that it has not been recently glaciated. A variety of microclimates are created by the unique physical characteristics of the land. Especially important to these rare species are steep, moist, north-facing slopes many of which are classified as “algific talus slopes”. On these slopes, constant cold air and/or cold groundwater exiting from a cliff or talus slope creates a unique microclimate, one that may be considerably different from areas only meters away. This cool, moist habitat is necessary for the continued survival of these rare species. The refuge is currently 775 acres, consisting of nine units in four counties.

### **J. Wildlife**

Much of Jo Daviess County is a suitable habitat for a variety of species of wildlife including birds, mammals, amphibians, reptiles, fish, and other aquatic biota. Even in the intensive agricultural areas, scattered woodlands and fence rows exist which provide habitat for various wildlife species.

#### **1. Mammals**

Many mammals are generalists that use a variety of habitat types and have adapted to living in areas that have been transformed by humans. Mammals known or likely to occur in Jo Daviess County include:

- Virginia opossum
- Several species of Insectivores (masked shrew, northern short-tailed shrew, least shrew, eastern mole)
- Several species of bats
- Eastern cottontail rabbit
- Numerous species of rodents (including, to name a few, eastern chipmunk, woodchuck, thirteen-lined ground squirrel, Franklin’s ground squirrel, gray squirrel, fox squirrel, beaver, muskrat, and several species of mouse and vole)
- Several species of carnivores (including, coyote, red fox, gray fox, raccoon, mink, badger, striped skunk, river otter, bobcat, least and long-tailed weasel)
- White-tailed deer
- There have been several reports of wolf, bear and mountain lion sightings in Jo Daviess County in recent years

#### **2. Birds**

The bird species that live in Jo Daviess County are ecologically diverse, and although some species are able to live in a variety of habitats, many species are adapted to living in only one or a few habitats. Many species of birds live year-round in Jo Daviess County or are migratory visitors at various times throughout the year. The Driftless Area and Jo Daviess County are a very distinctive part of Illinois. Similar habitats extend into Wisconsin and parts of Minnesota and Iowa that are both botanically and geologically unique in the upper Midwest.



These traits help create a wide variety of natural communities. Because of the geographic position of the area (in the extreme northwest corner of the state), several species of birds either reach or are near the northern (e.g., Yellow-throated and Worm-eating Warblers), southern (e.g., Yellow-bellied Sapsucker and Sandhill Crane), or eastern (Yellow-headed Blackbirds) limits of their range or are virtually disjunct outliers of their populations because of the unique botanical and geological traits of the area.

### **3. Amphibians and Reptiles**

Several species of reptiles and amphibians are known to occur in Jo Daviess County, including salamanders and newts, frogs, turtles and snakes. The State-threatened timber rattlesnake and western hognose snake are known to occur in Jo Daviess County. Most amphibian and reptile species are not restricted to a single habitat type. For example, the timber rattlesnake requires forest habitat, but pregnant females also require open rocky areas. On the other hand, some species have narrower habitat requirements such as the smooth soft-shell turtle, a species likely to occur in the County, is only found in medium-sized creeks with sandy substrates and clear water.

### **4. Aquatic Biota**

Jo Daviess County waters support a wide variety of aquatic biota including numerous species of fishes; freshwater mussels; and crayfishes, isopods and amphipods.

Threatened or endangered species of aquatic biota known to occur or that have been observed in Jo Daviess County include the lake sturgeon, western sand darter, longnose sucker, pallid shiner and weed shiner (fishes); and the slippershell, butterfly, higgins eye, and black sandshell (freshwater mussels).

Stream habitat fragmentation, stream channelization, and stream degradation from agricultural and other point- and non-point sources, siltation and increased water temperatures are the greatest threats to aquatic biota in Jo Daviess County. Given the opportunity, streams will restore themselves and, often, the best approach to restoration may be to encourage restoration of the native vegetation of the drainage basin, in particular the riparian zone, correct any additional existing pollution problems, and let the stream return to natural conditions.

### **5. Hunting, Fishing and Trapping**

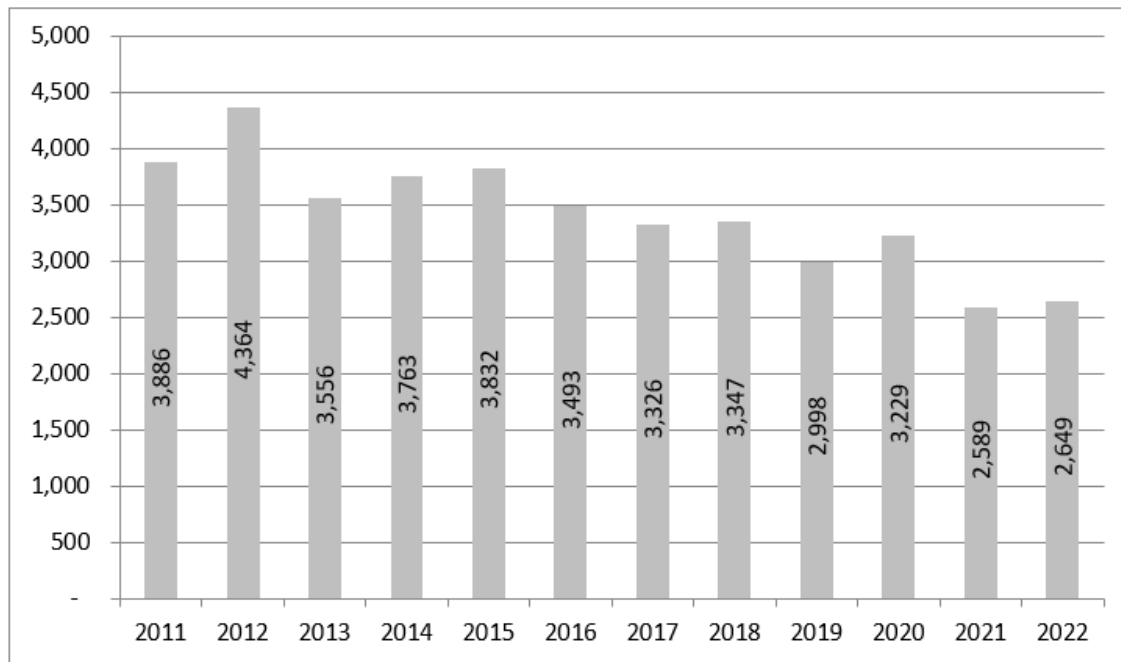
Due to its rural and diverse terrain, wildlife abounds in Jo Daviess County. Popular game includes deer, turkey, waterfowl, upland game, migratory game birds and furbearers. State owned/managed natural and wildlife areas in the county include: Apple River Canyon State Park (Salem and Thompson Units), Hanover Bluff, Rall Woods, Tapley Woods, Wards Grove, Winston Tunnel, and Witkowski. Hunting is also allowed on private land with the permission of the landowner.

Hunting, fishing and trapping not only contribute direct and indirect economic impact to Jo Daviess County, they are an important wildlife management tool that maintains the health and abundance of game species and the balance of our natural resources. Hunters play an important role in managing wildlife and it is their tax dollars paid through hunting licenses and fees that pay for the majority of wildlife management by the Illinois Department of Natural Resources (IDNR).

Most game species have specific hunting and trapping seasons throughout the year. The state administers licenses, permits, quotas and lotteries for firearm, archery, muzzle and Chronic Wasting Disease.

The most popular harvest is white-tailed deer, which reached a record of 4,364 animals in 2012. The following IDOR chart summarizes deer harvest in Jo Daviess County from 2011 through 2022.

**Figure 6.1 Jo Daviess County White-Tailed Deer Harvest Summary (all seasons)**



Source: Forest Wildlife Program, Illinois Department of Natural Resources

For more information on hunting, fishing and trapping in Jo Daviess County, visit: <https://dnr.illinois.gov>

## 6. Threatened or Endangered Species

The Illinois Natural Heritage Database lists twenty-eight (28) species of threatened or endangered animals that have been observed in Jo Daviess County as of April 2023, as follows:

**Table 6.9**

**Illinois Natural Heritage Database Threatened or Endangered Animals within Jo Daviess County, Illinois**

Scientific Name	Common Name	# of Occurrences	Last Observed
<i>Acipenser fulvescens</i>	Lake Sturgeon	1	2011-10-25
<i>Ammocrypta clara</i>	Western Sand Darter	3	2022-08-04
<i>Bartramia longicauda</i>	Upland Sandpiper	2	2014-05-06
<i>Bombus affinis</i>	Rusty Patched Bumble Bee	8	2020-08-01
<i>Canis lupus</i>	Gray/Timber Wolf	3	2013-03-08
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	1	1992-06
<i>Crotalus horridus</i>	Timber Rattlesnake	4	2022-07-26
<i>Crystallaria asprella</i>	Crystal Darter	1	2022-08-04
<i>Discus macclintocki</i>	Iowa Pleistocene Snail	1	1994-08-31
<i>Ellipsaria lineolata</i>	Butterfly	6	2022-06-16

Scientific Name	Common Name	# of Occurrences	Last Observed
<i>Emydoidea blandingii</i>	Blanding Turtle	4	2022-05-09
<i>Hemidactylium scutatum</i>	Four-toed Salamander	2	2017-04-18
<i>Heterodon nasicus</i>	Plains Hog-nosed Snake	1	2015-07-23
<i>Hybognathus hankinsoni</i>	Brassy Minnow	3	2015-07-13
<i>Hybopsis amnis</i>	Pallid Shiner	5	2020-08-12
<i>Lampsilis higginsii</i>	Higgins Eye	2	2022-06-16
<i>Lanius ludovicianus</i>	Loggerhead Shrike	1	2017-07-11
<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	7	2017-01-23
<i>Myotis sodalis</i>	Indiana Bat	2	2015-02-24
<i>Nocomis micropogon</i>	River Chub	1	1972-05-09
<i>Notropis nubilus</i>	Ozark Minnow	13	2015-07-15
<i>Reginaia eburnus</i>	Ebonyshell	1	2019-08-17
<i>Setophaga cerulea</i>	Cerulean Warbler	2	2008-08
<i>Speyeria idalia</i>	Regal Fritillary	1	2020-07-27
<i>Stygobromus iowae</i>	Iowa Amphipod	1	1965-11-30
<i>Terrapene ornata</i>	Ornate Box Turtle	1	2016-06
<i>Tropidoclonion lineatum</i>	Lined Snake	1	2020-05-09
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	1	1992-07-08

Source: Illinois Natural Heritage Database 2023

## K. Flora

Prior to settlement, the area of present-day Jo Daviess County consisted of approximately 72 percent forest, 17.7 percent prairie, and the remainder was bottom land, sloughs, and water. As people settled the County, wetlands were drained and prairies tilled for agricultural purposes, and forests were utilized for building materials and fuel. In present-day Jo Daviess County, native prairie is all but non-existent, except for scattered prairie remnants found mostly in the Savanna Army Depot, along railroad rights-of-way, in old pioneer cemeteries and on rocky and/or sandy ridges and hillsides that have not been tilled. Primarily deciduous forest is still a predominate land use throughout the County due to the topography and geology of the County.

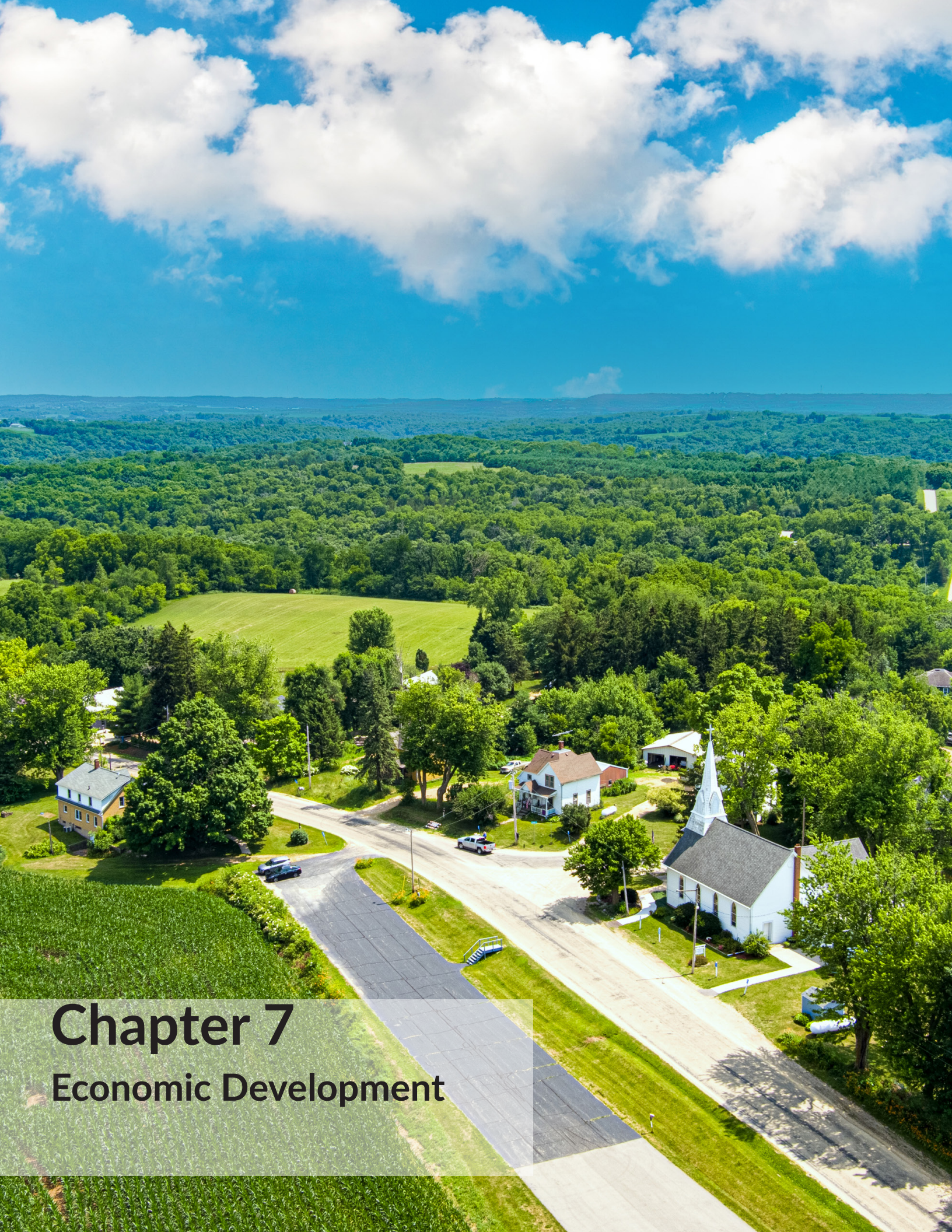
Jo Daviess County is floristically rich, due in part to the County's geologic and climatic history. Several plant species are known to occur in Illinois only in Jo Daviess County. These are in specialized habitats such as algific slopes and dolomite cliff communities. Algific slopes are rare communities with species of plants that are disjunct from their northern range and are communities of special concern.

The open spaces, Natural Areas, State Park, and Nature Preserves in the County are host to a wide variety of floral species - some of which are unique or rare. The Illinois Natural Heritage Database lists forty-eight (48) species of threatened or endangered plant species that have been observed in Jo Daviess County as of April 2023, as follows:

**Table 6.10**  
**Illinois Natural Heritage Database Threatened and Endangered Flora and Fauna within Jo Daviess County, Illinois**

Scientific Name	Common Name	# of Occurrences	Last Observed
<i>Adoxa moschatellina</i>	Moschatel	1	2014-10
<i>Amelanchier interior</i>	Shadbush	2	1995
<i>Antrostomus carolinensis</i>	Chuck-will's-widow	1	2015-06-03
<i>Asclepias lanuginose</i>	Wooly Milkweed	1	1995
<i>Besseyia bullii</i>	Kittentails	2	2020
<i>Botrychium multifidum</i>	Northern Grape Fern	1	1978-08-23
<i>Bouteloua gracilis</i>	Blue Grama	1	2020-07-27
<i>Carex diandra</i>	Sedge	1	1982-09-05
<i>Carex heliophila</i>	Plains Sedge	1	2020-11-19
<i>Carex prasine</i>	Drooping Sedge	1	1996-06-25
<i>Ceanothus herbaceous</i>	Redroot	2	2022-06-03
<i>Circaea alpina</i>	Small Enchanter's Night-shade	2	1987
<i>Conioselinum chinense</i>	Hemlock Parsley	1	2022-09-21
<i>Cyperus grayoides</i>	Umbrella Sedge	1	1997
<i>Cypripedium parviflorum</i>	Small Yellow Lady's Slipper	1	2014-05-20
<i>Elymus trachycaulus</i>	Bearded Wheat Grass	1	1997
<i>Equisetum pratense</i>	Meadow Horsetail	6	2011-10-13
<i>Equisetum scirpoides</i>	Dwarf Scouring Rush	1	1978-08-23
<i>Gymnocarpium Dryopteris</i>	Oak Fern	1	1991
<i>Hackelia deflexa</i> var. <i>americana</i>	Stickseed	3	1995-06-27
<i>Hudsonia tomentosa</i>	False Heather	1	2019-09-20
<i>Juglans cinerea</i>	Butternut	5	2017

Scientific Name	Common Name	# of Occurrences	Last Observed
<i>Juniperus communis</i>	Ground Juniper	1	1994-06-08
<i>Lathyrus ochroleucus</i>	Pale Vetchling	2	1996-06-26
<i>Luzula acuminata</i>	Hairy Woodrush	1	2008
<i>Mirabilis hirsuta</i>	Hairy Umbrella-wort	2	2003-08
<i>Nothocalais cuspidata</i>	Prairie Dandelion	1	2021-05-18
<i>Notropis texanus</i>	Weed Shiner	3	2020-08-07
<i>Opuntia fragilis</i>	Fragile Prickly Pear	1	2020-07-27
<i>Penstemon grandiflorus</i>	Large-flowered Beard Tongue	1	2019-06-26
<i>Rosa acicularis</i>	Bristly Rose	2	2003-08-20
<i>Salvia azurea</i>	Blue Sage	1	1997
<i>Schizachne purpurascens</i>	False Melic Grass	1	2019-05-15
<i>Pinus banksiana</i>	Jack Pine	1	1996-10-18
<i>Polanisia jamesii</i>	James' Clammyweed	1	2015-08
<i>Primula mistassinica</i>	Bird's-eye Primrose	1	2020
<i>Quadrula metanevra</i>	Monkeyface	4	2019-08-17
<i>Rosa acicularis</i>	Bristly Rose	2	2003-08-20
<i>Salvia azurea</i>	Blue Sage	1	1997
<i>Schizachne purpurascens</i>	False Melic Grass	1	2019-05-15
<i>Solidago sciaphila</i>	Cliff Goldenrod	9	2022-09-21
<i>Sullivantia sullivantii</i>	Sullivantia	3	2022-09-21
<i>Symphoricarpos albus</i> var. <i>albus</i>	Snowberry	1	1995
<i>Ulmus thomasii</i>	Rock Elm	1	1988-05-19
<i>Veronica americana</i>	American Brooklime	2	2021-08-12
<i>Viola blanda</i>	Hairy White Violet	1	1968
<i>Viola canadensis</i>	Canada Violet	4	2022-05-05
<i>Zigadenus elegans</i>	White Camass	2	2022-09-21



# Chapter 7

## Economic Development

## Section 7.1 Introduction

As Jo Daviess County continues to move forward, it remains firmly committed to supporting sound economic development projects. A high priority is to retain and grow the county's existing business and industry. Tourism continues to thrive and should be encouraged, but many of its front line jobs are at lower wages and/or seasonal. National trends show that agriculture will become increasingly competitive. Consequently, county leaders and residents recognize the importance of creating new jobs, particularly higher paying jobs. Nearly half of those responding to the public survey indicated a need for more employment opportunities. Diversification of the economy is also a prime concern. Groups are now exploring technology and communications upgrade as a cornerstone for attracting high-tech industries. Educational upgrade of a labor force in transition is also a growing need.

A trend of increased Work from Home (WFH) employment followed the COVID-19 pandemic which was also realized in Jo Daviess County. This trend further emphasizes the need for improved digital infrastructure to support this trend. See Appendix II Map 5.2 for County fiber data.

With the examination of income information, the County should also assess the poverty status of its residents. "Poverty" is generally defined as a set of money income thresholds that vary by family size and composition to determine who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically. That is, they are the same throughout the United States. However, the poverty thresholds are updated annually for inflation using the Consumer Price Index (CPI-U). The official poverty definition counts money income before taxes and does not include capital gains and non-cash benefits (such as public housing, food stamps, and Medicaid). Poverty is not defined for people in military barracks, institutional group quarters, or for unrelated children under age 15 (such as foster children).

This section of the Comprehensive Plan summarizes Jo Daviess County's existing economic activity and conditions and looks to what future conditions might be desirable. Economic development, which can be defined as the type and level of business activity within an area, is often based on a combination of market forces, regulation, and the extent of local government encouragement. State economic development information is included to help the County identify potential opportunities that could be used to pursue appropriate economic development activities.

## Section 7.2 Economic Base Characteristics

### A. Labor Force Analysis

#### 1. Educational Attainment

Paragraph C of Section 1.4 (Demographic Trends) of the Issues and Opportunities Chapter (Chapter 1) details educational attainment for Jo Daviess County adults.

#### 2. Earnings and Income

Wages are not the only form of income that residents receive. "Total income" is defined by the US Census as the sum of the amounts reported separately for wages, salary, commissions, bonuses, or tips; self-employment income from non-farm or farm businesses, including proprietorships and partnerships; interest, dividends, net rental income, royalty income, or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); any public assistance or welfare payments from the state or local welfare office; retirement, survivor, or disability pensions; and any other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support, or alimony.

According to the 2020 American Community Survey, it is estimated 7,386 (73.4%) of the 10,069 Jo Daviess County households were classified as households with earnings in the past 12 months; 4,271 (42.4%) were households with social security income; 2,904 (28.8%) were households with retirement income; 793 (7.9%) were households with food stamps/ SNAP benefits; 493 (4.9%) were households with supplemental security income; and, 219 (2.2%) were households with cash public assistance income. Overall, with regards to 2010 data, there were more households with SS income, retirement income, food stamps/SNAP benefits, supplementary security income and cash public assistance income. This indicates that more households are retirement age and on fixed income and more require supplementary income from public assistance.

To better understand the existing wage-earning realities within Jo Daviess County, “earnings” data is more informative. “Earnings” are defined by the US Census Bureau as the algebraic sum of wage or salary income and net income from self-employment, representing the amount of income received regularly before deductions for personal income taxes, Social Security, bond purchases, union dues, Medicare deductions, etc.

Table 7.1 compares income for households and individuals for Jo Daviess County with the State of Illinois as a whole. Jo Daviess County has increased both median household income and per capita income at a rate greater than the State of Illinois overall. In 2010, the median income per household and per capita income were 9.8% and 6.8%, respectively, less than Illinois as a whole; in 2020, they were 8.9% and 6.3% less, respectively, than Illinois as a whole.

**Table 7.1**  
**Comparison of Household and Per Capita Income**  
**Jo Daviess County and State of Illinois**

	Median Income Per Household				Per Capita Income			
	2000	2010	2020	% Change 2010-2020	2000	2010	2020	% Change 2010-2020
<b>Jo Daviess County</b>	\$40,411	\$50,279	\$59,223	17.79%	\$21,497	\$26,819	\$34,974	30.41%
<b>State of Illinois</b>	\$46,590	\$55,735	\$64,994	16.61%	\$23,104	\$28,782	\$37,306	29.62%

U.S. Bureau of the Census; American Community Survey 2022

Table 1.8 of the Issues and Opportunities Chapter details changes in household income between 2010 and 2020.

### 3. Percent in Labor Force and Unemployment

Table 7.2 below shows the number of residents 16 years and above living in Jo Daviess County and the State of Illinois. Age sixteen is the lower threshold for being eligible for employment. 61.3% of Jo Daviess County residents are in the labor force as compared to the State of Illinois at (65.1%). Jo Daviess County has a lower percentage of unemployed persons in the labor force (1.4%) compared to the State of Illinois (3.9). The County lost 829 (4.4%) in its civilian labor force between 2010 and 2020 but a greater percent of the labor force is employed (97.6) and a lower percentage is unemployed (2.4) over the same time frame.



**Table 7.2**  
**Employment Status of Population 16 Years and Above**  
**Jo Daviess County and State of Illinois**

	Jo Daviess County		State of Illinois	
	2010	2020	2010	2020
<b>Population 16 yrs. and over</b>	18,684	17,855	9,967,535	10,193,604
<b>In Civilian Labor Force</b>	12,424	10,973	6,632,592	6,631,897
<i>% in Civilian Labor Force</i>	66.5	61.3	66.5	65.1
Employed	11,769	10,679	6,062,848	6,236,755
<i>% in Civilian Labor Force Employed</i>	94.7	59.8	91.4	61.2
Unemployed	655	258	559,744	395,142
<i>% in Civilian Labor Force Unemployed</i>	5.3	1.4	8.6	3.9
<b>Not in Labor Force</b>	6,260	6,914	3,313,487	3,543,571
<i>% Not in Labor Force</i>	33.5	38.7	33.2	34.8

U.S. Bureau of the Census; American Community Survey 2022

The Illinois Department of Employment Security, Labor Market Information Unit provides unemployment rate data that differs from the census period data provided by the U.S. Bureau of the Census and is also calculated annually. Illinois Department of Employment Security data for January 2022 through December 2022 indicates that Jo Daviess County had a monthly average of 10,479 persons in the labor force, down from 12,847 in 2011. The County saw a monthly average of 387 persons unemployed in 2022, down from 997 in 2011. The 2022 average monthly unemployment rate (January through December) for Jo Daviess County was 3.7%, which is lower than the average monthly unemployment rate for the State of Illinois of 4.6% over the same time period. The 2023 average monthly unemployment rate (January through September) for Jo Daviess County was 4.2%, compared to 4.9% for Illinois as a whole.

#### **4. Labor Force Participation Characteristics**

An analysis of the data represented in Table 7.3 below reveals the following regarding the characteristics of the Jo Daviess County labor force:

- The County labor force decreased between 2010 and 2020 by 1,487 persons, or 12.0%.
- A lower percentage of the population is in the labor force in 2020 (61.3%) compared to 2010 (66.5%).
- The 16-24- and 25-54-years population class showed a decrease in the percent of population in the labor force between 2010 and 2020; 55-65 and 65+ population classes showed an increase in percent in labor force.
- All population classes decreased in the percentage of the population class unemployed between 2010 and 2020 except the 65+ population class saw a slight increase.
- The 25-54 years population class makes up the largest portion of the labor force at 53.8 percent, however that percentage has decreased from since from 60.5% in 2010. Meanwhile the percentage and total number of 55+ people in the labor force continues to rise indicating delayed retirement.
- The percentage of women in the civilian labor for increased from 47.2% in 2010 to 56.2% in 2020.

**Table 7.3**  
**Labor Force Participation Characteristics 2010 and 2020**  
**Jo Daviess County, IL**

	2010	2020	Change 2010 - 2020	% Change 2010 - 2020
<b>Population 16 years and over</b>	18,864	17,855	-829	-4.4
<b>In Civilian Labor Force (LF)</b>	12,424	10,937	-1,487	-12.0%
<i>% in Civilian Labor Force</i>	66.5	61.3	---	---
<b>Population 16 to 24 years</b>	2,109	1,782	-327	-15.5%
Employed	1,440	1,200	-240	-16.7%
<i>% Employed</i>	68.3	67.3	---	---
Unemployed	137	21	-1	-0.7%
<i>% Unemployed</i>	6.5	1.2	---	---
Not in labor force	532	561	29	5.5%
<i>% Not in Labor Force</i>	25.2	31.5	---	---
<i>% In Labor Force</i>	74.8	68.5	---	---
<b>Population 25 to 54 years</b>	8,147	6,628	-1,519	-18.6%
Employed	7,143	5,745	-1,398	-19.6%
<i>% Employed</i>	87.7	86.7	---	---
Unemployed	379	141	-238	-62.8%
<i>% Unemployed</i>	4.7	2.1	---	---
Not in labor force	661	738	77	11.6%
<i>% Not in Labor Force</i>	8.1	11.1	---	---
<i>% In Labor Force</i>	91.9	88.8	---	---
<b>Population 55 to 64 years</b>	3,649	3,446	-203	-5.6%
Employed	2,272	2,391	119	5.2%
<i>% Employed</i>	62.3	69.4	---	---
Unemployed	121	68	-53	-43.8%
<i>% Unemployed</i>	3.3	2.0	---	---
Not in labor force	1,256	372	-884	-70.4%
<i>% Not in Labor Force</i>	34.4	10.8	---	---
<i>% In Labor Force</i>	65.6	71.4	---	---
<b>Population 65 years and over</b>	4,743	5,999	1,256	26.5%
Employed	914	1,371	457	50.0%
<i>% Employed</i>	19.3	22.9	---	---
Unemployed	18	28	10	55.6%
<i>% Unemployed</i>	0.4	0.5	---	---
Not in labor force	3,811	4,628	817	21.4%
<i>% Not in Labor Force</i>	80.3	77.1	---	---
<i>% In Labor Force</i>	19.7	23.3	---	---
% of women in civilian labor force	47.2	56.1	---	---
<i>% of civilian LF 16-24 years</i>	12.7	10.7	---	---
<i>% of civilian LF 25-54 years</i>	60.5	54.0	---	---
<i>% of civilian LF 55-64 years</i>	19.3	23.3	---	---
<i>% of civilian LF 65 years and over</i>	7.5	12.0	---	---

U.S. Bureau of the Census; American Community Survey 2022

## 5. Employment by Occupation

Table 7.4 below provides information regarding the type of occupation that Jo Daviess County residents are employed in. Table 1.11 of the Issues and Opportunities Chapter summarizes resident employment by industry for the 2010 Census year and 2020. The information for both these tables represents what type of occupation/industry the working residents of the County were employed in and is not a listing of the employment opportunities currently located in the County. There was a 37% decline in service occupations employment between 2010 and 2021. The employment sector that saw the most growth (13.7%) was Management, business, science and arts.

**Table 7.4**  
**Jo Daviess County Residential Employment by Occupation**

Occupation	2010		2021		% Change 2010-2021
	Number	Percentage	Number	Percentage	
<b>Employed civilian population &gt;16 yrs.</b>	11,769	100.00%	11,145	100.00%	-
<b>Management, business, science, and arts</b>	3,662	31.10%	4,164	37.36%	13.7%
<b>Service</b>	2,159	18.30%	1,360	12.20%	-37.0%
<b>Sales and office</b>	2,594	22.00%	2,334	20.94%	-10.0%
<b>Natural resources, construction, and maintenance</b>	1,273	10.80%	1,187	10.65%	-6.8%
<b>Production, transportation, and material moving</b>	2,081	17.70%	2,100	18.84%	0.9%

Source: American Community Survey \*May not total 100% due to rounding.

## 6. Commuting

The mean travel time to work for Jo Daviess County residents is lower than the mean travel time for the State of Illinois as a whole; it is the second lowest among the six northwest Illinois counties of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside, and below the average mean travel time for said area of 21.8 minutes.

**Table 7.5**  
**Mean Travel Time to Work in 2010 and 2020**

	2010 (Minutes)	2020 (Minutes)	Change 2010-2020	% Change 2010-2020
<b>Carroll County</b>	25.2	24.5	-0.7	-2.8%
<b>Jo Daviess County</b>	20.3	20.9	0.6	3.0%
<b>Lee County</b>	21.4	24.1	2.7	12.6%
<b>Ogle County</b>	24.4	26.7	2.3	9.4%
<b>Stephenson County</b>	19.7	22.8	3.1	15.7%
<b>Whiteside County</b>	19.6	20.2	0.6	3.1%
<b>State of Illinois</b>	28.1	29	0.9	3.2%

Source: U.S. Bureau of the Census; American Community Survey 2022

It is helpful to understand the nature of the place of work of the County work force. As illustrated in Table 7.6 below, 68.7% of Jo Daviess County workers 16 years of age and over worked in Illinois, and 31.3% worked in another state. Of those workers that worked in Illinois, 86.5% worked in Jo Daviess County. 59.4% of all Jo Daviess County workers 16 years of age and over worked in Jo Daviess County.

**Table 7.6**  
**Place of Work for Workers 16 Years and Over in 2020 - State and County Level**  
**Jo Daviess County, IL**

	Total	% of Total
Workers 16 years and over	10,549	100%
Worked outside state of residence	3,302	31.3%
Worked in state of residence	7,247	68.7%
Of those workers that worked in state of residence:		
Worked in country of residence	6,266	59.4%
Worked outside county of residence	981	9.3%

U.S. Bureau of the Census; American Community Survey 2022

## B. Economic Base Analysis

Jo Daviess County's major employers are indicated in Table 7.7 below:

**Table 7.7**  
**Major Employers\* in Jo Daviess County, Illinois**

Employer	City or Village	Product/Service	Number of Employees
Eagle Ridge Resort & Spa	Galena	Resorts	500-999
Chestnut Mountain Resort	Hanover	Skiing Centers & Resorts	250-499
Crescent Electric Supply Co	East Dubuque	Electric Equipment & Supplies-Wholesale	100-249
East Dubuque Nitrogen Fertilizers	East Dubuque	Agricultural Chemicals	100-249
Hirschbach Motor Lines Inc	East Dubuque	Trucking-Motor Freight	100-249
Jo-Carroll Energy Inc	Elizabeth	Electric Contractors	100-249
Jo Daviess County Illinois	Galena	County Government-Executive Offices	100-249
Midwest Medical Center	Galena	Hospitals	100-249
Signcraft Screenprint	Galena	Screen Printing	100-249
Walmart Supercenter	Galena	Department Stores	100-249
Woodlands Restaurant at Eagle	Galena	Restaurants	100-249
Workshop	Galena	Social Service & Welfare Organizations	100-249
Brewster Cheese Co	Stockton	Cheese Processors	100-249
Stockton CUSD	Stockton	School Districts	100-249
Apple Canyon Lake Property	Apple River	Homeowners Associations	50-99
Americold Logistics Inc	East Dubuque	Warehouses-Cold Storage	50-99

<b>Employer</b>	<b>City or Village</b>	<b>Product/Service</b>	<b>Number of Employees</b>
Leibold Irrigation Inc	East Dubuque	Irrigation Systems & Equipment	50-99
Runde Chevrolet	East Dubuque	Automobile Dealers-New Cars	50-99
Weber Concrete Service	East Dubuque	Concrete Contractors	50-99
Galena Property Owners' Assn			
Leibold Irrigation Inc	East Dubuque	Irrigation Systems & Equipment	50-99
Runde Chevrolet	East Dubuque	Automobile Dealers-New Cars	50-99
Weber Concrete Service	East Dubuque	Concrete Contractors	50-99
Galena Property Owners' Assn	Galena	Associations	50-99
Galena Senior Community Care	Galena	Residential Care Homes	50-99
Galena Unit District 120	Galena	School Districts	50-99
Piggly Wiggly	Galena	Grocers-Retail	50-99
Tri-State Travel	Galena	Buses-Charter & Rental	50-99
River Ridge CUSD	Hanover	School Districts	50-99
Scales Mound School	Scales Mound	Schools	50-99
Citizens State Bank	Stockton	Banks	50-99
Warren Elementary	Warren	Schools	50-99
Apple River Fire District	Apple River	Fire Departments	20-49
Bell Tower Retirement	East Dubuque	Retirement Communities & Homes	20-49
East Dubuque High School	East Dubuque	Schools	20-49
Family Beer & Liquor Store	East Dubuque	Liquors-Retail	20-49
R T & T Inc	East Dubuque	Real Estate	20-49
T & T Electronic Recycling	East Dubuque	Recycling Centers	20-49
Timmerman's Supper Club	East Dubuque	Restaurants	20-49
Top Block & Brick	East Dubuque	Masonry Contractors	20-49
WHKS & Co	East Dubuque	Engineering	20-49
Civil Residential Asphalt Paving	Elizabeth	Paving Contractors	20-49
24-HOUR Care LLC	Galena	Nursing & Convalescent Homes	20-49
Cannova's Pizzeria	Galena	Pizza	20-49
Contemporary Services Inc	Galena	Services NEC	20-49
Country Inn-Suites by Radisson	Galena	Hotels & Motels	20-49
Culver's	Galena	Limited-Service Restaurant	20-49
Desoto House Hotel	Galena	Hotels & Motels	20-49
First Community Bank of Galena	Galena	Banks	20-49

Employer	City or Village	Product/Service	Number of Employees
Fried Green Tomatoes	Galena	Bars	20-49
Galena Cellars Vineyard-Winery	Galena	Tasting Rooms	20-49
Galena Territory Fire Dept	Galena	Fire Departments	20-49
Illinois Bank & Trust, a division of HTLF Bank	Galena	Banks	20-49
Irish Cottage Boutique Hotel	Galena	Hotels & Motels	20-49
Lemfco Inc	Galena	Foundries-Steel	20-49
Mc Donald's	Galena	Limited-Service Restaurant	20-49
Rainbow Ridge Inc	Galena	Social Service & Welfare Organizations	20-49
Renaissance Restoration Inc	Galena	General Contractors	20-49
Stoney Creek Inn Galena	Galena	Hotels & Motels	20-49
Top Notch Plumbing Heating & Electric	Galena	Heating Contractors	20-49
Vinny Vanucchi's	Galena	Restaurants	20-49
Absolute Water Solutions	Hanover	Water Softening Equipment Service & Supplies	20-49
Riverboat Twilight	Scales Mound	Cruises	20-49
Boy Scouts Camp	Stockton	Youth Organizations & Centers	20-49
JJ & Freddie's	Stockton	Restaurants	20-49
M & M Concrete Inc	Stockton	Concrete Contractors	20-49
McDonald's	Stockton	Limited-Service Restaurant	20-49
Woodbine Bend Golf Course	Stockton	Golf Courses	20-49
Hartzell Family Foods	Warren	Grocers-Retail	20-49

Source: Employer information is provided by Data Axle®, Omaha, NE, 800/555-5211. Copyright © 2023 Edition 2 Released March 2023. All Rights Reserved.

\*Employers of 20 persons or more



The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. The following Table 7.8 displays the average quarterly employment and average monthly earnings by NAICS sector.

**Table 7.8**  
**2022 Average Quarterly Employment and Average Monthly Earnings per NAICS Sector**

NAICS Sector	Average Employment	Average Monthly Earnings
Agriculture, Forestry, Fishing and Hunting	69.25	\$3,625.75
Utilities	85.5	\$6,579.00
Construction	529	\$4,534.25
Manufacturing	608.25	\$6,764.25
Wholesale Trade	369.5	\$6,534.00
Retail Trade	841.75	\$2,738.50
Transportation and Warehousing	238.5	\$3,629.25
Information	46.5	\$1,757.75
Finance and Insurance	157	\$4,778.75
Real Estate and Rental and Leasing	138.5	\$6,896.25
Professional, Scientific, and Technical Services	205.5	\$6,198.00
Administrative and Support and Waste Management and Remediation Services	210.25	\$3,961.75
Educational Services	775.75	\$3,788.75
Health Care and Social Assistance	586.75	\$3,310.25
Arts, Entertainment, and Recreation	238.5	\$1,976.00
Accommodation and Food Services	1355.75	\$2,045.75
Other Services (except Public Administration)	322.5	\$3,116.25
Public Administration	302.5	\$3,402.50

Source: U.S. Census Bureau, Local Employment Dynamics 2022

## Section 7.3 Economic Development Programs

This section contains a brief description of the Jo Daviess County development actions and various programs that could potentially assist the County's businesses with loans and grants.

### A. Jo Daviess County

#### 1. Jo Daviess County Comprehensive Economic Development Strategy (CEDS)

The Comprehensive Economic Development Strategy (CEDS) is a comprehensive economic development plan that is created through a process that brings together public and private sector stakeholders to provide a regional economic roadmap to diversify and strengthen a regional economy. The CEDS analyzes the regional economy, addresses regional economic problems, and serves as a guide for establishing regional goals and objectives, developing and implementing a regional plan of action, identifying investment priorities and funding sources, and assigning lead organizations responsibilities for execution of the strategy. Goals and Objectives are developed by the CEDS committee, organized and prioritized by the Blackhawk Hills Regional Council staff, and then considered and approved by the CEDS Prioritization Committee.

## 2. Jo Daviess County Revolving Loan Fund

The Jo Daviess County Revolving Loan Fund (RLF) is established to provide a source of financing, which may not otherwise be available within the county, for expanding or start-up businesses. Used to fill a "financing gap" in a business development project, the RLF offers a low-interest option to complete a financing package. A "gap" occurs when the business lacks the funds to meet the equity requirements of bank financing or needs a lower interest rate.

Further, the RLF seeks to:

- Retain and attract businesses that provide permanent jobs.
- Maximize investment within the County.
- Redevelop vacant and/or blighted land.
- Promote sales and tax generating projects.
- Provide financial assistance to eligible businesses.

The Revolving Loan Fund adds another tool to the "toolbox" of the county's economic development efforts. The incentives provided to business through this RLF are a fixed rate, low interest, and/or long-term financing for a business wanting to expand or locate within the county. The RLF is not the primary source of financing for a project, however, the combination of public and private financing lessens the risk for the primary lender and yields an overall lower cost of money for the borrower.

It is the intent of the RLF to view both existing and start-up business as equal under the criteria, with preference given to those expansions and start-ups that result in retained or new jobs and/or new sources of economic activity within the county. Jo Daviess County seeks to work with healthy companies that have excellent potential for growth, will provide increased employment in the county, and will help diversify our economy. For existing business, the primary criteria to be considered are the following:

- Dedicated and experienced management.
- Past performance.
- Current economic viability of the business.
- High potential for profitability.
- High potential for growth.
- Sufficient collateral and cash flow to service and secure the loan.

In the case of entrepreneurial start-up business, the following will also be considered:

- Market strengths such as providing a new service or product development or distribution in Jo Daviess County as demonstrated by local market and/or feasibility study.
- Complementary business development that serves an existing county business entity.

## 3. 2023 Jo Carroll LRA Reuse Plan

The Savanna Army Depot Activity site is a 13,062-acre former Army installation. It is located on the eastern bank of the Mississippi River in Carroll and Jo Daviess counties, seven miles north of the city of Savanna, Illinois. Between 1917 and 1995, the U.S. Army used the property for artillery weapons and ammunition testing, as well as the storage of ordnance and the loading and renovating of shells and bombs. The LRA has performed a comprehensive analysis in support of the reuse planning for parcel 20 and can be found at the links below:

**[doc-parcel-20-final-reuse-plan-1689879402.pdf \(savannaindustrialpark.org\)](#)**

**[savannaindustrialpark.org/pdf/doc-parcel-20-final-reuse-plan-appendices-1689879402.pdf](#)**



## **B. Regional**

### **1. Blackhawk Hills Economic Development District (EDD)**

The mission of the Blackhawk Hills EDD is to develop and implement a regional Comprehensive Economic Development Strategy that will enhance job opportunities and improve the quality of life for local communities. The focus that the Council has adopted for economic development issues is to:

- Promote the importance of the planning process to facilitate positive and desirable economic growth within the individual communities of the EDD.
- Assemble and implement a regional plan based on the needs of the communities within the region.
- Provide technical assistance to the communities in the EDD by connecting local people, with specific projects, to the appropriate local, state, and federal offices.
- Provide assistance in grant or loan applications; and
- Provide support for communities in the form of statistical, demographic, and economic data.

<https://www.blackhawkhills.com/>

### **2. NW Illinois Economic Development**

NW Illinois Economic Development (NWILED), formerly, Tri-County Economic Development Alliance, Inc. (TCEDA), is a private, not for profit 501 c (6) corporation formed to develop a regional public/private partnership to promote, encourage, and support industrial and economic development in Jo Daviess, Carroll and Whiteside counties.

Over recent years NWILED has broadened its outreach, with new partners and sponsors, and increased membership in the private and public sectors. They have been recognized by colleagues and peers with a Nonprofit of the Year award and a regional, state-awarded Certificate of Appreciation for support and contribution to workforce development.

The mission of NWILED is to promote economic development by fostering business growth; assist expanding and relocating businesses in determining their needs for growth with cooperation of government and business partners; encourage entrepreneurs by assisting with access to resources to begin and grow their businesses; employ all available resources to create a welcoming business environment, aligning the skills of the workforce with the needs of businesses; and build political and economic capital.

[www.nwiled.org](http://www.nwiled.org)

### **3. Jo-Carroll Local Redevelopment Authority**

The Jo-Carroll Local Redevelopment Authority (LRA) is the Federally recognized agency that facilitates the transfer of property formerly owned by the Army at the Savanna Army Depot, for economic development opportunities.

The LRA was established in 1996 following the Base Realignment and Closure (BRAC) of the former Depot, through an intergovernmental agreement between Jo Daviess and Carroll Counties.

The LRA owns roughly 400 acres at the former Depot, now known as Savanna Industrial Park, which is tasked with redeveloping for public benefit. The LRA's operational life is linked to the pace at which parcels of property are transferred by the Army.

The LRA is presently (2024) working in conjunction with the Upper Mississippi River International Port District to establish a 21st century public intermodal port facility at the depot. The development aims to create a fully sustainable economic engine for the region, through its 2023 Reuse Plan.

Sustainable economic development is at the core of the LRA's mission, as it seeks to address the economic imbalance caused by the Savanna Army Depot BRAC.

The LRA is governed by a board of eight, appointed from Jo Daviess and Carroll Counties. It employs an executive director and a contractor to oversee and manage finances, operations, property matters, and future planning.

The LRA's operational funding emanates from sale and lease of property and the Office of Local Defense Community Cooperation (OLDCC) in the form of grants. OLDCC supports the LRA in its goals for redevelopment of the former Depot, as well as economic development of the communities impacted by the closure of the former Depot.

Savanna Industrial Park is presently home to over a dozen businesses, including agricultural, rail and logistics, logging and design and manufacturing.

[www.savannaindustrialpark.org](http://www.savannaindustrialpark.org)

## C. State

### 1. Upper Mississippi River Port District and Port District Authority

Established in 2009, the Upper Mississippi River Port District (UMRIPD) is a public municipal entity that covers the entirety of Jo Daviess and Carroll Counties.

The UMRIPD's primary role is economic development through its ability to construct, operate, and maintain intermodal transportation (road, rail, water, air) systems and their allied businesses in the region.

Due to its wide-ranging municipal powers, the UMRIPD is a powerful economic development tool that can directly assist businesses in creating opportunities for industrial, manufacturing, commercial, recreational, or other enterprises.

At present (2024), the UMRIPD is in the process of completing its Port Master Plan funded by the Illinois Department of Transportation, as well as its Capital Improvement Plan, funded by the same agency.

Through an intergovernmental agreement, UMRIPD and the JCDLRA are working together to create a modern, sustainable, and energy-smart public intermodal facility on the Upper Mississippi River to foster rural economic development in the region.

The project will not only have a positive impact on intermodal transportation, agriculture, and allied infrastructure, but also the surrounding communities and the people who live in them.

The UMRIPD board of commissioners consists of four members, two - a Republican and a Democrat - from each of Jo Daviess and Carroll Counties, as well as a Governor's appointee.

<http://umripd.com/>

### 2. The Illinois Department of Commerce and Economic Opportunity (DCEO)

DCEO has a broad range of financial assistance programs to help communities with economic development. DCEO offers a number of innovative programs to augment conventional sources of financing and help with business locations, relocations, and expansions. Visit [dceo.illinois.gov](http://dceo.illinois.gov) for a complete and up-to-date list of opportunities. A description of several programs specific to the County follows.

## **Illinois Enterprise Zone Program**

Certain specifically designated portions of Jo Daviess County are located within an Illinois Enterprise Zone (Jo-Carroll Enterprise Zone and Freeport/Stephenson County/Jo Daviess County Enterprise Zone). The Illinois Enterprise Zone Act was signed into law December 7, 1982. The purpose of the Act is to stimulate economic growth and neighborhood revitalization in economically depressed areas of the state. Businesses located (or those that choose to locate) in a designated enterprise zone can become eligible to obtain special state and local tax incentives, regulatory relief, and improved governmental services, thus providing an economic stimulus to an area that would otherwise be neglected.

Businesses located or expanding in an Illinois enterprise zone may be eligible for the following incentives: an exemption on the retailers' occupation tax paid on building materials, an investment tax credit of .5 percent of qualified property, and an enterprise zone jobs tax credit for each job created in the zone for which a certified dislocated worker or economically disadvantaged individual is hired. Additional exemptions, such as an expanded state sales tax exemption on purchases of personal property used or consumed in the manufacturing process or in the operation of a pollution control facility and an exemption on the state utility tax for electricity, natural gas and the Illinois Commerce Commission's administrative charge and telecommunication excise tax are available for companies that make the minimum statutory investment that either creates or retains the necessary number of jobs. These exemptions require a business to make an application to, and be certified by, the Department. In addition to the state incentives, each zone offers distinctive local incentives to enhance business development projects.

Each enterprise zone has a designated zone administrator who is responsible for zone compliance and is available to answer questions regarding the zone.

## **Commercial Property Assessed Clean Energy (C-PACE)**

Jo Daviess County and Galena C-PACE programs allow businesses to pay off clean energy projects on a long-term basis through voluntarily requested special assessments tied to the property. The new C-PACE programs come at no cost to the county or city, and they may terminate or suspend their programs at any time, for any reason, or for no reason. Jo Daviess County's C-PACE program is essentially the same as the City of Galena C-PACE program. The difference is a Galena business or project can choose between them, and may decide, for example, to go with the City's CPACE program if they have prior relationships at city hall which would help expedite their project.

C-PACE programs aims to spur investment in renewable energy systems and resilient building design. Any privately-owned commercial, industrial, non-residential agricultural, or multi-family (of 5 or more units) property or any property owned by a not-for-profit can take advantage of these new C-PACE programs in connection with the renovations of an existing buildings and new construction, in each case up to 25% of the value of the property. Instead of asking a bank for a traditional loan secured by a mortgage, the C-PACE programs enable owners and developers of commercial real estate to secure their long-term financing needs with a better form of collateral, thus making it less risky for lenders and allowing businesses to push off initial costs and pay off projects for up to 40 years with fixed interest rates.

Eligible improvements generally include fixtures, systems, and equipment. Basically, anything that improves energy efficiency, promotes renewable energy, energy resiliency, or lowers water use is eligible, including electric vehicle charging stations. Examples of projects include renovating an existing structure into commercial kitchen space, upgrading older hotels, and new construction of for lease commercial workforce housing.

## **D. Federal Opportunity Zone**

### **Foreign Trade Zone**

The Savanna Depot Park is located within a Foreign Trade Zone (Jo-Carroll Foreign Trade Zone #271). Foreign Trade Zones (FTZs) were created in the United States to provide special customs procedures to U.S. plants engaged in international trade-related activities. Duty-free treatment is accorded items that are processed in FTZs and then re-exported, and duty payment is deferred on items until they are brought out of the FTZ for sale in the U.S. market. This helps to offset customs advantages available to overseas producers who compete with domestic industry. The Foreign-Trade Zones (FTZ) Board (composed of representatives from the U.S. Departments of Commerce and Treasury) has its operational staff in the International Trade Administration's Import Administration.

FTZs are considered to be outside of U.S. Customs Territory for the purpose of customs duty payment. Therefore, goods entering FTZs are not subject to customs tariffs until the goods leave the zone and are formally entered into U.S. Customs Territory. Merchandise that is shipped to foreign countries from FTZs is exempt from duty payments. This provision is especially useful to firms that import components in order to manufacture finished products for export.

There is no time limit on goods stored inside a FTZ and certain foreign and domestic merchandise held in FTZs may be exempted from state and local inventory taxes. This allows firms to minimize their costs while their products are waiting to be shipped. In addition, quota restrictions are in some cases waived for items entering an FTZ; however, the restrictions would apply if the items were to enter the U.S. market.

A variety of activities can be conducted in a zone, including assembling, packaging, destroying, storing, cleaning, exhibiting, re-packing, distributing, sorting, grading, testing, labeling, repairing, combining with foreign or domestic content, or processing. Manufacturing and processing require specific FTZ Board approval, however.

### **Federal Opportunity Zone**

Opportunity Zones are an economic development tool that allows people to invest in distressed areas in the United States. Their purpose is to spur economic growth and job creation in low-income communities while providing tax benefits to investors.

Opportunity Zones were created under the Tax Cuts and Jobs Act of 2017 (Public Law No. 115-97). Thousands of low-income communities in all 50 states, the District of Columbia and five U.S. territories are designated as Qualified Opportunity Zones. Taxpayers can invest in these zones through Qualified Opportunity Funds. Currently there exists one federal opportunity zone in the County that includes the City of Stockton.

On September 28, 2023, a bipartisan group of legislators introduced H.R. 5761, the Opportunity Zones Transparency, Extension, and Improvement Act. This legislation, which is a revamped version of a bill originally introduced in 2022, will bolster the Opportunity Zones incentive by adding an extended deferral period, increased flexibility, and robust reporting requirements.

## **E. Other Resources**

### **Quad Cities Regional Economic Development Authority**

The Quad Cities Regional Economic Development Authority (QCREDA) was created by action of the Illinois General Assembly and is a general development agency for the counties of Henry, Knox, Mercer, Rock Island, Carroll, Lee, Whiteside, Jo Daviess and Stephenson. QCREDA is an economic development finance tool that can help to lower the cost of financing for businesses, not-for-profits, senior housing and public projects in the region. Depending upon the project, QCREDA can issue industrial revenue bonds for manufacturing firms, senior housing bond for developers; taxable revenue bonds; local government bonds; non-profit bonds and environmental bonds.

The financial instruments that an authority such as QCREDA chooses to use is largely limited only by its enabling statute and the policies established by its board and does not take away any authority of a participating county or municipality to issue bonds on their own. QCREDA simply provides another financing tool to help communities in the region.

[www.qcreda.com](http://www.qcreda.com)

## **Section 7.4 Tourism**

This section contains an overview of the tourism industry in Jo Daviess County. Galena Country Tourism (GCT) is the official destination marketing and management organization for the County. It serves as the chief architect of the destination's brand identity and strives for a thriving and sustainable year-round destination.

## **A. Structure**

Galena Country Tourism is primarily funded by a 5% lodging tax paid by overnight guests to lodgings in the County (guests also pay 6% to the state, making the total tax 11%). Jo Daviess County and the City of Galena administer collection of the local tax; each retains an 8% fee for administration. GCT is governed by a 9-member Board of Directors advising on the use of Hotel-Motel tax funds, which by state law may only be spent to promote tourism to the destination.

## **B. Programming**

GCT uses digital and other media including a robust website, social engagements, and a strong online presence. It also provides content-rich publications, a visitor center, strategic event support, group tours, media communications, familiarization tours, data management and industry advocacy. See a comprehensive visitor guide at [www.visitgalena.org](http://www.visitgalena.org).

## **C. Destination Objectives**

A 2030 Tourism Master Plan for GCT identified these four objectives aligned around elevating the long-term viability of the local economy, maintaining the community's authentic character, protecting the environment, and improving the overall destination experience for both visitors and residents:

1. Maximizing the value of tourism to the region – economically, socially, and environmentally.
2. Delivering a balanced year-round visitor economy.
3. Delivering exceptional and original experiences for our visitors and residents.
4. Enhancing the region's reputation as a place to live, work, and visit.

## **D. Destination Strategic Plan**

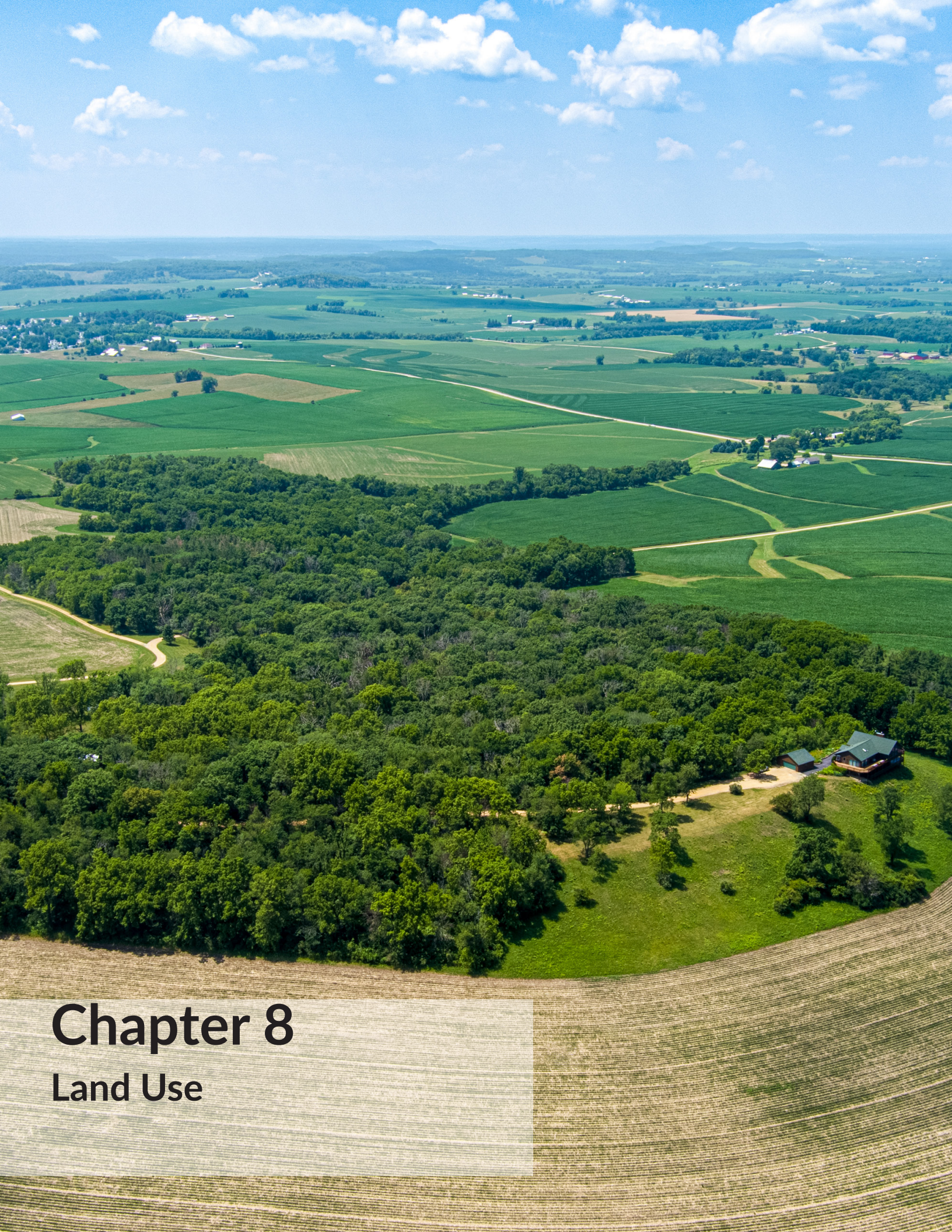
Also in the 2030 Tourism Master Plan are these four high-level goals which are interdependent and designed to collectively optimize the year-round tourism economy and enhance the local community character:

1. Enhance and diversify the experience.
2. Address and mitigate visitor pressures.
3. Improve livability and community wellbeing.
4. Foster stakeholder alignment and collaboration.

## **E. Impact Measurements**

With 79% of the City of Galena on the national historic registry, it is recognized as one of the best preserved 19th-century towns in America. Its fortuitous location in the County allows visitors traveling to Galena to pass through other smaller yet interesting towns creating a 'string-of-pearls' effect providing the potential for economic impact throughout the county.

The state provides an annual report for all 102 Illinois counties created by Tourism Economics, a global tourism research firm. The 2022 report shows Galena/Jo Daviess County tourism contributed \$19.5 million in local tax revenue while directly supporting 2,851 jobs in the tourism and hospitality industry. Every \$1 invested by GCT in marketing resulted in \$13.50 of visitor spending in Jo Daviess County (July 2023-February 2024).



# Chapter 8

## Land Use

The purpose of this plan's land use chapter is to compile an inventory of existing land-use information, and establish the goals, objectives and policies which will be used to guide public and private actions concerning future land use and development. These goals, objectives and policies express ideas that are consistent with the desired character of the community and the other chapters of the Comprehensive Plan.

## Section 8.1 Existing Land Use Within Jo Daviess County

An accurate depiction of Jo Daviess County's existing land use pattern is the first step in planning for a desired future land use pattern. It is important to recognize that existing land use is not always the same as the current zoning of a property.

### A. Existing Land Use Map Categories

Existing Land Use in Jo Daviess County is categorized as follows:

**Agriculture & Rural Lands:** Land used primarily for farming, farmsteads, nurseries, and farm support activities, and limited single-family residential uses, generally with densities at or below 1 dwelling unit per 40 acres. This category also includes grasslands, timber, shrub land, and water (except the Mississippi River and adjacent federally-owned waters).

**Residential:** Groupings of predominantly single-family residential development, including vacant residential subdivision lots, generally with densities at or below 1 dwelling unit per 10 acres. Typically, residential land uses will be zoned residential and may be platted or subdivided.

**Commercial:** Land used for commercial trade purposes such as wholesale and general retail. Uses include such items as building materials, hardware, food stores, equipment stores, truck stops, auto sales, gas stations, eating and drinking establishments, etc. Also includes land used for commercial services such as finance, insurance, real estate, repair, motels, medical, professional (i.e. legal, accounting) and private (i.e. daycare, laundry) type services, golf courses, public-use aircraft landing fields and commercial campgrounds.

**Industrial:** Land occupied for industrial purposes, including light and heavy industry and the production and/or manufacturing of durable and non-durable goods. Also includes land occupied by transportation-related uses (such as warehousing/distribution), utilities and extractive uses (quarries and sand/gravel pits).

**Public/Governmental:** Land occupied for public or governmental use, such as schools and municipal, township, county or state buildings and/or land. Also includes land occupied by private utility companies that provide sanitary sewer and/or water service.

**Private Camp/Recreation Area:** Privately-owned camps such as Canyon Camp (owned and operated by the Boy Scouts of America, Blackhawk Area Council) that provide recreational/educational programs, camping, retreats and other activities for youth and adults. Also includes the Jo Daviess County Fairgrounds in Warren.

**Church/Cemetery:** Land occupied by churches and cemeteries.

**Public Open Space/Public Parks/Public Preservation Lands:** Includes all publicly-owned land that is permanently preserved as open space, and passive or active recreation. This land use category includes all federally-owned land within and adjacent to the Mississippi River.

**Private Conservation Land:** Land owned by private conservation organizations such as The Natural Land Institute, Jo Daviess Conservation Foundation, and Prairie Enthusiasts. This land use category also includes private open space owned by Apple Canyon Lake Property Owner's Association and Galena Territory Association.

**Incorporated:** Incorporated cities and villages within the County.

**Other:** Land unaccounted for in other land use categories (publicly-owned and dedicated road rights-of-ways and railroad rights-of-ways).

## B. Existing Land Use Pattern

Jo Daviess County's existing land use pattern is primarily rural, consisting of: farmland related uses including farmsteads and farm buildings; pasture and grazing land; timber lands; grasslands; and, other rural open space land uses. The County's population and most intensive development is concentrated in municipalities and two planned residential developments (Galena Territory and Apple Canyon Lake). The rural population is in residential developments and scattered residential parcels. Isolated commercial and industrial uses are found throughout the County, as well. The County's municipalities contain the most intensive land uses in the County - the municipalities cumulatively account for 2.5% of the land area of the County, but contain 49.1% of the population. Each local community's existing land use map, if available, should be referenced for a more detailed review of these land use patterns. Table 8.1 below provides an amount, type and intensity (or percentage) of the acreage within each existing land use category in Jo Daviess County as of 2012. These acreage totals do not include lands within the municipalities. Map 8.1 Existing Land Use, Jo Daviess County, IL found in Appendix I Maps graphically details existing land uses.

**Table 8.1**  
**Existing Land Use Within Jo Daviess County Ranked by Amount of Land Area**

Land Use	2023	
	Acres	% of County
Agriculture and Rural Lands	327,978.9	82.3
Public Open space/Public Parks/Public Preservation Lands	28,974.5	7.3
Residential	21,418.5	5.4
Incorporated Cities/Villages	7,844.4	2.0
Other	7,638.2	1.9
Private Consercation Land	168.4	0.1
Commercial	2,143.8	0.5
Industrial	752.5	0.2
Private Camps/Recreation Areas	533.2	0.1
Church/Cemetary	162.1	0.1
Public/Government	143.2	0.1
<b>Total Area of County</b>	<b>393,251.8</b>	<b>100.0</b>

Jo Daviess County, GIS 2023



## Section 8.2 Land Development and Market Trends

According to the Jo Daviess County Planning and Development Department, there were 654 zoning permits issued for new dwelling construction in unincorporated Jo Daviess County from 2006 through October of 2023, for an average of 32.8 dwelling starts per year over the past twenty years. The majority of dwelling starts were in Guilford Township (17.0% of total), Thompson Township (13.1% of total), Dunleith Township (12.2% of total) and East Galena Township (7.3% of total). These four townships accounted for 49.7% of the dwelling starts in unincorporated Jo Daviess County from 2006 through 2023. The County's two largest residential development, Galena Territory and Apple Canyon Lake, accounted for 29.2% of the dwelling starts in the County between 2006 and 2023 (17.9% and 11.3%, respectively).

Galena Territory saw an increase in population from 1,058 in 2010 to 1,500 in 2020 and Apple Canyon Lake saw an increase in population from 558 in 2010 to 574 in 2020. The total population of both resort communities constitutes 18% of population of unincorporated areas of the County.

**Figure 8.1 Township Dwelling Starts 2006 – Oct. 2023 Unincorporated Jo Daviess County, IL**

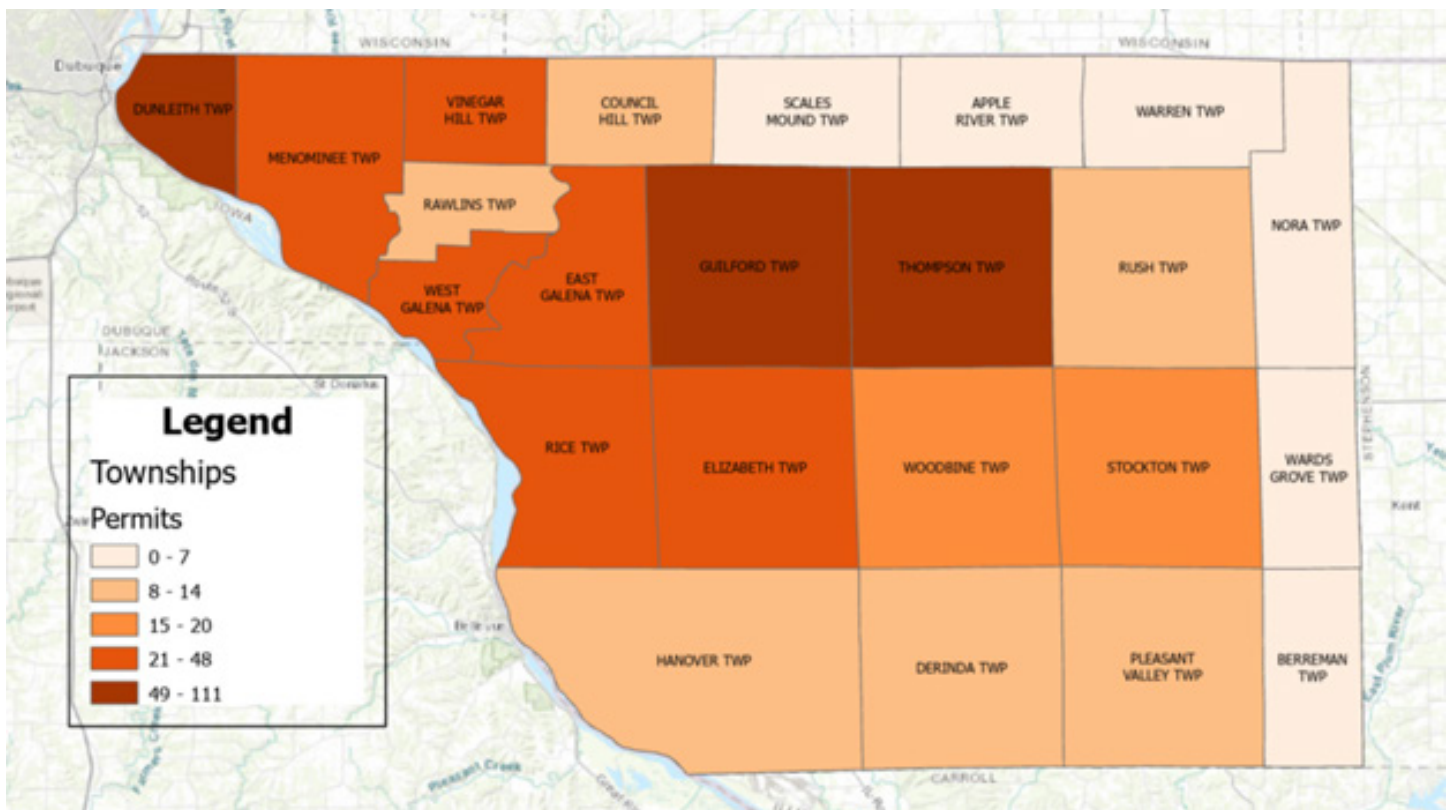


Table 8.2 below shows the comparison of equalized assessed valuations (EAV) by class of property from Assessment Year 2002 through Assessment Year 2022 in Jo Daviess County.

**Table 8.2**  
**Comparison of Equalized Assessed Valuations by Class of Property In Assessment Years 2002 Through 2022**  
**Jo Daviess County, Illinois**

	Residential	Farm	Commercial	Industrial	Total	% Change
2002	\$310,251,540	\$157,500,736	\$60,027,235	\$13,158,591	\$540,938,102	---
2003	\$334,488,310	\$160,952,332	\$61,923,464	\$13,114,992	\$570,479,098	5.5%
2004	\$360,170,863	\$172,934,288	\$65,611,890	\$12,574,290	\$611,291,331	7.2%
2005	\$387,434,611	\$182,749,692	\$68,145,805	\$12,522,134	\$650,852,242	6.5%
2006	\$427,739,920	\$202,374,955	\$71,614,123	\$12,712,400	\$714,441,398	9.8%
2007	\$485,281,205	\$214,255,290	\$76,256,317	\$12,871,898	\$788,664,710	10.4%
2008	\$526,629,554	\$232,019,987	\$92,549,194	\$13,182,025	\$864,380,760	9.6%
2009	\$539,686,915	\$237,141,222	\$93,484,333	\$13,173,468	\$883,485,938	2.2%
2010	\$510,154,234	\$239,146,698	\$93,853,343	\$12,893,018	\$856,047,293	-3.1%
2011	\$473,441,729	\$242,841,727	\$93,619,701	\$12,807,594	\$822,710,751	-3.9%
2012	\$403,328,216	\$219,263,299	\$80,191,678	\$13,816,705	\$724,614,974	-11.9%
2013	\$359,593,670	\$214,860,010	\$79,635,718	\$14,711,263	\$677,425,066	-6.5%
2014	\$350,220,432	\$218,142,540	\$79,480,930	\$15,391,992	\$673,221,302	-0.6%
2015	\$347,988,498	\$224,750,380	\$79,442,224	\$15,474,702	\$678,284,330	0.8%
2016	\$348,891,220	\$230,715,391	\$84,313,040	\$16,121,095	\$692,607,811	2.1%
2017	\$358,680,543	\$238,084,378	\$85,612,632	\$16,486,351	\$710,933,314	2.6%
2018	\$367,047,198	\$244,082,758	\$86,947,718	\$19,710,987	\$729,849,444	2.7%
2019	\$371,343,302	\$251,133,860	\$86,207,882	\$19,707,966	\$741,366,670	1.6%
2020	\$375,586,251	\$262,227,845	\$87,519,155	\$19,628,959	\$760,082,972	2.5%
2021	\$396,633,220	\$279,555,911	\$89,014,846	\$22,408,239	\$805,494,196	6.0%
2022	\$421,724,918	\$309,450,609	\$92,920,340	\$22,602,289	\$866,399,781	7.6%

Source: Jo Daviess County Supervisor of Assessments

The total County Equalized Assessed Value (EAV) increased every year from 2002 to 2009, but then decreased from 2009 to 2010 and from 2010 to 2011. The average annual increase in EAV from 2002 to 2011 was 4.9% per year. The average annual increase in EAV from 2012 to 2022 is 0.61% per year, much lower than the previous decade. The total County EAV increased 52.1% from 2002 to 2011 and only 19.6% from 2012 to 2022.

Residential EAVs, which account for 57.5% of the total County EAV in the 2011 assessment year and 48.7% in 2022, increased every year from 2002 to 2009; however, in response to the recessionary economy, residential EAVs decreased 5.5% from 2009-2010, and decreased an average of 6.9% from 2010-2015. Residential EAVs increased 35.9% from 2002 to 2022.

Farm EAVs, which account for 29.5% of the total County EAV in the 2011 assessment year and 35.7% in 2022, have increased every year from 2002 to 2022. Farm EAVs increased 96.5% from 2002 to 2022.

Commercial EAVs, which account for 11.4% of the total County EAV in the 2011 assessment year and 10.7% in 2022, have shown an upward trend from 2002 to 2009, but decreased slightly from 2010 to 2015 (2.5%). Commercial EAVs increased 54.8% from 2002 to 2022.

Industrial EAVs, which account for 1.6% of the total County EAV in the 2011 assessment year and 2.6% in 2022, decreased every year between 2002 and 2005, but increased from 2005 to 2008. Industrial EAVs have decreased every year from 2008 to 2011. From 2011 to 2018, Industrial EAVs steadily increased each year, averaging 6.5%. Assessment years 2019 and 2020 saw a minimal decrease (0.0% and 0.4% respectively), then assessment years 2021 and 2022 reinstated an upward trend (14.2% and 0.9% increase, respectively). Industrial EAVs decreased 71.8% from 2002 to 2022.

## Section 8.3 Land Use Conflicts

As growth occurs in Jo Daviess County and as urban areas expand, there will likely be increasing land use conflicts. Urban and rural residential, commercial and industrial land use development will require the conversion and possible fragmentation of more farmland, woodlots, and open fields in the County. Conflicts between non-farm residential development and surrounding farms and farm activities could become increasingly common in the rural parts of Jo Daviess County. Other potential rural land uses that could conflict with neighboring uses include large-scale farm operations, mining/quarrying operations, and rural manufacturing plants. This Plan seeks to avoid potential future land use conflicts through thoughtful and comprehensive land use planning at the local and county level. Municipal comprehensive plans should document specific localized existing and potential land use conflicts.

## Section 8.4 Projected Land Demand

### A. Residential Land Demand

Projected residential land use demands are typically based on year-round population, household size, housing unit forecasts, and an assumption of a typical size of a future residential home site. Jo Daviess County has experienced a gradually increasing population, and is projected to moderately increase in population into the future (see Chapter 1, Issues and Opportunities for Planning). A reasonable amount of land should be designated for future residential development based on stated planning policies, goals and objectives. Residential land demand and, in particular, consumption, relate largely to planning policy implementation and where/how residential development occurs. Rural residential development where few services are available demands a much greater land area than residential development where urban services and infrastructure are available.

### B. Commercial and Industrial Land Demand

Jo Daviess County's dominant land use is agriculture, although there are numerous commercial and industrial uses located throughout the County. However, commercial and industrial land uses are predominately, and will likely continue to be, located within the County's municipalities. The County should work cooperatively with the municipalities to plan for and encourage new commercial and industrial uses where identified as appropriate, and plan for and prepare infrastructure to accommodate potential commercial and industrial uses.

## Section 8.5 Land Use Plan

Map 8.2 Jo Daviess County Land Use Plan found in Appendix I Maps identifies how development should proceed in the future to meet the County's goal of encouraging a pattern of growth and development that will provide a quality living environment. Future development and redevelopment should be encouraged in an orderly pattern adjacent to and compatible with existing development. Where differences exist, the long range Land Use Plan recommendations are not considered to be inconsistent or in conflict with the County's existing zoning map because they will be implemented over a period of many years as development proposals and land use changes are presented to the County for consideration.

The Jo Daviess County Land Use Plan map is intended to incorporate the land use recommendations of the various municipalities that have adopted comprehensive plans. For land areas located within the 1.5 mile extraterritorial planning jurisdiction of any municipality, the controlling municipality's comprehensive plan should be consulted for specific planning guidance. It is the intent of this Comprehensive Plan to incorporate by reference comprehensive plans that have been adopted by municipalities within Jo Daviess County or any municipality located outside of Jo Daviess County that has extended its extraterritorial jurisdiction into Jo Daviess County.

## **Section 8.6 Relationship Between Planned Land Use Designations and Future Zoning**

The Land Use Plan map is not a zoning map. However, the planned land use designations shown on the Land Use Plan generally advise appropriate future zoning and land use decisions. In many cases, existing zoning districts reflect desired future land uses as indicated by the planned land use designations mapped over those areas. In some cases, zoning map or text changes may be required to meet some of these planned land use recommendations.

The identification of desired future land use types through the Land Use Plan does not imply that any area is immediately appropriate for re-zoning. Given service demands and a desire for controlled growth, careful consideration to the timing of zoning decisions is essential. In some places, it may be desirable to re-zone land to reflect the planned land use designations as soon as possible. In other cases, it may be appropriate to wait to re-zone the area until an actual development proposal is brought forward by the landowner.

## **Section 8.7 Land Use Issues and Needs**

Jo Daviess County is rich in resources that contribute to its economic vitality and the quality of life of its residents. The natural resources, historical features and the aesthetic qualities of the area are valued by the county's citizens. Protecting these resources is crucial for the public good and the future well-being of the county.

**Land Use Issues:** The county's tourism economy is strong. The agricultural economy, while still strong here, can expect increasing pressure from encroachment of development into agricultural areas, rising land values and competition from large-scale operations and foreign markets. These pressures on agriculture are seen not only here, but nationwide. At the same time, the scenic beauty and pastoral appearance of the county have been identified among the most significant attributes and are the very underpinnings of the tourism economy.

Random rural development threatens agriculture, scenic beauty and other resources. Scattered rural residential development, in particular, has been increasing over the past twenty years, and has in some cases compromised the ability of agriculture to flourish. Residential uses are not entirely compatible with agricultural practices.

A continued increase in scattered rural residential development will ultimately result in the same problems generally associated with urban sprawl -- inefficient use of large areas of land to house a small number of residents, increased traffic, and excessive energy usage as residents drive longer distances to acquire goods and services. Infrastructure and services required to support rural development (e.g. country road upgrades to accommodate increased traffic; longer routes for school buses, emergency services, fire and police protection) are more costly per housing unit than the same services provided to concentrated development in communities and planned developments. Scattered rural development is not a cost-effective form of development for the county.

**The Need:** Residents of the county strongly support creation and retention of good paying jobs. They want diversification of the economy through growth of clean industry and technology-based businesses. They want development which will allow young people to find meaningful career opportunities here. Residents support rural ambiance and preservation of productive farmland. They value tourism. Careful, planned use of the land allows for growth and development while preserving the natural beauty and rural character of the county.

By managing development and directing it to areas best able to support it, county revenues can be used more efficiently. The agricultural economy, rural character and scenic beauty of the county, valued by county residents, can be protected to a greater degree. The principles on which this plan is based are not anti-growth, but rather "smart growth."

## Section 8.8 Agriculture and Agricultural Preservation Areas

Agriculture and tourism are the two largest sectors of the county's economy. It is fortunate that both rely on the land itself for their success. The land is the greatest asset of the farmer. The rural landscape, pastoral beauty, and scenic countryside are what motivate the tourist to visit. Both industries rely on the preservation and protection of farmland for a successful future.

The scenic beauty of the area is also alluring to people who want to live in a rural setting in order to enjoy the ambiance, serenity, and privacy of country living. The demand for rural residential development is steadily increasing. Also increasing is the potential for conflict between rural residential growth and agriculture. The benefits of rural residential growth are discussed in Section 8.11 Residential Uses of this Chapter. Here the focus is on the policies and approaches which will be used to preserve the highly valued agricultural land.

- A.** Presently, the Jo Daviess County Planning Commission is using the Land Evaluation and Site Assessment (LESA) system to evaluate development proposals for impacts on productive farmland. This system also rates other factors including: distance from urban services; percent of land adjacent to and within one (1) mile of the requested site's boundaries that are used agriculturally; size of parent parcel; average slope of site; financial commitment to agricultural on adjacent sites; fire district rating class; transportation; central water and sewer; and consistency with County and municipal plans. This LESA criteria has been tested for a number of years and has proven a workable and valuable tool in evaluating projects. The LESA system was approved by the Illinois Department of Agriculture, Bureau of Land & Water Resources and the USDA Natural Resources Conservation Service and was adopted July 11, 2006 by the Jo Daviess County Board.
- B.** The Land Use Plan (Appendix I Maps, Map 8.2 Land Use Plan) delineates three types of agricultural areas. Areas with a high concentration of Prime Farmland have been designated as "Agriculture Preservation Area 1," concentrated areas of Important Farmland have been designated "Agriculture Preservation Area 2," and the remainder of the county is simply designated as "Agricultural." During ordinance review, these areas could be designated AP1, AP2 and AG respectively.

It should be noted that the boundaries of the three agricultural areas shown on the Land Use Plan are general rather than rigid. Site specific information from the Natural Resources Conservation Service (NRCS) and other sources should be considered in the evaluation of every specific application.

The County strongly supports a diverse agricultural environment in which sustainable agriculture can survive. This includes not only crop production, but also dairy, livestock and timber. It is desirable to preserve the most productive prime farmland to the fullest extent possible, while preserving large areas of important and other farmland as much as possible without being unduly restrictive.

- C.** It is also recommended that the County provide a similar mechanism for allowing appropriate rural residential development as described in Section 8.11 Residential Uses of this Chapter. The Land Evaluation and Site Assessment (LESA) system should be adjusted to favor cluster and/or conservation development over solitary single housing units. This will help to keep large tracts of productive agricultural land intact, while allowing residential uses on the less productive land.
- D.** The County will allow, through a special use permit, compatible commercial and industrial uses which are supplemental to the primary agricultural use.
- E.** The County will require development to provide adequate buffer between adjacent uses.

Periodically, the County should evaluate its progress in preserving productive agricultural land. The table provided in the V. Baseline Data Summary, Section E. "Existing Land Use" of the Comprehensive Plan adopted in 2009 (and amended in 2012), and Chapter 8 Land Use of this Comprehensive Plan document, may be used for comparison.

## Section 8.9 Communities and Their Contiguous Growth Areas

The county's small friendly communities are highly valued by county residents. Therefore, throughout the Comprehensive Plan process, great care was taken to promote the economic viability and social vitality of the communities. The County recognizes the importance of cooperating with municipalities in guiding growth and development to those areas within or near communities where services are most readily available and where growth is desired. Toward this end, the Comprehensive Plan designates "Contiguous Growth Areas." These areas are illustrated on the Land Use Plan (Appendix I Maps, Map 8.2 Land Use Plan) and are referenced in Chapter 9 Goals and Objectives.

A "Contiguous Growth Area", or CGA, is defined as that area around a municipality in which that community anticipates and desires growth to occur in the foreseeable future. These areas were identified with input from the communities and take into consideration a number of factors including, but not limited to: 1) the community's official plan(s); 2) the feasibility of providing the area with municipal water, sewer and other infrastructure; and 3) the community's expressed desires with regard to the amount and location of growth. In some cases (e.g. East Dubuque) the CGA is large, while in others it is small, or identical to the existing corporate limits (e.g. Menominee). Boundaries of the CGAs shown on the Land Use Plan (Appendix I Maps, Map 8.2 Land Use Plan) are approximate. They will be more clearly defined as the County progresses in the joint planning activities with municipalities described below. While these plans for CGA growth will provide a useful guide for sound growth management, each application for zoning change still must be reviewed for its specific impact on the site, area, community and county as a whole. By defining CGAs, the County has expressed its intent to strongly encourage and guide residential, commercial and industrial development to those areas most ready to receive and serve it. The CGA approach encourages efficient use of resources and reduces sprawl.

As stated in Chapter 9 Goals and Objectives, the County will cooperate with the respective community in its land use decisions for projects within a CGA whenever possible. Effective implementation of this approach will require ongoing joint planning between the County and the municipality. It is expected that, over time, the County will negotiate and enter into a "joint planning agreement" with each municipality ensuring that not only the community's needs and desires are met, but also the planning standards the County deems important for protection of the health, safety and welfare of county residents are upheld.

Any substantial new development near a community should annex to the municipality. Where there is no land contiguity or immediate annexation is not possible, an annexation agreement between the municipality and the developer would be appropriate to allow the municipality control over the new growth.

The Comprehensive Plan repeatedly stresses the importance of preserving prime and important or productive farmland as well as the pastoral appearance of the county. At the same time, the Plan recognizes the critical need to stimulate economic development. The County acknowledges that within the defined CGAs some farmland may be developed for the overall good of the people of the community and the county as a whole. The particular areas, now used for agriculture, but most likely to be impacted by growth contiguous to the municipality, should be scrutinized carefully as the joint planning agreements are developed and implemented.

### **A. Apple Canyon Lake and the Galena Territory:**

In the application of the Contiguous Growth Area policy, three communities are exceptional. Two, Apple Canyon Lake and the Galena Territory, are planned residential communities. Each offers a lake, golf, and other amenities, and includes some commercial uses. Both are legally recognized as subdivisions. Each is represented by an owner's association and has its own plan and design guidelines. Parts of each subdivision are served by central water and sewer. Some areas are served by septic systems and wells. Roads are maintained by the townships. Socially, both function as communities. Since neither is incorporated, neither community has a designated CGA. However, during the planning process, both were consulted with regard to their preferences for future land use in adjacent areas. Both cited the preservation of the rural character as a priority. It is recommended that both these communities be included in County planning efforts. (See Chapter 9 Goals and Objectives).

## **B. Woodbine:**

The third exceptional community, Woodbine, presents several challenging issues. Because of its location on the county's major highway, U.S. Highway 20, it merits special consideration. Woodbine was built long before county zoning or subdivision ordinances were enacted. It consists mostly of single-family residences, laid out in a traditional community pattern. It has numerous commercial uses, several home-based businesses, a church, the township hall and garage, and several historically significant structures including the railroad depot. U.S. Highway 20 serves as its "main street." Socially, Woodbine functions as a community. Yet, Woodbine is unincorporated. In fact, it is prevented from incorporating because it does not meet the minimum size threshold required under the State statutes. Legally, it is represented by only its township government and the County.

Woodbine has expressed concern that, as a result of its status and the Plan policy of directing commercial growth to the contiguous growth areas of municipalities, it will be prohibited from pursuing the economic and residential growth it desires. Zoning remains a concern, as under the existing ordinance, the commercial uses in Woodbine are legal "grandfathered" uses. They may continue to operate, but expansion is currently limited. Under policies stated in the Plan, new commercial growth might not be easily accomplished. The County is eager to resolve these problems. It will actively work with the community of Woodbine toward that end. One viable option is to develop a joint land use plan between the Woodbine Township and the County.

## **C. Other Unincorporated Communities:**

In Jo Daviess County there are numerous other small unincorporated communities which may experience challenges similar to those of Woodbine. Among them are Council Hill, Council Hill Station, and Schapville. The approach used and the experience gained in working with Woodbine may serve as an example for cooperatively resolving matters with these other communities. (See Chapter 9 Goals and Objectives).

## **Section 8.10 Commercial and Industrial Growth**

Jo Daviess County is strongly supportive of commercial and industrial growth. It recognizes existing businesses for the contribution they have made to the local economy and the tax base over the years. Existing business and industry have the greatest likelihood of new job creation. The County is eager to support existing business and industry in their efforts to expand. The County will also work to retain businesses and industries as well as the jobs they provide.

The County also supports the tourism industry. Annually, tourism provides an enormous contribution to the county in a wide variety of ways. It not only stimulates the restaurant and lodging businesses, but also supports many ancillary businesses from professional firms to the construction trades. Not all jobs provided by the tourism industry are low paying service sector jobs.

Nonetheless, the County recognizes the need to stimulate and diversify the economy. It places a high value on new, well-planned commercial and industrial growth. There is strong support for new manufacturing, high-tech and professional growth. There is a great demand for new jobs, in particular, jobs which provide wages sufficient to sustain families. Many residents of the county must rely on several part-time jobs in order to provide adequate household income. For these reasons, the County will encourage commercial and industrial growth.

In its land use policies, the County will encourage new commercial and industrial growth in the areas which have the best capacity for supporting such growth. It must balance the desire for new commercial uses with the equally important needs of health, safety and welfare and those of preserving productive farmland and the scenic beauty of the county. The two most significant economic sectors of the county, agriculture and tourism, both rely on preserving the rural character of the county. Therefore, the County will:

- A.** Encourage new commercial and industrial growth to locate within the Contiguous Growth Areas (CGA) of communities, where services are available or easily provided. This is generally the most logical location from the perspective of the business as well.

- B.** Encourage sound planning and multi-use redevelopment of the Savanna Army Depot. The County will cooperate with the Local Redevelopment Authority (LRA) in review and approval of redevelopment plans and proposals. This will be done through its representatives on the LRA and through the County Board as appropriate in accordance with established procedures. When title to parcels of land within the Depot area is to be transferred from federal ownership to non-federal owners, the County will expedite zoning, subdivision, or other reviews necessary for the new proposed uses.
- C.** Discourage commercial development in rural areas at a distance from communities or near rural intersections, i.e. those intersections outside of Contiguous Growth Areas. To the extent that commercial growth is too far from a community to be within the already ample CGA's, such growth could detract from the vitality of the community. When growth is widely distributed in rural areas, essential services (e.g. fire, police, ambulance, and school transportation) are more expensive to provide, due to distances of travel.  
  
It should be noted that a community's Contiguous Growth Area is defined with input from that community and can be as large as needed to include such growth areas the community deems appropriate for its available services within the foreseeable future. For this reason, it is to the benefit of the community to work closely with the County to develop agreements for its CGA, particularly with regard to any intersections where it desires growth to occur and can meet the service needs.
- D.** Strongly support expansion of existing and new industrial growth. In its planning, the County has recognized the fact that the needs of prospective industries cannot always be anticipated. While most are expected to seek locations near communities, some may prefer other locations. The County will carefully evaluate any new industrial proposal to balance the impacts of the proposed development and the health, safety and public welfare needs, with the benefits of economic development and much needed job creation.
- E.** Establish regular cooperative planning sessions with municipalities to update Contiguous Growth Area maps and effectively coordinate efforts.

## Section 8.11 Residential Uses

In Jo Daviess County the demand for rural residential development has increased greatly over the past few decades. All factors indicate that this demand will remain strong. Much of the rural residential development is concentrated in two large planned rural residential communities, Apple Canyon Lake and the Galena Territory. However, in recent years many smaller rural subdivisions have been built, and there is constant demand for new single family rural residential growth. Jo Daviess County is beautiful, and many people want to live in the rural areas to enjoy the beauty, views, serenity, and privacy of country living.

### A. Benefits

The County has benefitted in many ways from rural residential growth. Economic benefits include the growth of the construction industry, job creation in the trade/design sector, and an increase in the tax base.

Social benefits accrue simply from the infusion of more people. The population is increasingly diversified as people with different experiences and life views move into the county. Many bring with them both skills and contacts with others who may bring economic growth to the area. Many also have substantial disposable income which helps to support local business and increases the economic viability of the county's small towns.

There are monetary benefits to farmers who are able to sell land for residential development at higher prices than it would bring as farmland. Farmers can also benefit as some who buy land use only a portion for their home and lease the remainder for agricultural use.

Along with rural residential development comes the demand for support services. Farmers can benefit from providing services, such as tilling and mowing, for a fee. Businesses which provide home maintenance services also benefit. The increased population, even if some are only part-time residents, helps to support local restaurants and retail businesses.



## B. Problems

As with most things, there is a downside to increased rural residential growth. Loss of farmland for any future agricultural use is perhaps the major concern. Related to this is the increase in the value of farmland. While this is a benefit to the farmer who sells land, it can be a problem for farmers who wish to remain in farming as the purchase of additional acreage is more difficult.

The quality of open land is not always improved by rural residential growth. When large parcels are purchased with only small portions used for the home, the remaining land often grows over with weeds and brush. Land previously open to hunting is often closed, resulting in an exploding deer herd in the county. These deer feed on agricultural crops.

Nuisance conflicts with agricultural uses are often noted. Non-farmers complain of odors, dust, and slow-moving farm equipment on the roads. Farmers cannot spray for weed control or spread manure near residential uses, and they complain of fast-moving cars creating hazards on roads. Farmers also note problems with motor bikes, snowmobilers, trespassers, and loose pets.

Rural residential growth increases the cost of providing services. Fire, ambulance, police, and school buses must travel longer distances. Services needed to support home life require travel in both directions -- e.g. repairmen to the house, and residents to the communities for school and events. These travel distances contribute to dependence on the automobile and increased use of fossil fuels. Power, phone, and gas services must extend farther with greater capacity. All these factors present challenges for efficient use of energy and sustainability of community life.

Rural residential growth has potential negative impacts on the environment and public health and safety. It increases the proliferation of septic systems, which is of particular concern in some areas of the county where soil conditions or depth to rock is not optimal for septic use. Rural homes also require water, which is generally provided by private wells, requiring perforations into local aquifers.

These factors increase the chances of groundwater contamination. Houses built in rows along rural roads present safety problems at access points, particularly when curves and hills offer little sight distance.

Finally, rural residential growth can have negative impacts on the aesthetics of the area. Preserving the scenic beauty and the rural character of the county are very important to County residents. Residential growth which is not sited with sensitivity can obscure views from scenic roadways and destroy natural features.

## C. Striking the Balance Through Sound Planning

In order to enjoy the benefits of rural residential development while minimizing the negative impacts, the County will implement the following policies and approaches:

1. When possible, guide new residential growth to the Contiguous Growth Areas (CGAs) around municipalities where services exist or can be provided.
2. Encourage clustered, planned residential development rather than single isolated housing units.
  - A. Encourage early consultation. Encourage applicants to consult with the County Planning and Development Administrator at the "concept sketch plan" and "preliminary plan" stages of development planning. The County may wish to develop a checklist or amend the Zoning and Subdivision Ordinance procedures to ensure early plan review.
  - B. Encourage integrated planning. Often requests for subdivision of a parcel from a larger agricultural plot are made piece-meal, lot-by-lot, over a period of years. Encourage integrated planning of all parcels for any proposed subdivision, even if actual development of the lots will occur in phases over several years. The County should consider requiring a plan for all acreage held under single ownership or control, at the time the first request for subdivision is made.

**C.** The County should also explore the feasibility of setting time limits. One approach might be to amend the Subdivision Ordinance to limit the frequency of subdivision requests from a single parcel. For example, a request for a subdivision of land would not be considered within a certain period (e.g. five years) from the date of an earlier subdivision from that parcel. This would encourage landowners to plan subdivisions as an integrated development. The downside of this approach is that it could inadvertently accelerate the subdivision of land, as owners present plans that are more ambitious than they would have otherwise presented. For this reason, further study of time limits is needed.

**D.** Follow tested methods for "cluster development" or "conservation development" design in rural subdivisions. These methods allow siting at higher-than-normal densities provided that sensitive areas are protected and efficient provision of services are incorporated into the design. They help to keep larger tracts of productive farmland intact while siting homes on the less productive land. They provide a limited number of access points, reducing traffic hazards. Since these methods group homes in a more compact layout, they have less visual impact on scenic views from roadways. Conservation easements can be incorporated into such developments, offering tax benefits to developers. For all these reasons, "cluster" or "conservation" development methods are preferable to single homes aligned along roadways in a strip development pattern. The four-step method of "conservation development" described in "Growing Greener" published by the Natural Lands Trust, Inc. and other works by Randall G. Arendt offer good examples of desirable rural residential subdivision design. This method uses a sliding scale of density to lot size to preserve desirable portions of a site. Its four-step process uses: a) a yield plan, b) the set-aside of primary conservation areas, c) the set-aside of secondary conservation areas, and d) the final plan. Orientation and training of County staff in this method of planning is recommended.

**E.** Provide orientation and technical assistance about preferred development practices to land surveyors, engineers, realtors, builders, and others who work with those seeking to develop homes in the rural areas.

3. Adjust the Land Evaluation and Site Assessment (LESA) scale to add a higher number of points for solitary or isolated residential development proposals, a lower number of points for clustered development, and a still lower number of points for a clustered development consistent with the "conservation development" method described above.
4. Require development to provide an adequate buffer space between residential uses and different adjacent uses, including agricultural use.
5. While not prohibiting people from building on high elevations with beautiful views, require that any such development be as unobtrusive as possible, with the highest point of the roofline below the predominant elevation of the site, and the site properly screened with natural vegetation. Avoid glaring and excessive lighting.
6. Adopt a voluntary County Historic Preservation Ordinance. Saving historic buildings helps to preserve the rural, pastoral ambiance of the county. There are also substantial financial benefits to the residents of the county. A Historic Preservation Ordinance will formalize the methods for designating historic properties, allowing owners to take advantage of tax incentives not presently available to them. These include the property tax freeze program for owner-occupants of residential property, and a federal income tax credit for commercial properties. From the land use perspective, establishing a means of preserving historic properties could help those who presently own old farmstead buildings which serve no immediate purpose and are likely to be demolished. This program could make the difference between saving these buildings or losing them forever. The Historic Preservation program could make it economically feasible to restore these structures. For the rural landowner, a building that is a liability now could become an asset, available for sale or rent. Moreover, restoring old homes and farmsteads supports the policy of encouraging affordable housing. Older deteriorated homes with little marketability even as a "handyman's special" may become financially feasible projects once the tax incentives are factored in. These structures may provide some of the very needed affordable housing.

7. Encourage the preservation of historic or potentially historic farmsteads and abandoned farm buildings through Zoning and Subdivision Ordinances. The County will be flexible in allowing subdivisions of parcels with historic or potentially historic structures which could be restored or adapted for reuse. Such subdivisions can be beneficial to farmers who own such property. Buildings which are presently considered liabilities for the farmer, could be sold to provide needed cash to assist in supporting the agricultural operation. Barns not presently in use should be considered for adaptive reuse. Saving old barns helps preserve the heritage and contributes to the pastoral ambiance of the area. Preservation of historical buildings contributes more to the economy than demolition does!

## **Section 8.12 Environmental Corridors, Parks & Recreation Areas, Conservation Areas and Elevated Areas**

### **A. Environmental Corridors**

The Land Use Plan (Appendix I Maps, Map 8.2 Land Use Plan) identifies certain areas as environmental corridors. These areas, generally following the streambeds, are sensitive and should be preserved. The boundaries of these areas are approximate and may vary with the topography and conditions. The environmental corridors are sensitive areas for a number of reasons:

1. The areas along streams include floodplains which are not suitable for structures.
2. Lowland areas were popular with early populations for use as encampments and are likely to contain archeological sites.
3. Development or intense use along streambanks contributes to degradation of surface water quality. Intense grazing or cattle wading in streams increases erosion and sediment load of streams. Rainfall run-off from row cropping adjacent to streams increases pollution from agricultural chemicals. Vehicular uses (roads and parking areas) near streams contribute to pollution from oil and salt run-off. These impacts can be greatly reduced by vegetative buffer areas along streams.
4. Vegetative areas along streams provide good wildlife habitat for mammals, songbirds, and waterfowl.
5. Maintaining environmental corridors along streams preserves areas which may be used for public access to rivers for recreational uses such as boating, canoeing, and fishing. These areas may contribute to the tourism economy.

In general land use planning practice, environmental corridors are not usually confined to areas along streams. Typically, they include areas with other features such as parks, recreational areas, trails, historic sites, and conservation areas. In Jo Daviess County, environmental corridors will be more specifically delineated over time as part of the Comprehensive Plan implementation and the development and zoning process. Streams and rivers will be classified according to their sensitivity (as described above 1-5), and their significance in contributing to the overall goals of this Plan. In the long range, the ideal development pattern for the county would include a network of environmental corridors connecting natural, historic and recreational areas with subdivisions and communities.

Every attempt should be made to preserve the sensitive environmental corridors from inappropriate development. Once these areas are developed their natural qualities and potential benefits to the citizens of the county will be lost. In order to ensure the preservation of the environmental corridors, the County will adopt several policies. Construction is to be set back from these corridors. Set-back standards will be developed in conjunction with the classification of streams and the review of the Zoning and Subdivision Ordinances. These setbacks may vary depending on topography, stream sensitivity, types of adjacent uses, and proximity to other natural or conservation areas. The maintenance of appropriate vegetation within the environmental corridors may also be required as part of the project approval process.

In most cases, the property delineated as “environmental corridor” will remain in private ownership. Private property owners may provide conservation easements for tax benefits while at the same time preserving habitat in these areas. (See Paragraph C. Conservation Areas, below). A subdivision could use the environmental corridor area as part of its requirement for minimum open space. These areas may be privately held by separate lot owners, or commonly owned by an owner’s association and available for use by all residents of the subdivision. The Galena Territory is a good example of a community subdivision connected not only by roadways, but also by a system of trails (both pedestrian and equestrian) and greenways, some of which are golf courses of considerable commercial value. In some cases, public access may be appropriate. (See also Paragraph B. Parks and Recreation Areas and Paragraph C. Conservation Areas below). The County will be flexible in applying the environmental corridor policies when considering a specific case in order to allow the most appropriate methods for preserving these areas.

## **B. Parks and Recreation Areas**

Jo Daviess County has no park district or forest preserve district serving the unincorporated areas. The State of Illinois owns and operates Apple River Canyon State Park. The State also owns and maintains a scenic overlook located just off U.S. Highway 20 between Elizabeth and The Galena Territory. The U.S. Army Corps of Engineers owns and operates a camping and picnic area at Blanding Landing. Several private sector recreational opportunities are offered throughout the county’s rural areas, e.g. the Chestnut Mountain ski area, a marina at Ferry Landing and several private campgrounds. Most of the county’s parks are located in and operated by the municipalities.

The County does not have an Open Space and Recreation Plan. Chapter 9 Goals and Objectives lists development of such a county-wide plan as an activity which should be undertaken. This plan should examine the potential (both the short- and long-term) for integrated use and development of parks, recreational and natural areas, historic sites, tourist amenities, trails, environmental corridors, with communities and tourist demand. It should identify areas appropriate for public access. It should consider information obtained about significant natural resources. The planning process should involve input from communities, local, state, and regional groups. The Illinois Department of Natural Resources should be contacted for technical assistance. The development of such a Plan does not necessarily imply that County government would undertake purchase of land for park use. In many cases, the county’s position may be one of supporting efforts of communities or other groups in providing or improving their recreational amenities, many of which would be utilized by both residents of the county and tourists. The county’s role may include assisting in the promotion and marketing of recreational opportunities throughout the county through Great Galena Marketing Initiative. The completion of a county-wide Open Space and Recreation Plan will benefit other units of local government or not-for-profit organizations in securing grant funding for projects initiated by those entities.

The scenic beauty of Jo Daviess County, the popularity of the area for hunting and fishing, the Mississippi River with its allure for boating and fishing, and the vibrant tourism industry make the County a prime area for expansion of recreational uses. The County will evaluate development proposals on a case-by-case basis to balance the economic benefits of recreational uses with the need to preserve sensitive areas and productive agricultural lands, and to safeguard public health, safety, and general welfare. The County is eager to cooperate with communities, state, regional and local groups in planning recreational projects consistent with the Goals of the Comprehensive Plan.

## C. Conservation Areas

Jo Daviess County has no county-wide conservation district or forest preserve district. Several areas within the county have been set aside for conservation purposes. The U.S. Fish and Wildlife Service controls substantial tracts of land along the Mississippi River, and will gain ownership of considerable acreage in the northern part of the Savanna Army Depot when the Army relinquishes ownership. Many areas within the county have been acquired for preservation by the Illinois Department of Natural Resources, the Jo Daviess Conservation Foundation (JDCF), a private not-for-profit organization, the Prairie Enthusiasts, and The Nature Conservancy (see Jo Daviess County Greenways and Trails Plan, incorporated hereto by reference).

The concept of setting aside land for conservation purposes has been discussed in detail during the Comprehensive Planning process. Public input indicates strong support for the preservation of the scenic beauty of the area. However, given the pressures on the agricultural economy many farmers feel that, since their primary asset is land, they cannot afford to set it aside without substantial financial remuneration. Private landowners wishing to preserve portions of their land as natural areas may place a covenant on the parcel, known as a "conservation easement." In doing this, the landowner may obtain tax credits. Public access to the area may be provided but is not required. Several organizations, including the Jo Daviess Conservation Foundation, the Natural Land Institute, the Prairie Enthusiasts, the Nature Conservancy and the Bluffland Alliance, can assist owners in this transaction.

Purchase of development rights (PDRs) were also considered as a tool for preserving sensitive natural areas or open space. However, some people question whether the funding of a PDR program properly rests with County government or with some other not-for-profit entity. Several individuals have suggested that the Comprehensive Plan include an objective to establish a county conservation district. Conversely, others have commented that there is already enough land set aside and off the tax rolls, and that the need for economic development and jobs outweighs the need for more set-aside for land. Lacking consensus, the Plan merely sets forth an objective to "Develop a plan for conserving scenic areas through zoning, easements, acquisition or purchase of development rights", "Identify and generally map significant natural resource areas..." and "Develop a plan for preserving significant natural areas..." The County will evaluate proposals to ensure that development adjacent to sensitive natural areas, environmental corridors, conservation areas, and parks is designed to minimize conflicts between uses.

## D. Elevated Areas

Any development on the county's elevated ridges, knobs and mounds must be treated with great sensitivity. These areas have shallow soils which are often not suited for septic systems, and which erode easily when disturbed. Vegetative areas along ridges provide habitat for plants and animals, and these ridges include most of the remaining natural areas in the county. Ridges were popular prehistoric burial sites and may have archaeological value. Because of these characteristics, elevated areas should be a high priority for conservation efforts in the county.

In addition to the physical constraints of development in elevated areas, there is increasing opposition to development which is visually obtrusive. Recently, a number of structures have been built, typically large homes, which tower over the surrounding elevations and can be seen for miles. Certainly, people building homes in this beautiful area will want to take advantage of the breath-taking views. However, in the interests of not spoiling the view for all others, the Comprehensive Plan includes policies to avoid this kind of development.

In general, the County's policy is: development on ridges, knobs, and mounds should be as unobtrusive as possible. In practice this means that as building permits are issued or as applications for rezoning are considered, site plans will be reviewed to ensure that the development is consistent with this policy. Rooflines should not protrude above the surrounding elevations. Structures should be screened from view by natural vegetation. Roadways and access drives should follow the contours of the land to reduce their visibility from the surrounding area. Glaring or excessive lighting should be avoided.

The Land Use Plan (Appendix I Maps, Map 8.2 Land Use Plan) illustrates elevated areas -- knobs, hills, mounds, and ridges – which are commonly known to be scenic elevations in the county. These illustrations are only intended to suggest typical areas. Applications for zoning or building permits will be reviewed on a case-by-case basis to evaluate the visual impacts of the proposed development for consistency with the overall principle of preserving scenic areas.

## Section 8.13 Roadways and Scenic Routes

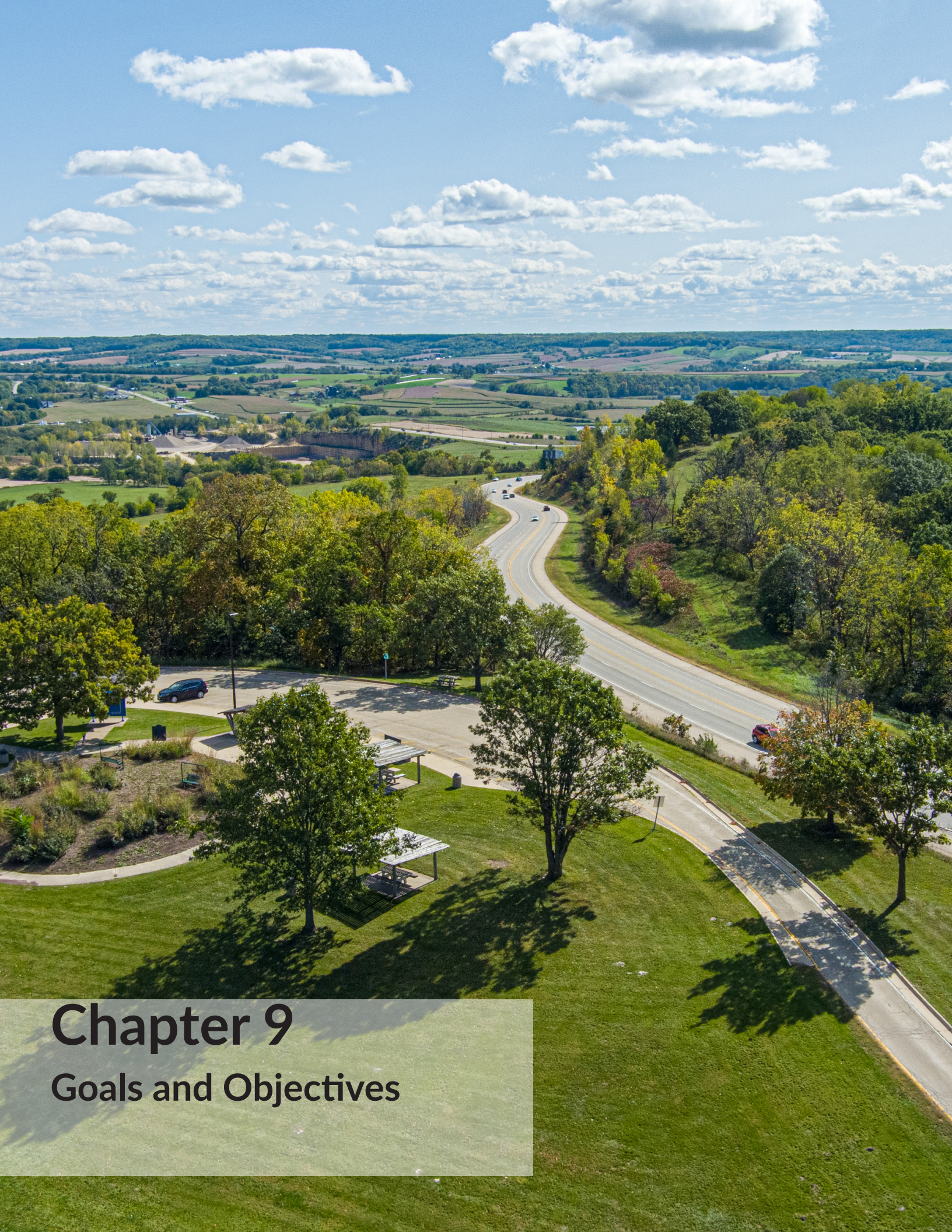
Through public engagement efforts of the County's comprehensive planning process (i.e., 1999 Comprehensive Plan, 2012 and 2024 Updates), citizens have stressed the high value they place on the scenic beauty of the area. In order to ensure that this beauty is preserved, the County will implement policies which treat aesthetics along roadways with sensitivity. In addition, the County will undertake a systematic classification of its local roads to evaluate and rank them for a number of factors including: current safety and improvement needs, future upgrade needs (lane widths, turning lanes, signalization, etc.), scenic value, signage considerations (safety, informational and aesthetic).

In general, the County's policies for its scenic roadways will include limiting billboards when possible, promoting standardized informational signage, preserving trees and desirable vegetation along roadways, and providing ample setbacks to allow space for sightlines and future improvements to the roadway system. The County will also require new development along roadways to be screened from view with appropriate landscaping.

During the mapping work sessions of the 1999 Comprehensive Planning process, it was generally agreed that designated scenic routes for their entire length through the county should include, but not be limited to the following roadways:

- U.S. Highway 20
- Stagecoach Trail
- Derinda Road
- State Route 84
- Blackjack Road
- State Route 78
- Elizabeth - Scales Mound Road

In general, it is anticipated that sections of roadway included in the Contiguous Growth Area (CGA) of a community would be classified in conjunction with joint planning between the County and the respective municipality. They could be classified as "scenic" or not, depending on the County's mutual agreement with the municipality on the anticipated growth patterns and preferred uses. In any consideration of signage, especially within contiguous growth areas, it will be important to balance the need to preserve the beauty of the county, with the equally important economic need. Both tourist and commercial travelers need information to enable them to find attractions, services and businesses throughout the county. While studying the treatment of roadways, the County determined that other considerations should be included before aesthetic standards are set for all roadways in the county. These include: safety needs; the designation of transportation corridors; and upgrade or improvement needs, particularly at intersections and in areas where growth is anticipated. In order to integrate the scenic considerations with the development and safety needs the County has determined that it will undertake a complete review of roadway needs and standards. It is recommended that the County coordinate this review and study of roadways with others including: the County Highway Engineer, township road commissioners, municipalities and communities, the LRA, IDOT and other appropriate groups.



# Chapter 9

## Goals and Objectives

## Introduction to Goals and Objectives

The Goals and Objectives stated in this section were created in response to land use issues summarized in the Problem Statement (see Chapter 8 Land Use, Section 8.7 Land Use Issues and Needs. Goals are broad, general statements of desire or intent. Objectives are more specific statements. Several objectives are listed under each of the nine goals, to indicate the actions or responses that should be undertaken to achieve the broad goals of the Plan. The Goals and Objectives recommend directing development to centers where infrastructure and services already exist or can easily be provided. Specifically, development is directed to communities and the areas contiguous to communities where growth is desired ("Contiguous Growth Areas"). This approach preserves productive farmland, the open areas of the county, and the associated natural, historical, and aesthetic amenities. This approach provides efficient, managed growth; maximum benefit of financial resources devoted to infrastructure and services; and continued vitality of the county's communities.

The Goals and Objectives described in the following pages are designed to guide the actions of the citizens and leadership of Jo Daviess County. The separate Goals do not stand alone but must be viewed and understood as a unit and are considered equal. Together they provide the basis for a balanced, holistic approach to sound development and the highest and best use of land in Jo Daviess County. All the Objectives listed for each goal are deemed important. However, some Objectives have been identified as being "Highest Priority" to allow for focused initial efforts to implement the Plan. It is understood that unforeseen opportunities, available staff time and funding will play a tremendous role in the sequence and timing of all Objectives.





## Goal 1: Promote and Preserve Human Resources

The county is fortunate to boast a population rich in diverse experiences and specialized skills. We highly value the wealth of expertise among our residents and seek to leverage their skills to advance the collective goals of the community. Given the county's rural character and modest population, special consideration is pivotal in decision-making to champion and preserve the following resources and characteristics:

- Job amenities and economic factors, crucial for retaining and attracting the younger demographic.
- A vibrant volunteer spirit.
- Unity and cohesiveness within the population.
- Warm and friendly community members.
- The invaluable senior citizen resource.
- A rich history and heritage.
- The judicious use of external resources and expertise when deemed beneficial.

### A. High Priority Objectives

1. Encourage retention and creation of jobs attractive to families and youth.
2. Plan for services which will meet the needs of an increasing senior population.

### B. Moderate Priority Objectives

1. Encourage volunteer involvement consistent with county and community plans.
2. Encourage activities which bring local people together and promote community spirit.
3. Promote activities and projects which enhance awareness of heritage and preservation of historical assets.

## Goal II: Promote Vibrant Communities

We are committed to fostering thriving and dynamic towns, ensuring their vitality and sustainability. To achieve this, development proposals will be scrutinized to align with the promotion of lively cities and towns through the following measures:

- Promotion of commercial development with and in adjacent towns.
- Facilitation of residential growth with convenient access to both public and private services.

### A. High Priority Objectives

1. Encourage and, when possible, assist in the development of current community comprehensive plans.
2. Encourage and, when possible, assist in the development of infrastructure improvements designed to meet community development goals.
3. Direct development to existing development centers where infrastructure and services are readily available or easily provided.
4. Encourage development of affordable, local and senior housing within communities (see Housing Study strategies).
5. Explore incentives for residential development such as housing TIFs and rebate programs.

### B. Moderate Priority Objectives

1. Respect the desires of development centers in the consideration of all development proposals for property within the mile-and-a-half or Contiguous Growth Areas surrounding those centers.
2. Explore cooperative efforts to provide services efficiently (e.g. County building inspector contracting services to communities).

## Goal III: Support Economic Development and Growth

Economic considerations are pivotal in reviewing development proposals. Key factors to enhance the economic base include:

- Retaining and attracting youth through job amenities and economic factors.
- Continue to encourage completion of the proposed IDOT Glacier Shadow Pass 4-lane project from Galena to Freeport.
- Maintaining and improving transportation/roads.
- Encouraging varied job opportunities, prioritizing primary job retention and creation.
- Supporting and improving education and job training.
- Expanding communication technology.
- Backing existing and expanding appropriate tourism destinations (e.g., natural areas, eco-sites).

### A. High Priority Objectives

1. Jo Daviess County, in cooperation with local municipalities, prioritize purchase of developable land for the purpose of creating shovel ready sites that can then be made available for county approved projects.
2. Prioritize the creation of new incentives and funding programs to bolster their current economic development program.
3. Support retention and creation of jobs providing wages sufficient to support families.
4. Support U.S. Route 20 4-lane development in a manner that will encourage development in communities and their contiguous growth areas rather than in rural areas.
5. Maintain county-wide development effort that coordinates and builds on local community efforts.
6. Improve transportation (pedestrian linkages, roadways, public transportation, river transportation).
7. Improve communication technology.
8. Build on tourism success, focusing on the natural, historical and cultural assets of the county.
9. Improve and support education, job training and retraining efforts.
10. Involve Township Road Commissioners on all development proposals within their jurisdiction.
11. Encourage appropriate signage.

## Goal IV: Preserve Scenic Beauty

Jo Daviess County, endowed with stunning scenic beauty, is committed to preserving its natural assets. Development decisions should prioritize the protection and promotion of:

- Scenic vistas along highways and roads.
- The pastoral and agricultural aesthetic of the county.
- Undeveloped ridgetops, knobs, and mounds.
- Prohibiting commercial development along highways and rural interchanges.
- Preserving river vistas and bluff lands.
- Safeguarding natural areas and features.
- Thoughtful development near and adjacent to towns.
- Limiting the proliferation of billboards.
- Development of incentives for cluster-type projects.

### A. High Priority Objectives

1. Identify and map scenic routes in the county as an informational tool.
2. Develop a plan for conserving scenic areas through zoning, easements, acquisition, or purchase of development rights.
3. Prohibit commercial development along highways and at rural interchanges except by county/community agreement within contiguous growth areas.

### B. Moderate Priority Objectives

1. Identify areas appropriate for public access (e.g. scenic overlooks, parks) and develop accordingly.
2. Limit billboards in scenic areas.
3. Establish consistent informational signage.
4. Develop a county open space and recreation plan.
5. Implement the 2022 Greenways and Trails Plan.
6. Work with IDNR, local communities and surrounding counties (in Illinois, Wisconsin, and Iowa) to encourage local and multi-jurisdictional trails and recreational projects.

## Goal V: Support Agriculture

The County's farming and agricultural essence must be upheld, safeguarding agricultural uses as vital components of the economy, landscape, and natural resources. Development proposals will be evaluated with the goal of preserving the agricultural economy and character. This involves promoting and preserving:

- Productive farms and farmland.
- Farm-related businesses and value-added enterprises.
- Local, regional, and national markets.
- Thoughtful residential and commercial development in and around county towns to protect farmland.
- Permitting diverse on-farm and rural business uses, contingent on their impact.

### A. High Priority Objectives

1. Maintain an Agriculture Preservation Area that encompasses large contiguous areas of prime and important farmland, for use as an informational tool, locating areas where non-agricultural development is to be limited.
2. Require development to provide buffer strips between the development and agricultural uses.
3. Explore potential of Agri-tourism.
4. Improve public awareness about the realities of rural living in Jo Daviess County.
5. Collaborate with farmers through organizations such as JDC Beef Producers and the Farm Bureau to understand how best to support and preserve agriculture in Jo Daviess County.

### B. Moderate Priority Objectives

1. Encourage and facilitate access to new markets for agricultural products (e.g. organizing special marketing cooperatives for hay, dairy products, organic crops, genetically altered crops and seed, as well as small “niche” markets for specialty crops and products).
2. Encourage local farm support businesses providing equipment, fertilizer, feed, seed, parts, repair shops and technical support.
3. Improve quality of secondary roads.
4. Involve Township Road Commissioners on all development proposals within their jurisdiction.
5. Consider adjusting Land Evaluation and Site Assessment (LESA) system to favor cluster and/or conservation development over solitary single housing units.

## Goal VI: Maintain Rural Character and Improve Quality of Life

The county's rural character and exceptional quality of life are integral and will be both enhanced and safeguarded. Given the significance of these ambiance factors to Jo Daviess County, development proposals will be scrutinized with the aim of protecting and promoting:

- The rural setting.
- A leisurely pace of life.
- A secure environment.
- The vitality of towns, schools, and community churches.
- Minimal congestion.
- The pastoral aesthetic.
- Preservation of small-town heritage.
- Thoughtful and unobtrusive development.
- The limited proliferation of billboards.
- Diverse public and private services.
- An appealing family-friendly environment (including affordable, available child care.)
- The position of the county as an attractive retirement area.
- Rural dark skies.

### A. High Priority Objectives

1. Support law enforcement and emergency services to maintain a safe and crime free environment.
2. Support farm operations to maintain rural character.
3. Develop/support lighting standards that maintain rural dark skies.

## Goal VII: Preserve and Enhance Natural and Historic Resources

The County's rare natural and historical resources set it apart, contributing significantly to its distinct character, value, and economic vitality. To ensure their preservation, development proposals will be carefully assessed with the aim of protecting and promoting:

- Groundwater purity.
- Soil, water, woodlands, and air resources.
- Wildlife habitat.
- Rivers and bluffs.
- Outdoor recreation amenities.
- Historical and archaeological sites.
- Environmentally sensitive areas and resources.
- Parks, public lands, and designated areas.

### A. High Priority Objectives

1. Continue to support the identification and generally map significant natural resources in the county (water resources, intact ecosystems, rare habitats, geologic formations, mineral resources) using resources such as the state's Critical Trends Assessment Program reports and the Jo Daviess County Karst Feature Database.
2. Identify and generally map historic sites and structures of significance in the county (archeological sites, mills, mining operations, barns, homes, bridges).
3. Develop land use groundwater protection policies following completion of Illinois Geological Survey's County aquifer sensitivity mapping.
4. Enhance stormwater, surface water, and groundwater management to achieve incremental, sustainable improvements to the county's water resources.

### B. Moderate Priority Objectives

1. Develop a plan and mechanism (such as a conservation district) for preserving significant natural areas.
2. Preserve access to mineral resources.
3. Support measures to maintain air quality.
4. Continue efforts toward proper solid waste management.
5. Adopt an historic preservation ordinance; set up a preservation commission for voluntary recognition of local landmarks.
6. Locate and classify existing mine and extraction sites. Promote reclamation of mining and extraction sites for future use of property.
7. Continue efforts of stormwater control and streambank stabilization (working with NRCS).
8. Maintain and improve the quality of wildlife habitat.
9. Improve surface water quality; pursue actions which reduce both point and non-point source pollution.

## Goal VIII: Promote Cooperative Planning

Promoting openness and collaboration with all county individuals and entities is vital for shaping the county's future. Achieving many planning goals will necessitate regional cooperation. In line with the rural character and small-town environment, planning should be grounded in the following principles:

- A widespread, shared community vision as the foundation.
- Collaboration with public and private agencies and interest groups.
- Crafting ordinances that protect and control elements impacting the county's essence, without infringing on individual rights.
- Special consideration of municipal needs and desires in contiguous growth areas around towns.

### A. High Priority Objectives

1. Link Savanna Army Depot planning to county comprehensive planning.
2. Define areas contiguous to communities where community growth is desired and adopt mutually agreeable standards for growth in these contiguous growth areas.
3. Work with unincorporated communities to define appropriate planning and development strategies.

### B. Moderate Priority Objectives

1. Contact those entities/individuals who have specialized interests and knowledge when planning efforts relating to their area of expertise are being undertaken.
2. Design all development plans to minimize the use of energy resources.
3. Work with state and regional planning agencies (e.g. Blackhawk Hills Regional Council, Southwest Wisconsin Regional Planning Commission, Dubuque Metro Area Transportation Study).
4. Improve communication between the County, townships, and communities through development of joint meeting sessions, regular correspondence, press releases and internet information.



## Goal IX: Support Strategic Growth and Development

The primary threats to the county's character come from rural development pressures, both commercial and residential. General policies, outlined below, aim to protect against these threats, with detailed standards provided in Chapter 8 Land Use and Chapter 10 Implementation.

### Recommendations

A. Highway commercial development is restricted to areas adjacent to established villages or cities, discouraging rural highway or interchange commercial projects. Future commercial development is encouraged to annex to municipalities for control within contiguous growth areas.

B. Residential development is encouraged near municipalities or planned communities. In rural areas, strict adherence to goals in farmland, view, natural resource protection, unobtrusiveness, hilltop protection, and the Plan is required. Development near cities and villages is subject to community planning, with standards detailed in Chapter 8 Land Use.

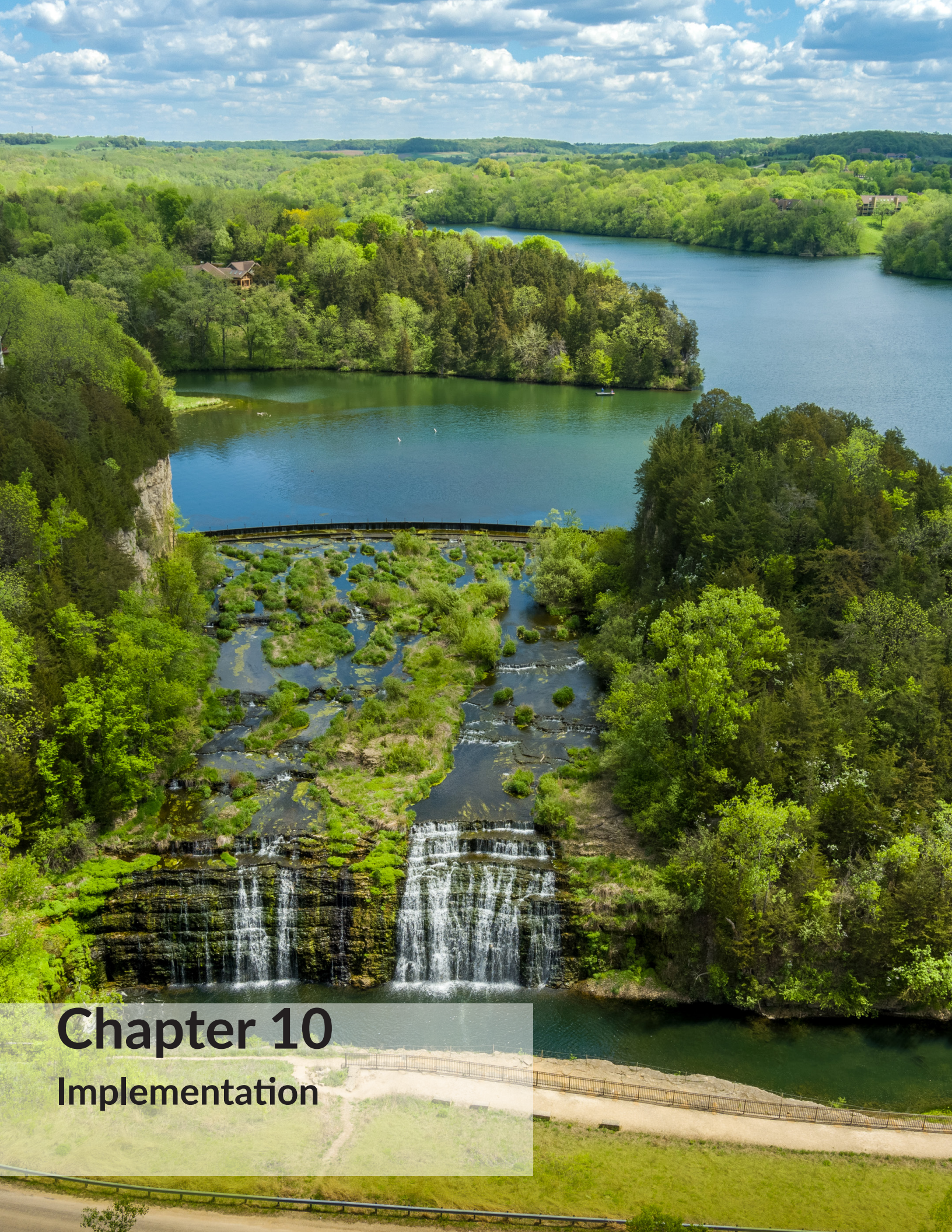
C. Rural development proposals are evaluated based on farmland protection and avoidance of agriculture/residential conflicts, using the Land Evaluation and Site Assessment (L.E.S.A.) system.

D. Hilltop development is tightly controlled to preserve the county's unique appearance, focusing on higher elevation protection of skylines, views, tree protection, and homesite visibility.

E. New development plans must ensure unobtrusiveness, maintaining rural character, scenic views, historical and natural resource protection. Requirements may include structure invisibility from roadways, tree screening, clustering, skyline and scenic vista protection, and preservation of the county's agricultural look.

F. Developers must adhere to Plan goals, conform to regulations in Zoning and Subdivision Ordinances, and provide efficient public improvements and community services. As experience is gained, more comprehensive standards will be developed to sustain growth while protecting the county's character and lifestyle.





# Chapter 10

## Implementation

## Section 10.1 Introduction

The Comprehensive Plan is intended to be used as the guide for future development decisions. Its real value, however, will be measured in the results it produces. To accomplish the goals, objectives, and policies of the plan, specific implementation measures must be taken to ensure that Jo Daviess County's actions meet the desires of the comprehensive plan.

This Comprehensive Plan has little or no value unless it is implemented. Therefore, the success of the plan will be dependent to a large extent, on proper administrative action to carry out its proposals and recommendations -- especially enforcement of the various regulating ordinances. It will be effective and useful only if active steps are taken to carry out its proposals and recommendations so they can be used by the citizens of Jo Daviess County in making everyday decisions. Every community is developed as the result of countless individual decisions such as: to buy or sell land; to subdivide land; to build homes, business, industries, schools and other community facilities; and to construct streets and install utilities. Each day, decisions are made that will affect the future of the County. They are made by landowners, lawyers, realtors, public officials and all private citizens. Whether these individual actions will add up to a well-developed, attractive and economically sound community will depend, to a large measure, on how well they are related to the County's objectives and plans. Successful implementation of the plan can only be accomplished through adequate legislative and administrative tools, public support and enthusiastic leadership.

While, by State law, a regional planning commission is charged with the responsibility of preparing the comprehensive plan, it is by law only an advisory body and does not have the legislative power necessary to implement it. The County Board shall, therefore, receive all planning recommendations and take the necessary steps to effectuate them and give them legal status.

## Section 10.2 Comprehensive Plan Adoption Procedures

The Jo Daviess County Regional Planning Commission should recommend the adoption or amendment of the Comprehensive Plan by adopting a resolution by a majority vote of the entire commission. The vote shall be recorded in the official minutes of the Planning Commission. The resolution shall refer to maps and other descriptive materials that relate to one or more elements of a comprehensive plan. The recommended Comprehensive Plan shall be forwarded to the County Board for formal official adoption by the County. Adoption should be in the form of a resolution passed by a majority vote of the County Board. Upon adoption by the County Board, the adopted Comprehensive Plan shall be filed with the Jo Daviess County Clerk/Recorder.

One copy of the adopted Comprehensive Plan, or of an amendment to such a plan, should be placed in every public library in the County and posted to the County's website. The Jo Daviess County Planning and Development Department shall be the official repository for the comprehensive plan.

## Section 10.3 Comprehensive Plan Implementation

Upon formal and official adoption of the Comprehensive Plan by the County Board, the County should undertake a review of its regulatory tools (zoning ordinance, subdivision regulations, etc.) for compatibility and consistency with the various goals, objectives and policies of the adopted comprehensive plan, and identify any sections of the documents that may need updating to accomplish this.

## Section 10.4 Integration, Amendment, and Update of Comprehensive Plan Elements

The goals, objectives, and policies contained within the preceding ten (10) elements (chapters) of this Comprehensive Plan, along with the accompanying inventory and analysis, have been thoroughly reviewed and approved by the Jo Daviess County Regional Planning Commission and County Board. Throughout the drafting and review process, great care was taken to include all issues and concerns from Board and Commission members, as well as from the community at large. Special attention was then given to making sure that the policies required to address the individual issues or concerns did not conflict, either with each other within the chapter, or between the different chapters. The future revision of any Comprehensive Plan goal, objective, or policy should receive the same level of deliberation and analysis as the original Plan; special attention should be given so that the new adopted language does not create conflicts within or between chapters.

## Section 10.5 Monitoring/Formal Review of the Plan and Continuation of the Planning Process

To assure that this Comprehensive Plan will continue to provide useful guidance regarding development within the County, the Jo Daviess County Development and Planning Committee must periodically review and amend the Plan to ensure that it remains relevant and reflects current County conditions and attitudes. In order to achieve this, the Development and Planning Committee should once each year place the performance of the Comprehensive Plan on the agenda for discussion and recommendation to the County Board. Discussion should include a review of the number and type of amendments approved throughout the previous year, as well as those that were denied. This information serves to gauge the adequacy of existing policies; multiple changes indicate policy areas in need of re-assessment. Other topics would include changes to either the development market or resident attitudes toward different aspects of County life. As a result of this discussion, the Development and Planning Committee would recommend either no change to the Plan, or one or more specific changes that should be addressed.



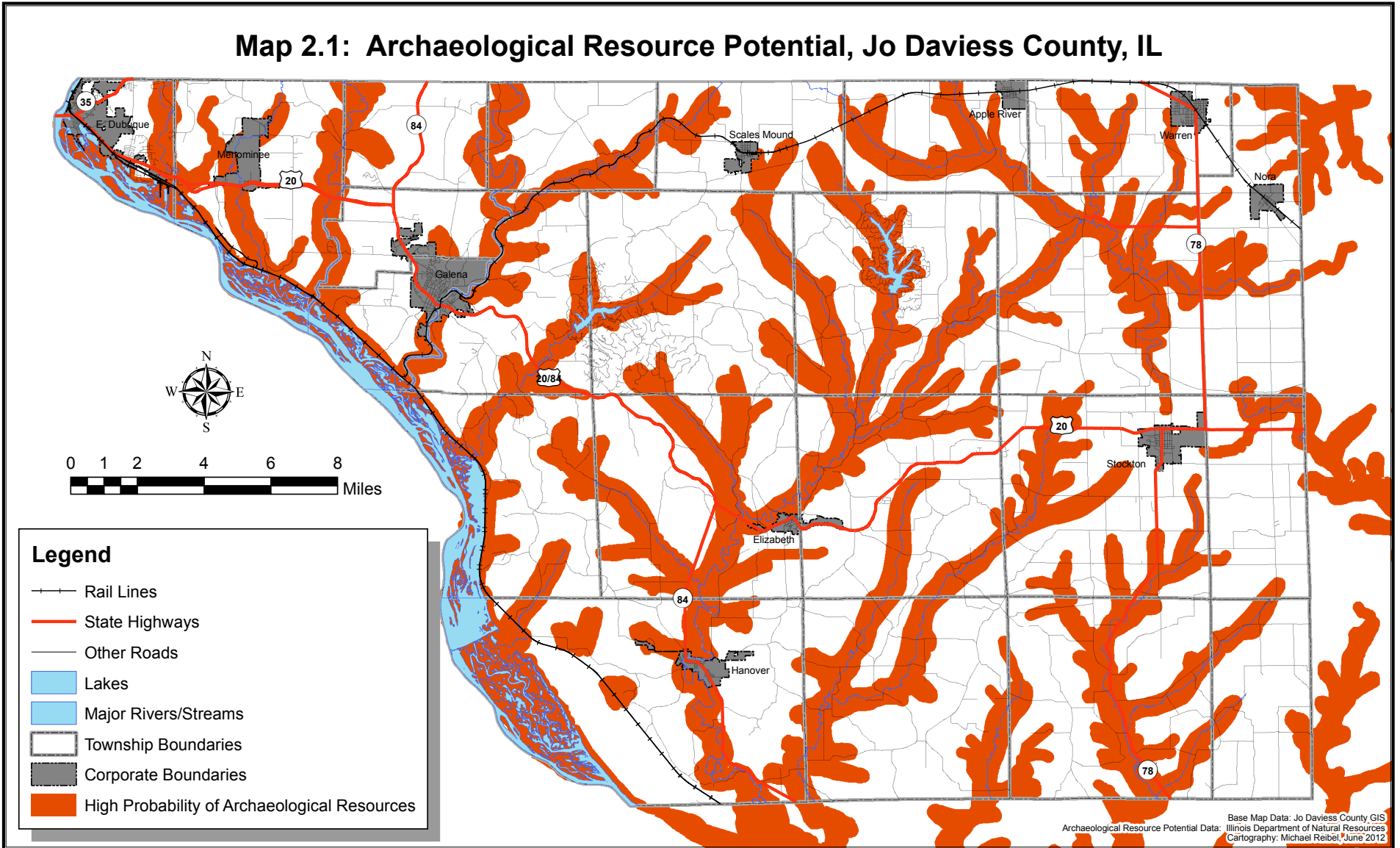


# Appendix I

Maps

Map 2.1:

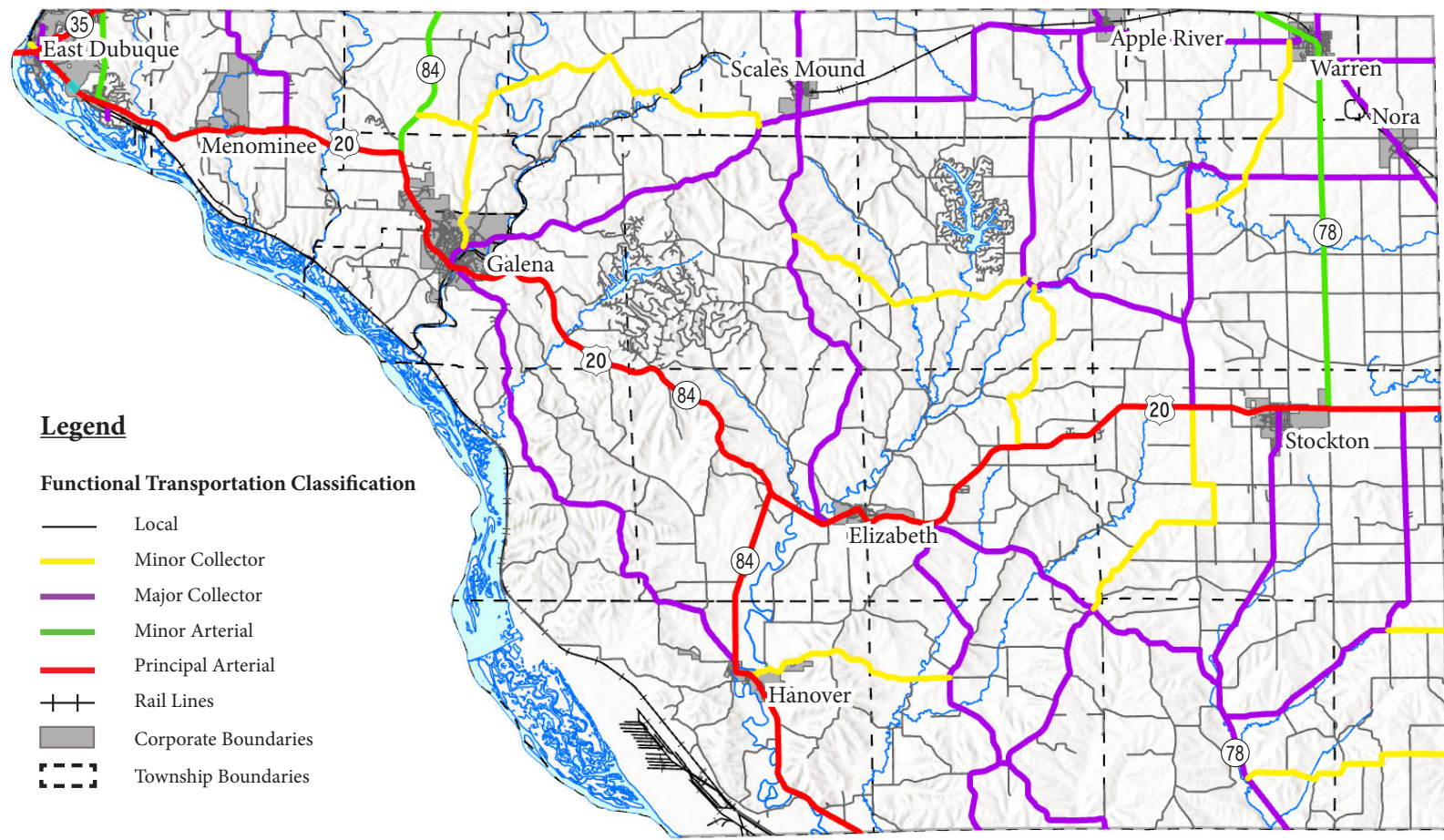
### Map 2.1: Archaeological Resource Potential, Jo Daviess County, IL



# Map 4.1

## Map 4.1 - Functional Transportation Classification

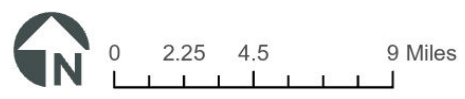
JO DAVIESS COUNTY, ILLINOIS



### Legend

#### Functional Transportation Classification

- Local
- Minor Collector
- Major Collector
- Minor Arterial
- Principal Arterial
- ++ Rail Lines
- Corporate Boundaries
- - - Township Boundaries



MSA  
Data Sources: Esri, NASA, NGA, USGS, Illinois Department of Transportation, 2022

# Map 4.2

## Map 4.2 - Average Daily Traffic on U.S. and State Routes

JO DAVIESS COUNTY, ILLINOIS



### Legend

- U.S. & State Highways
- Local
- + + Rail Lines
- Corporate Boundaries
- Township Boundaries



0 1.75 3.5 7 Miles

Data Sources: Esri, NASA, NGA, USGS, Illinois Department of Transportation, 2021





# Map 4.3

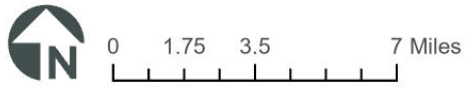
## Map 4.3 - Average Daily Truck Traffic on U.S. and State Routes

JO DAVIESS COUNTY, ILLINOIS

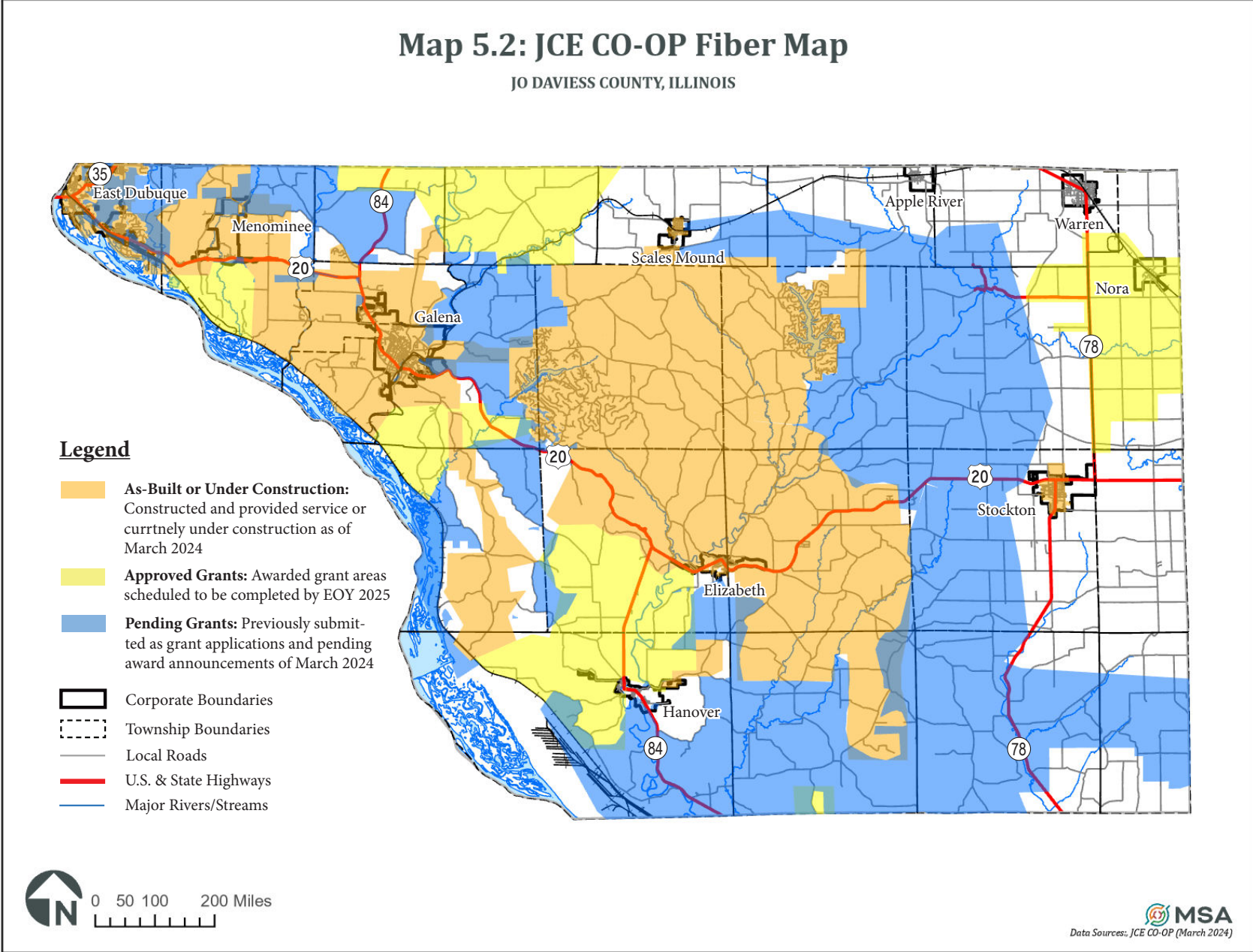


### Legend

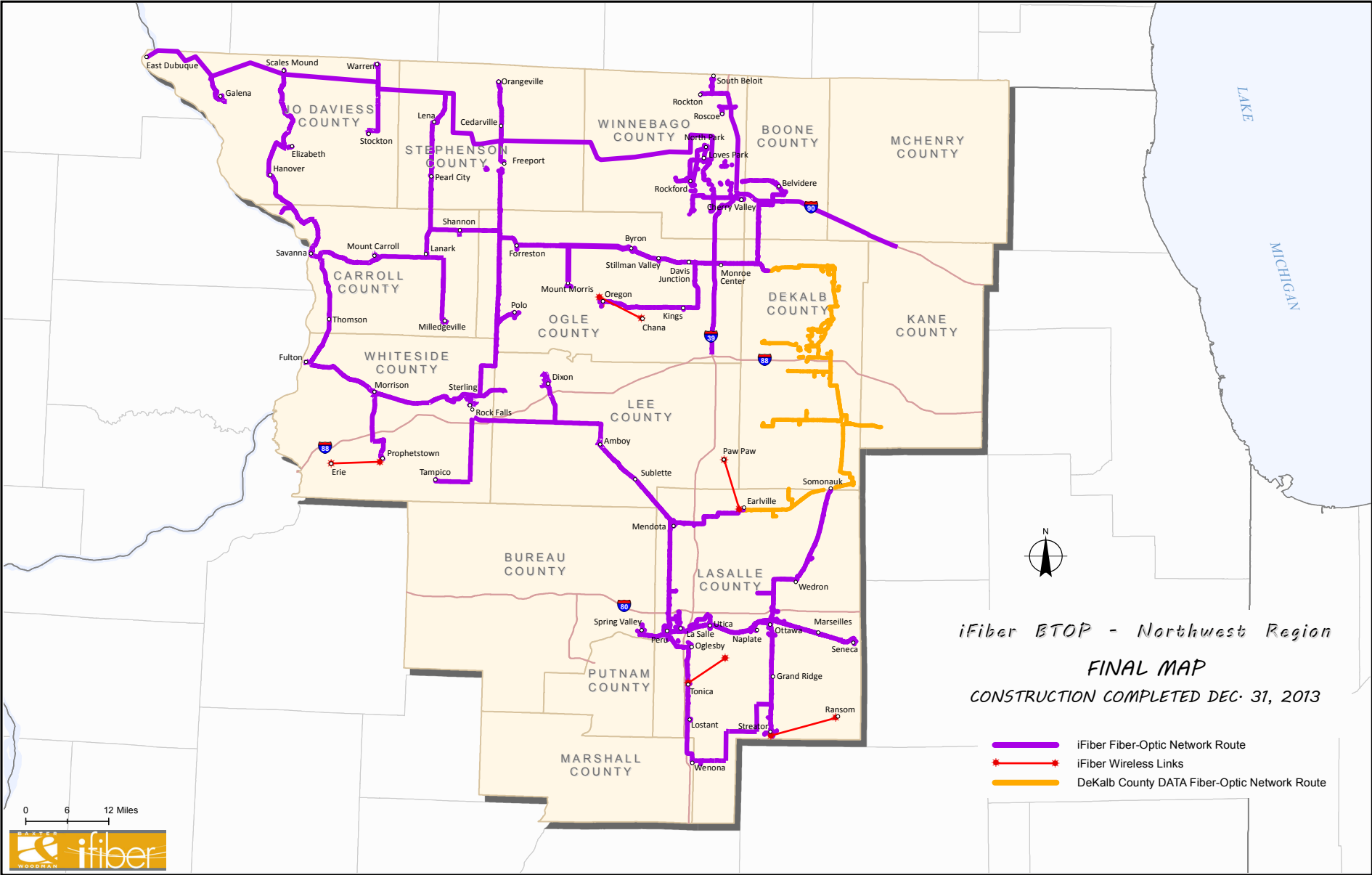
- U.S. & State Highways
- Local
- + + Rail Lines
- Corporate Boundaries
- - - Township Boundaries



Data Sources: Esri, NASA, NGA, USGS, Illinois Department of Transportation, 2021

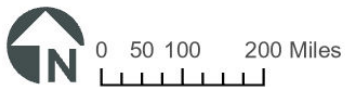
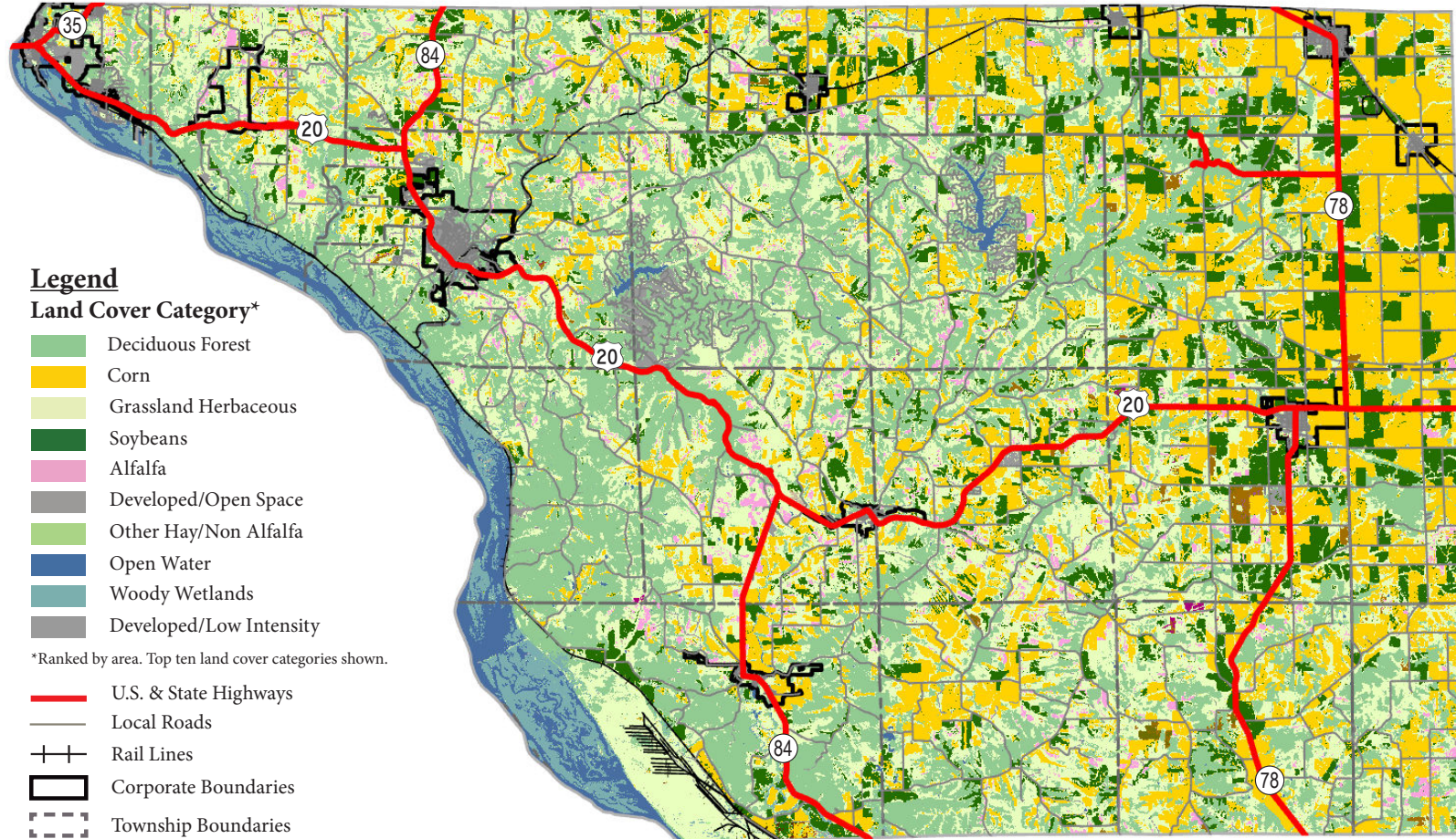


# Map 5.3



# Map 6.1 - Land Cover

JO DAVIESS COUNTY, ILLINOIS

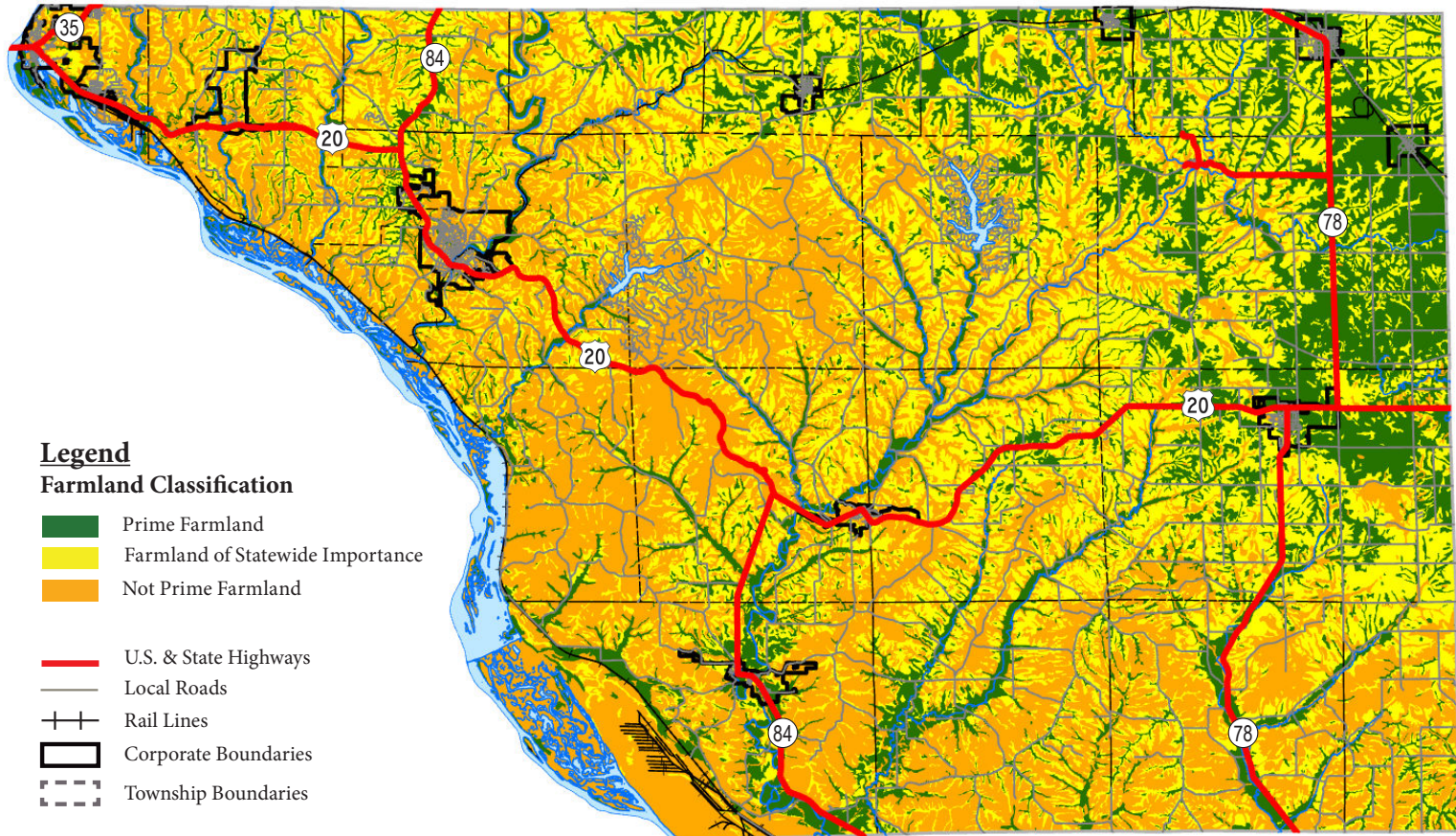


Data Sources: Esri, NASA, NGA, USGS, National Agricultural Statistics Service, Cropland Data Layer, 2023



# Map 6.2 - Farmland Classification of Soils

JO DAVIESS COUNTY, ILLINOIS



### Legend

#### Farmland Classification

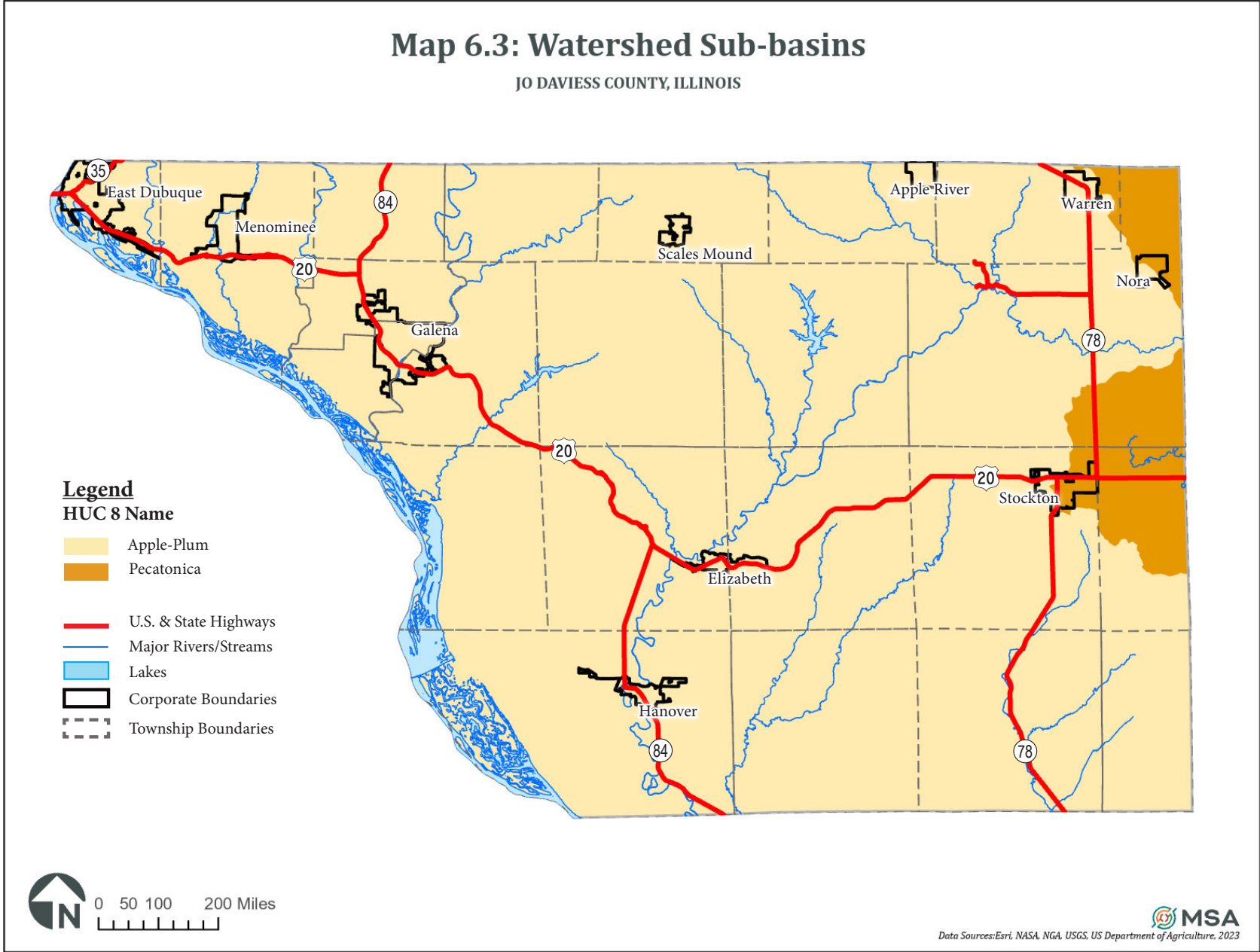
- Prime Farmland
- Farmland of Statewide Importance
- Not Prime Farmland

- U.S. & State Highways
- Local Roads
- Rail Lines
- Corporate Boundaries
- Township Boundaries



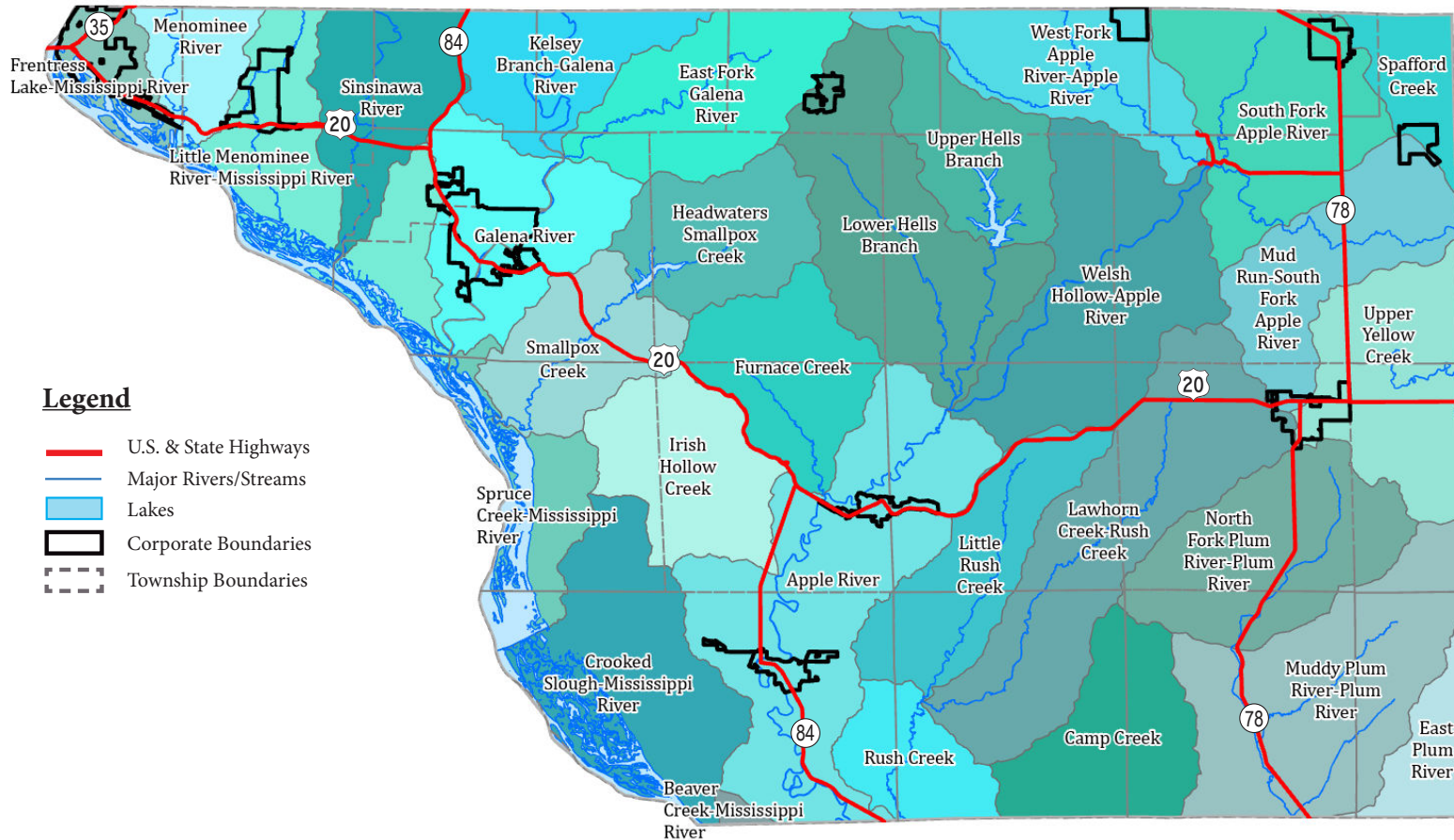
Data Sources: Esri, NASA, NGA, USGS, U.S. Department of Agriculture, Natural Resources Conservation Service, USA SSURGO - Farmland Class, November 2023





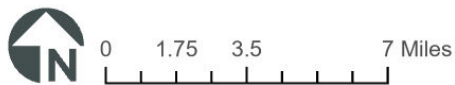
# Map 6.4 - Local Watersheds

JO DAVIESS COUNTY, ILLINOIS

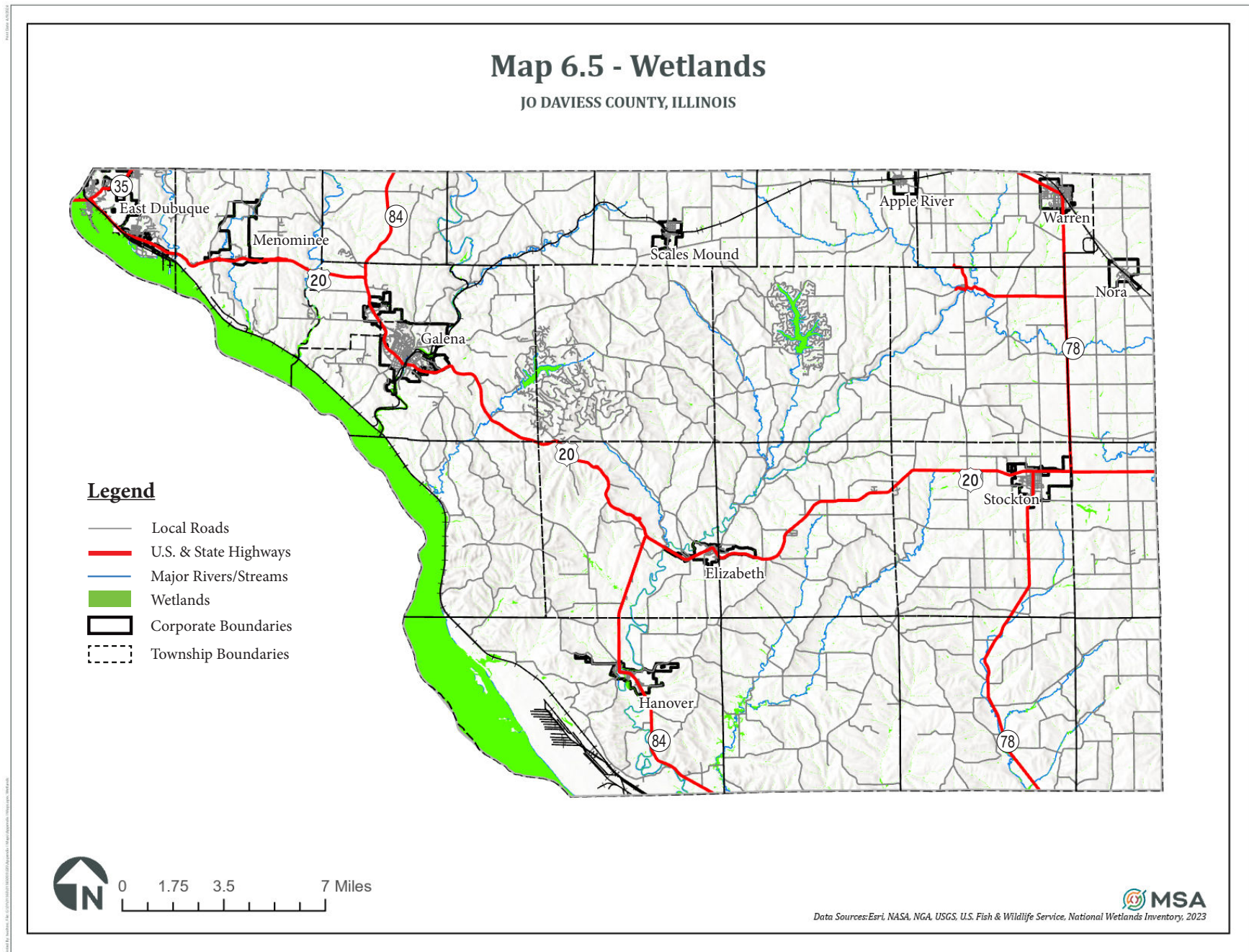


**Legend**

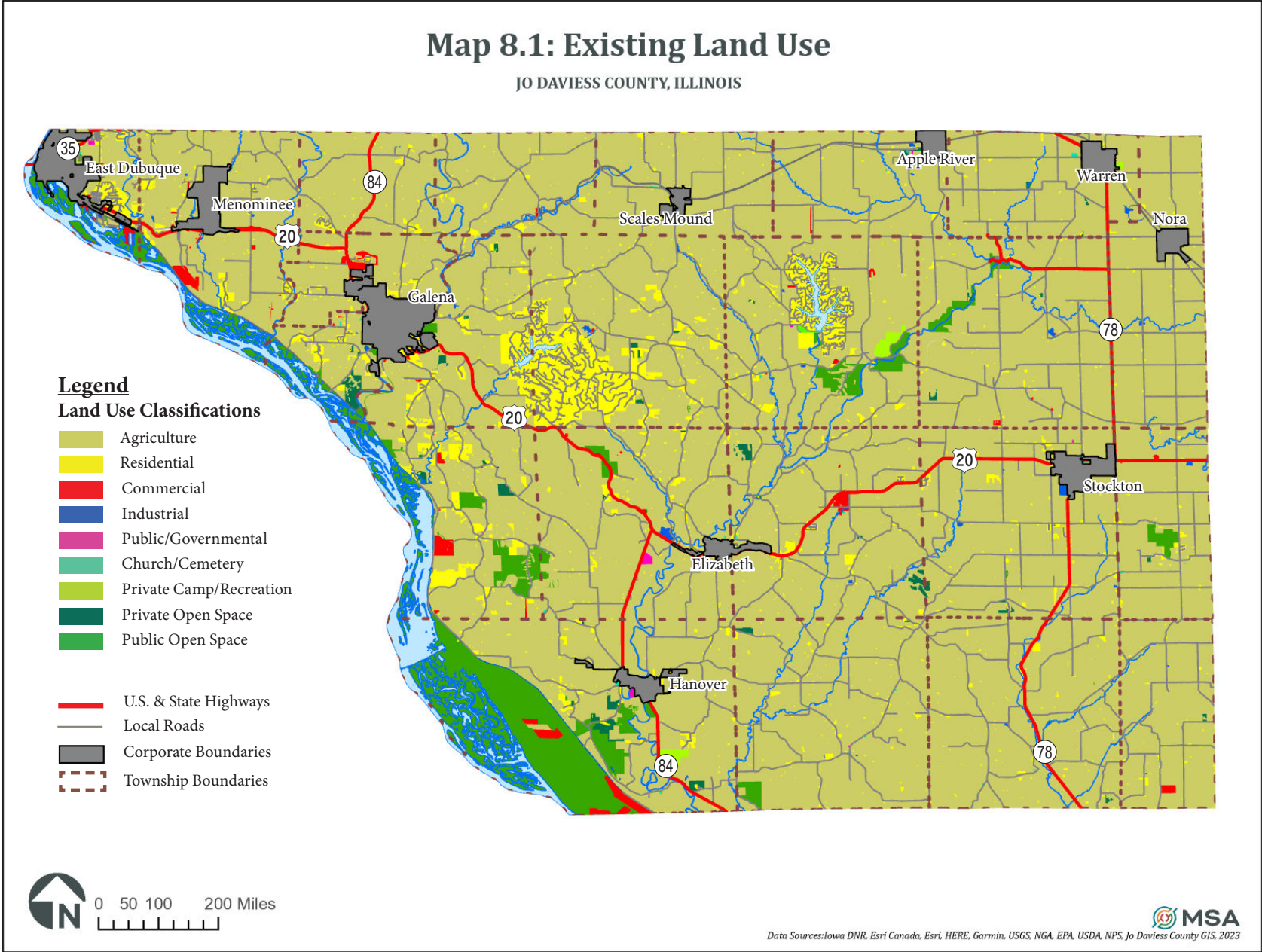
- U.S. & State Highways
- Major Rivers/Streams
- Lakes
- Corporate Boundaries
- Township Boundaries

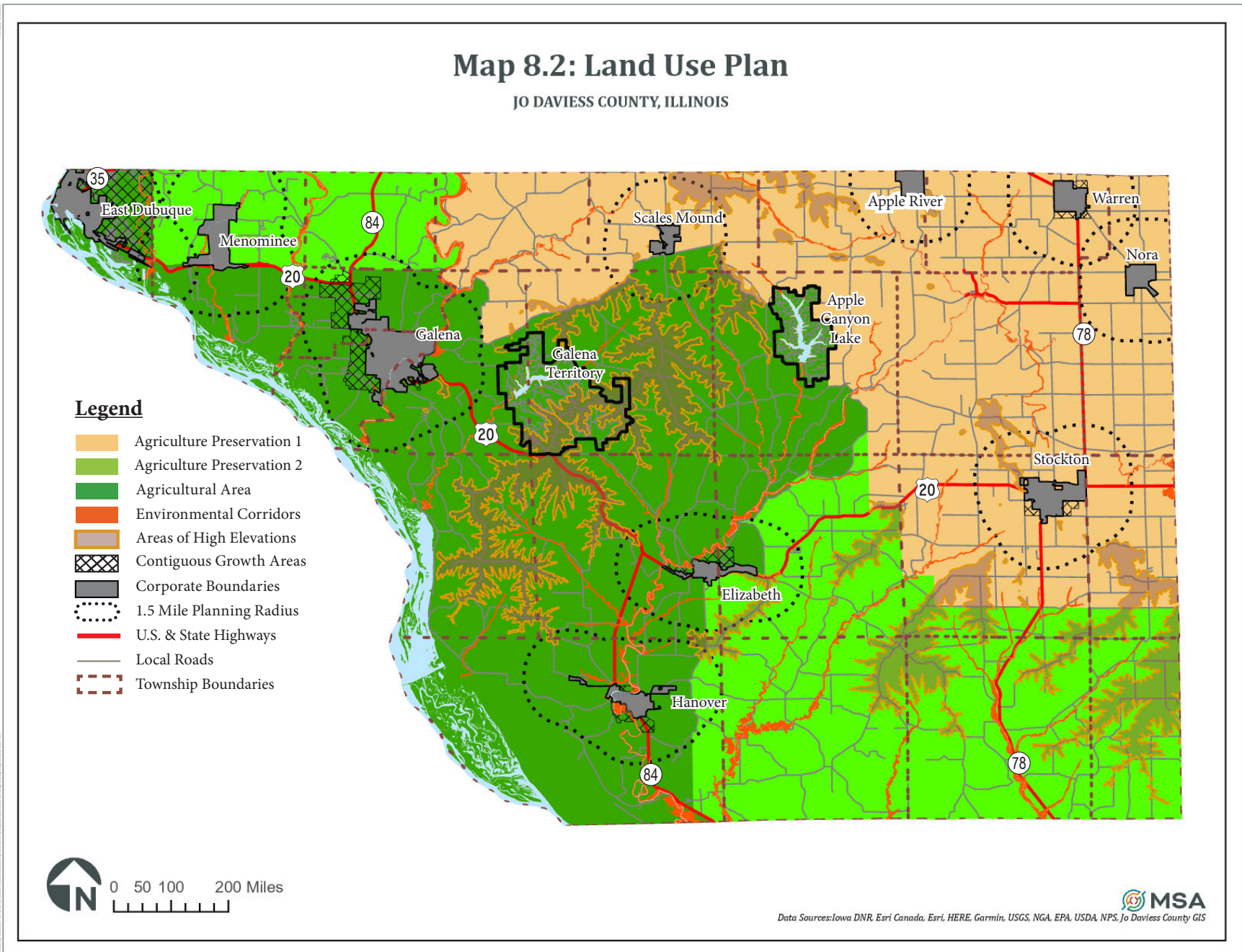


Data Sources: Esri, NASA, NGA, USGS, U.S. Department of Agriculture, 2023



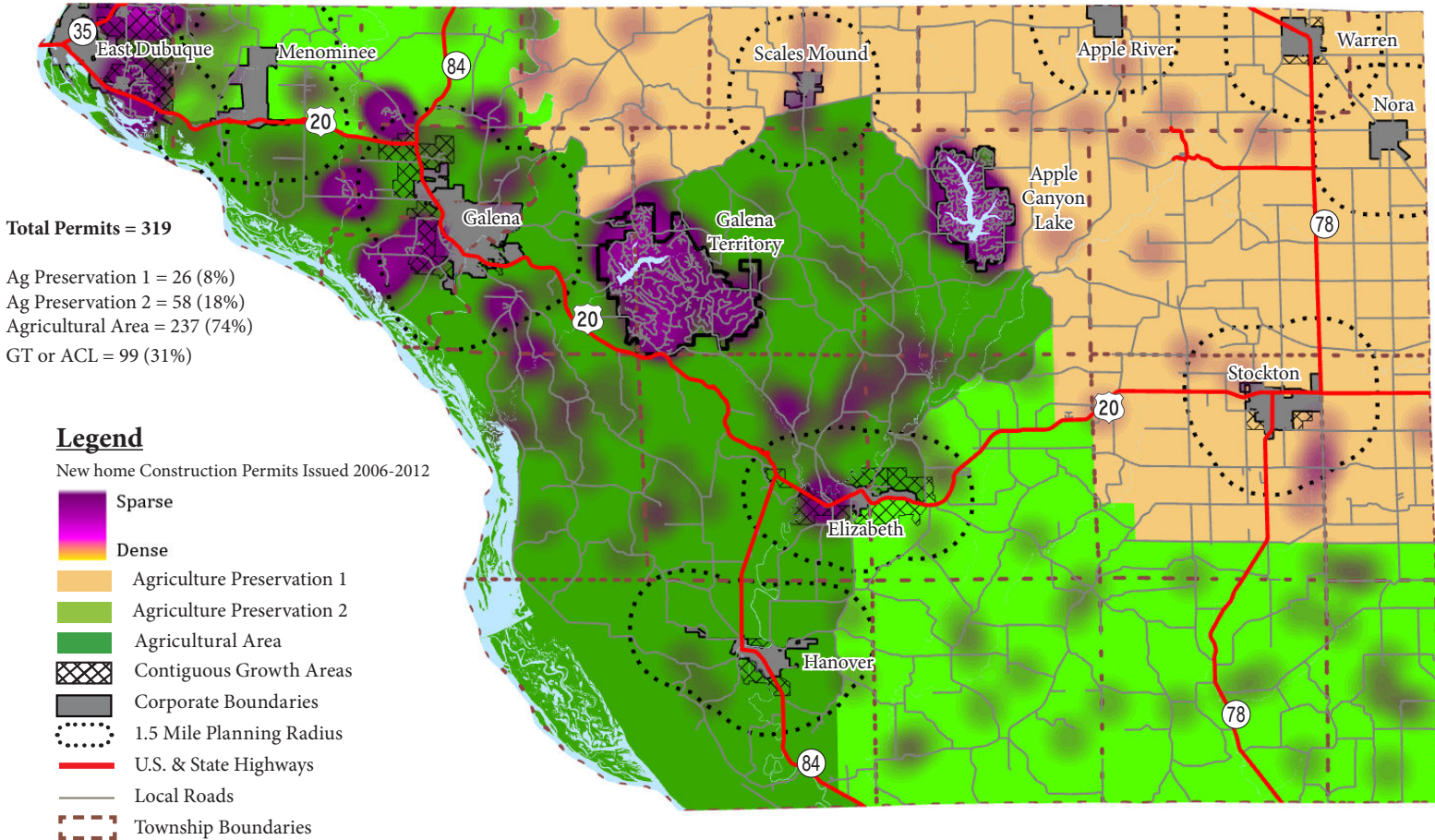






### Map 8.3: New Home Construction Permits Issued 2006-2012

JO DAVIESS COUNTY, ILLINOIS



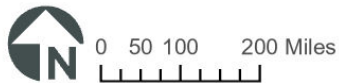
Total Permits = 319

- Ag Preservation 1 = 26 (8%)
- Ag Preservation 2 = 58 (18%)
- Agricultural Area = 237 (74%)
- GT or ACL = 99 (31%)

**Legend**

New home Construction Permits Issued 2006-2012

- Sparse
- Dense
- Agriculture Preservation 1
- Agriculture Preservation 2
- Agricultural Area
- Contiguous Growth Areas
- Corporate Boundaries
- 1.5 Mile Planning Radius
- U.S. & State Highways
- Local Roads
- Township Boundaries

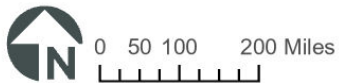
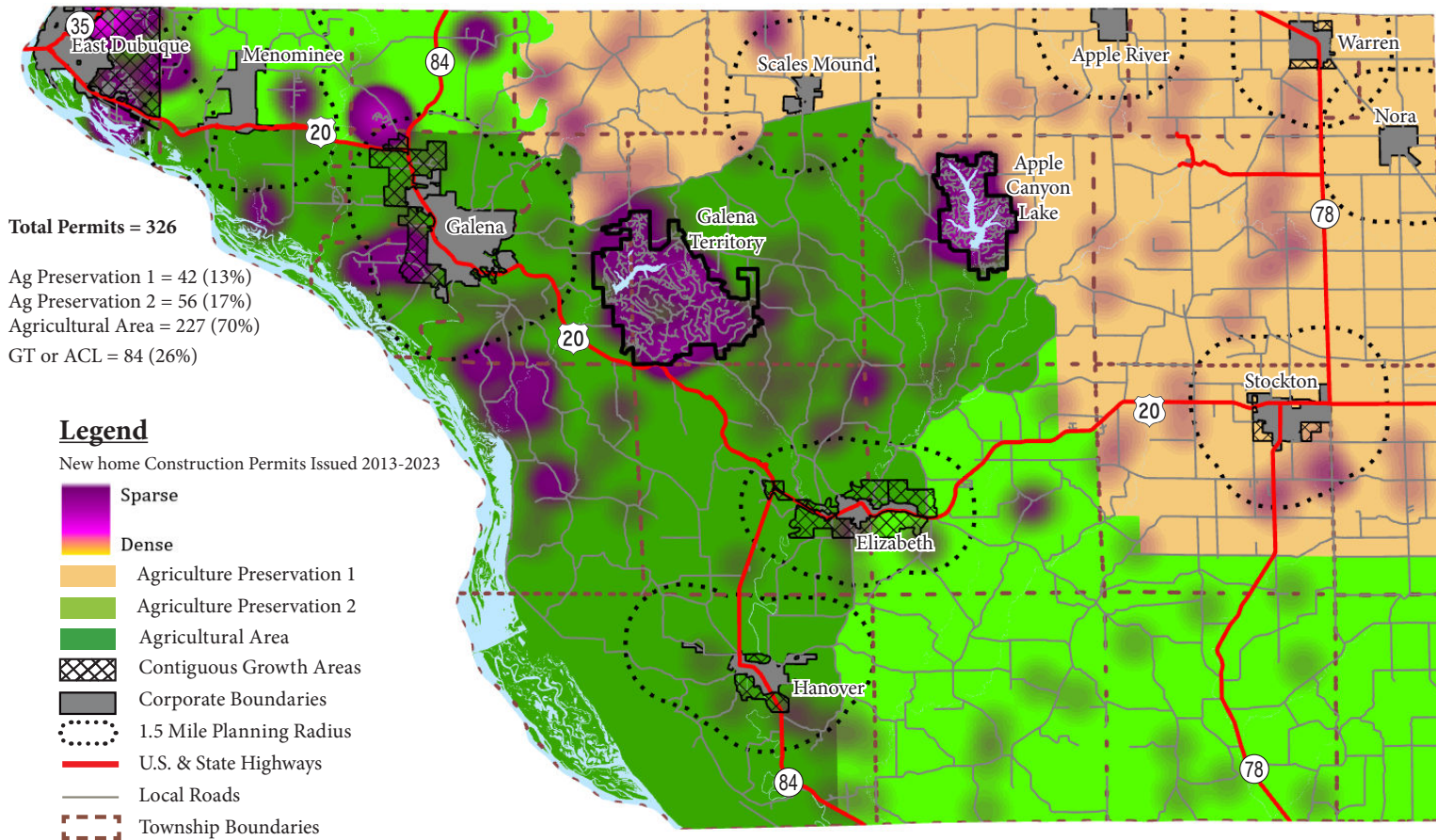


Data Sources: Iowa DNR, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, Jo Daviess County GIS, Jo Daviess County Planning and Development Department, 2023



# Map 8.4: New Home Construction Permits Issued 2013-2023

JO DAVIESS COUNTY, ILLINOIS



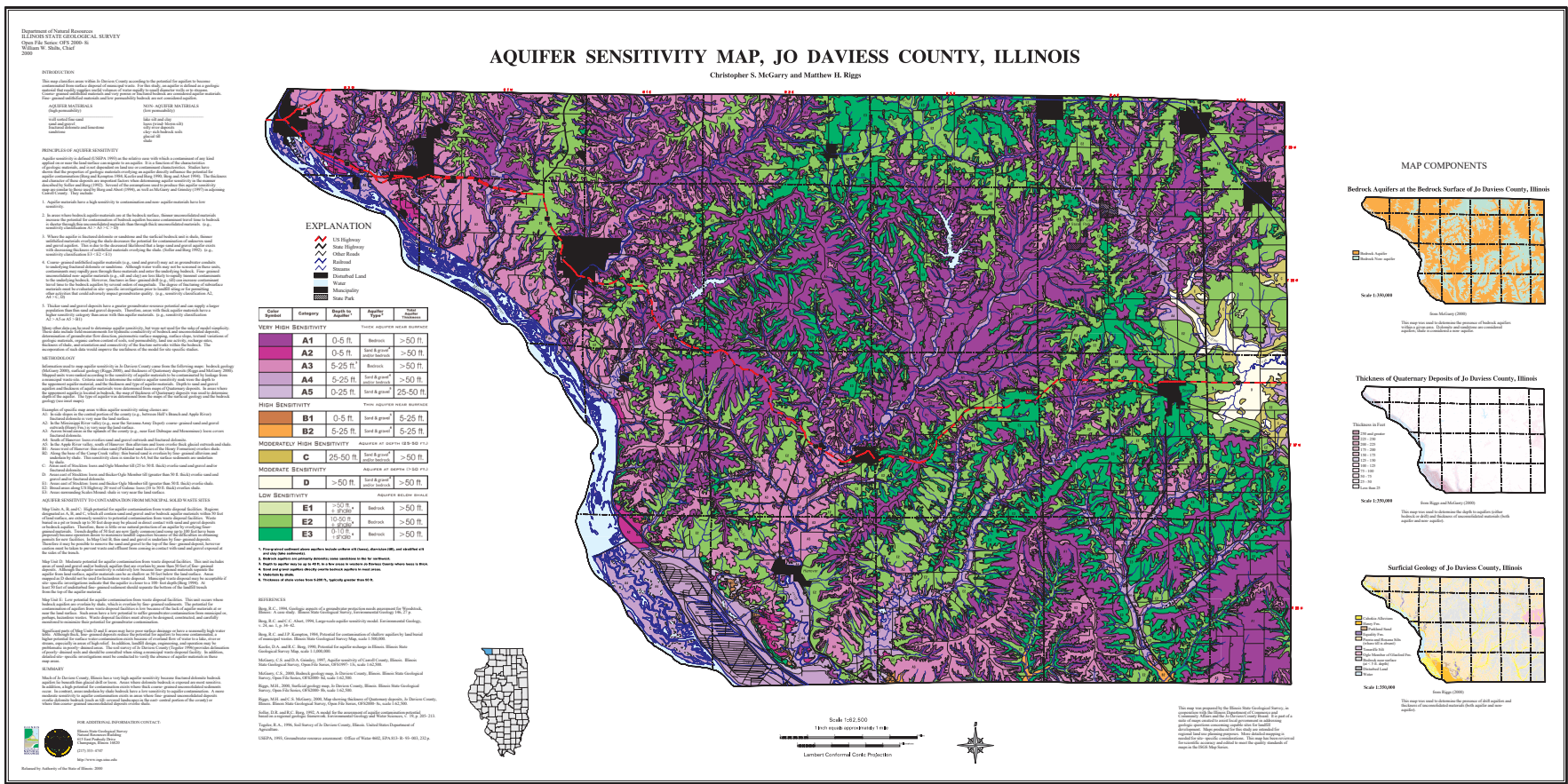
Data Sources: Esri, NASA, NGA, USGS, Jo Daviess County GIS, Jo Daviess County Planning and Development Department, 2023



# Appendix II

## Geological Maps

# Map A.2.A: Aquifer Sensitivity

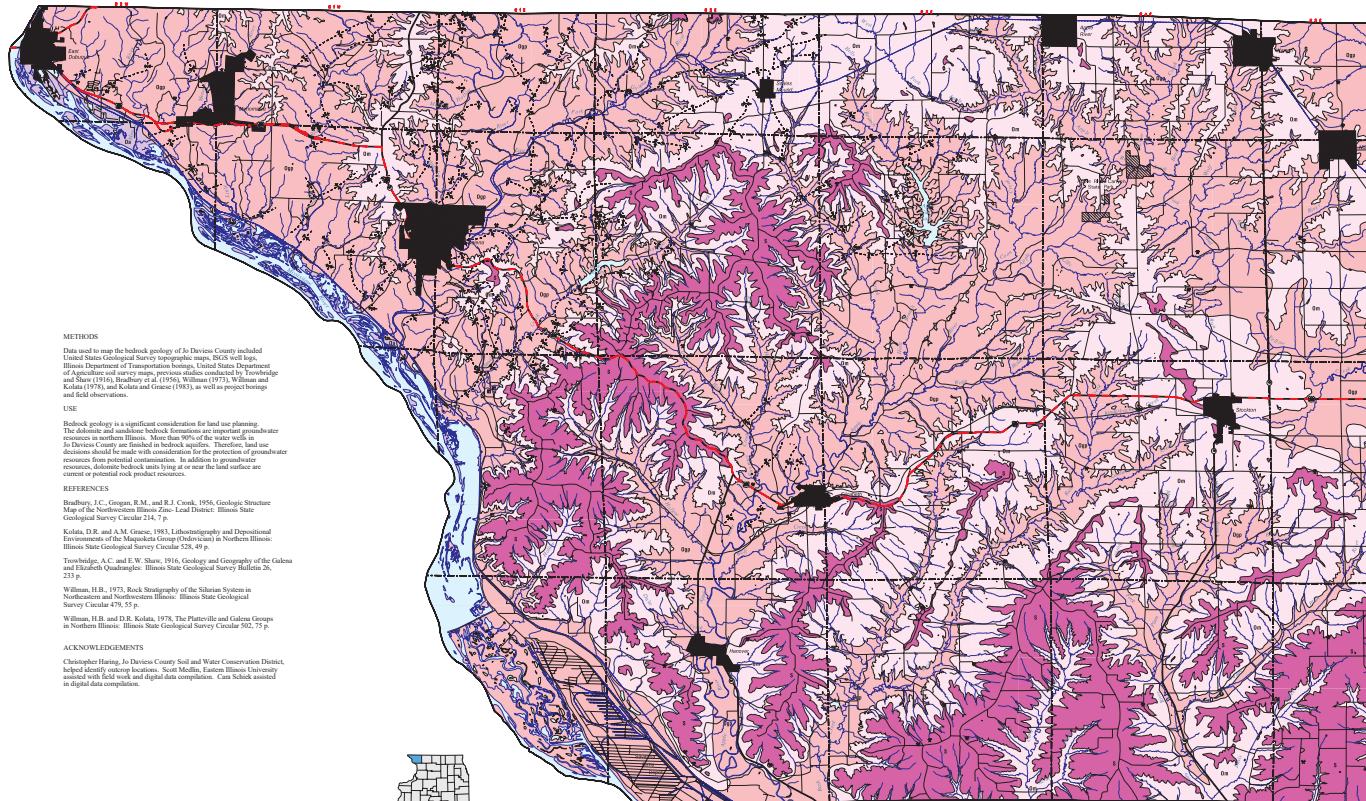


# Map A.2.B: Bedrock Geology

## BEDROCK GEOLOGY MAP, JO DAVIESS COUNTY, ILLINOIS

Christopher S. McGarry

Department of Natural Resources  
ILLINOIS STATE GEOLOGICAL SURVEY  
Open File Series OFS 2009-04  
William W. Shaub, Chief  
2009



### METHODS

Data used to map the bedrock geology of Jo Daviess County included United States Geological Survey topographic maps, USGS well logs, Illinois Department of Transportation maps, United States Department of Agriculture and various maps, Illinois State Department of Geology and Survey maps (1956, Williams (1973), Williams and Kohnen 1978), and Kohnen and Gmeiser (1983), as well as project borings and field observations.

### USE

Bedrock geology is a significant consideration for land use planning. The dolomite and sandstone bedrock formations are important groundwater resources in northern Illinois. More than 90% of the water wells in Jo Daviess County are drilled in bedrock aquifers. Therefore, land use decisions should be made with consideration for the protection of groundwater resources from potential contamination. In addition to groundwater resources, dolomite rock may be used as a natural aggregate or as a source of rock product resources.

### REFERENCES

- Beadler, J. C., Grogan, R. M., and R. J. Cook, 1956, Geologic Structure Map of the Northwestern Illinois Zone, Lead District, Illinois State Geological Survey Circular 214, 7 p.
- Kohnen, D. B., and A. M. Gmeiser, 1983, Lithology and Depositional Environments of the Maquoketa Group (Ordovician) in Northern Illinois, Illinois State Geological Survey Circular 220, 49 p.
- Townsend, A. C. and E. W. Shaw, 1916, Geology and Geography of the Galena and Elizabeth Quadrangles, Illinois State Geological Survey Bulletin 26, 223 p.
- Williams, H. B., 1973, Rock Stratigraphy of the Silurian System in Northeastern and Northwestern Illinois, Illinois State Geological Survey Circular 475, 55 p.
- Williams, H. B. and D. B. Kohnen, 1978, The Plattville and Galena Groups in Northern Illinois, Illinois State Geological Survey Circular 502, 79 p.

### ACKNOWLEDGEMENTS

Christopher Haug, Jo Daviess County Soil and Water Conservation District, helped identify survey locations. Scott Medina, Eastern Illinois University assisted with field work and digital data compilation. Curt Schuck assisted in digital data compilation.

FOR ADDITIONAL INFORMATION CONTACT:  
Illinois State Geological Survey  
615 East Randolph Street, 7th  
Springfield, Illinois 62761  
(217) 533-4347  
http://www.isgs.uiowa.edu  
Revised by Authority of the State of Illinois 2009

Scale 1:62,500  
1 inch equals approximately 1.18 miles  
Lambert Conformal Conic Projection



**SILURIAN SYSTEM**  
undifferentiated (0 - 150 feet thick)  
Dolomite, brownish gray; some beds contain white chert very northwesterly of here. The cliff-forming rock crops out in the northeast.

**ORDOVICIAN SYSTEM**  
Maquoketa Group (0 - 180 feet thick)  
Shale, dolomite, silty, greenish gray; well-laminated dolomite lenses in the lower half. Although the unit crops out on gentle slopes throughout the county, exposures of this type; forming rock are scarce due to vegetation. These rocks are well exposed in a railroad cut west of Scales Mound and a roadcut along US Highway 20 east of Elizabeth.

Galena and Plattville Groups (0 - 300 feet thick)  
Dolomite and limestone, yellowish-brown and gray; some cherty beds; some micaceous beds, esp. the lower part. The Plattville Group is fine grained and laminated, based on the Galena Group. The Plattville Group consists of limestone in the western half of the county. These cliff-forming rocks are exposed in an area along the Apple River at Apple River Canyon State Park and in many roadcuts throughout the county (e.g. along US Highway 20 west of Galena). These rocks contain local and rare (epidote and sphalerite) that has been extensively mined in the region in the past. Only larger mica shales are shown on this map, most smaller mica-shale outcrops.

Ancestral Group (100 - 200 feet thick)  
Sandstone, brown, fine- to medium-sized quartz grains, well sorted, pur. The upper 25 feet is composed of interbedded dolomite, fine- to medium-grained sandstone and shale. These rocks are not exposed at the land surface in the county, but underlie the sediments in the Mississippi River valley.

Surface Water  
Syncline  
Misc. Shale (all are abandoned)  
Quarry  
Municipality  
State Park  
US Highway  
State Highway  
Other Road  
Railroad  
Stream

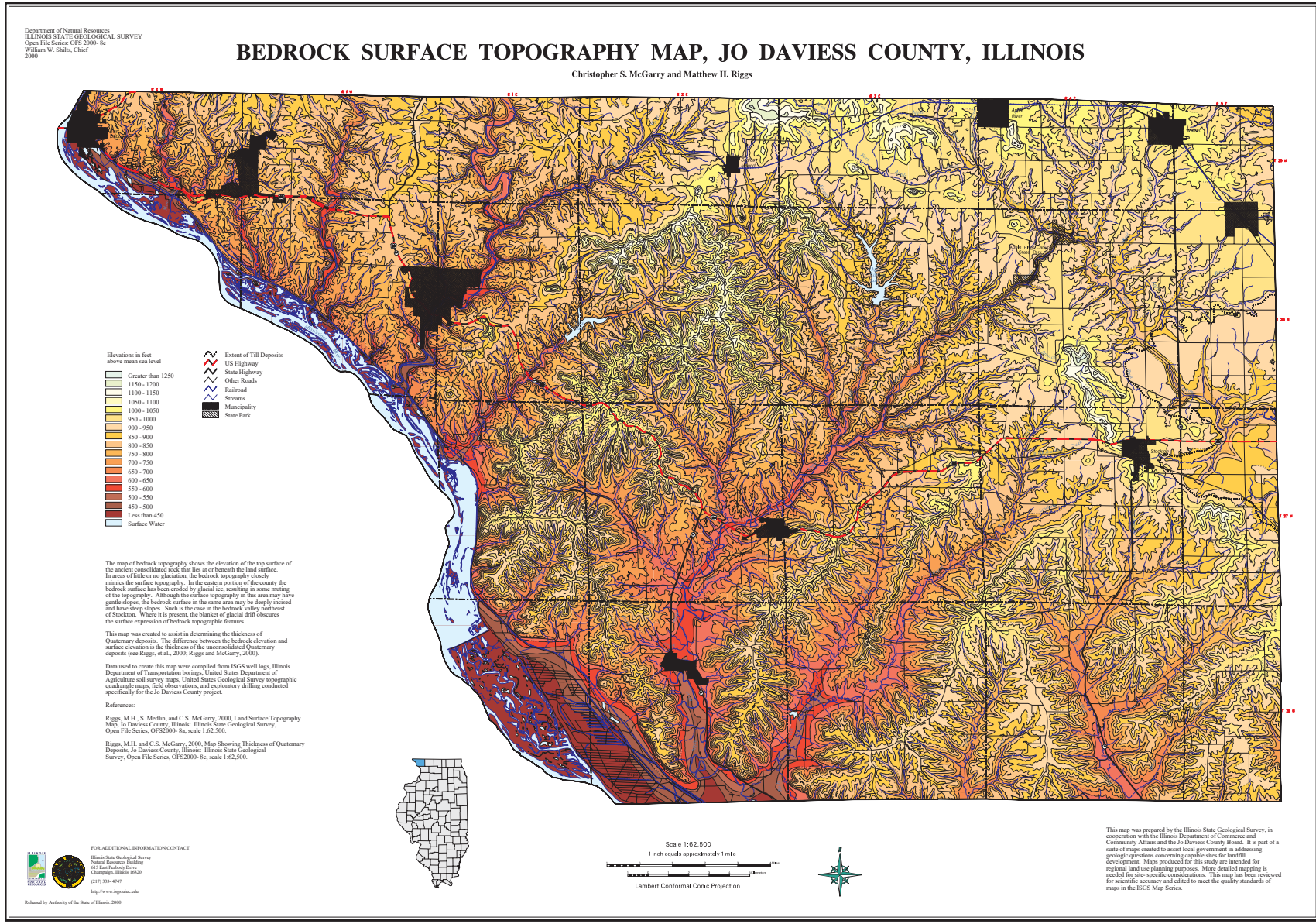
**SILURIAN**  
undifferentiated  
Maquoketa Grp.  
**ORDOVICIAN**  
Plattville Grp.  
Galena Grp.  
Ancestral Grp.

**Key**  
Limestone/Dolomite  
Sandstone  
Shale  
Shale  
Sandstone  
Dolomite, chert  
Carbonate surface  
Chert  
Phosphatic nodules

Modified from Williams (1973), Williams and Kohnen (1978), and Kohnen and Gmeiser (1983)

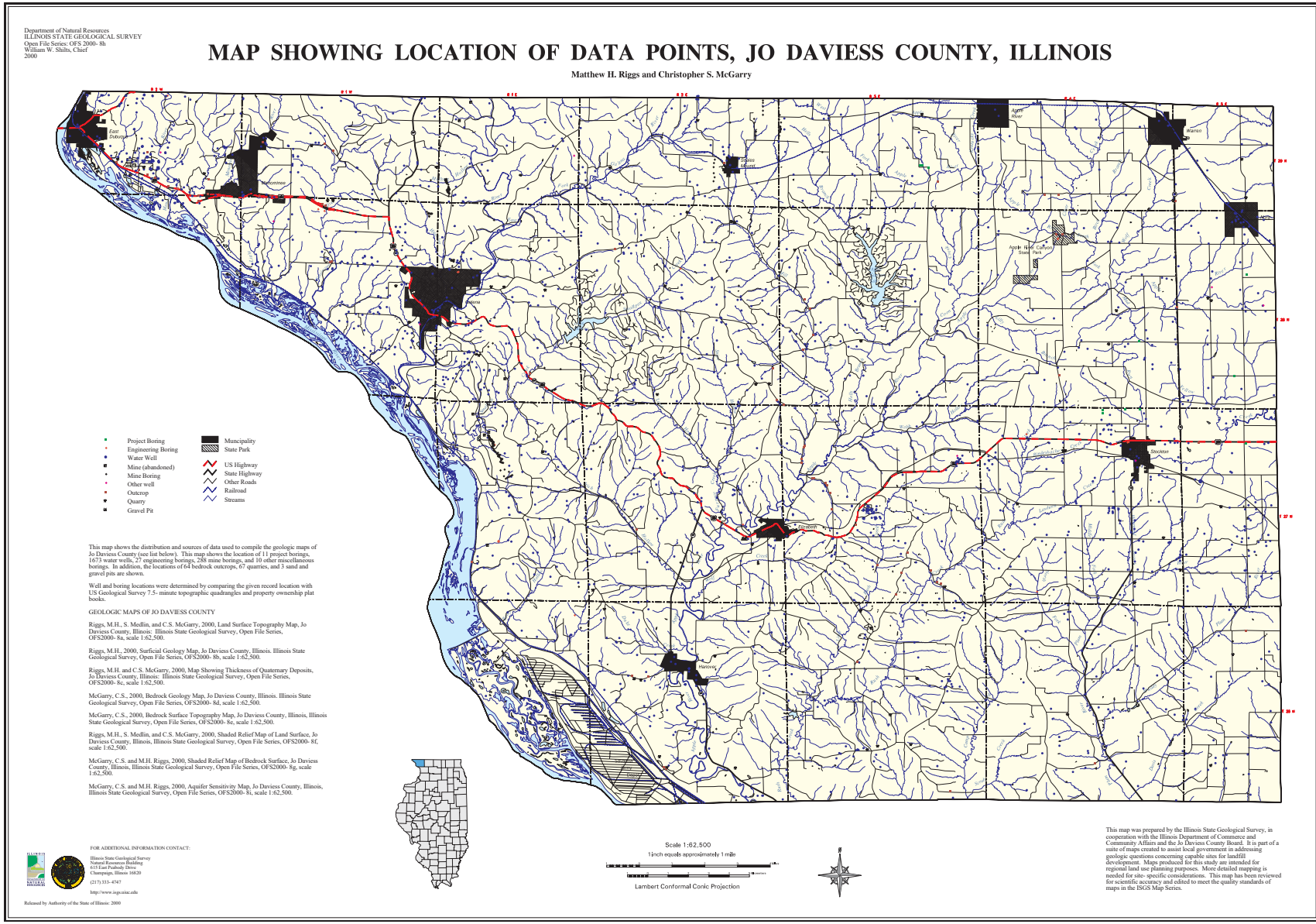
This map was prepared by the Illinois State Geological Survey, in cooperation with the Illinois Department of Commerce and Community Affairs and the Jo Daviess County Board. It is part of a series of maps created to assist local government in addressing geologic questions concerning suitable sites for landfill development. Maps produced for this study are intended for regional land use planning purposes. More detailed mapping is needed for site-specific considerations. This map has been reviewed for scientific accuracy and edited to meet the quality standards of maps in the ISGS Map Series.

# Map A.2.C: Bedrock Surface Topography

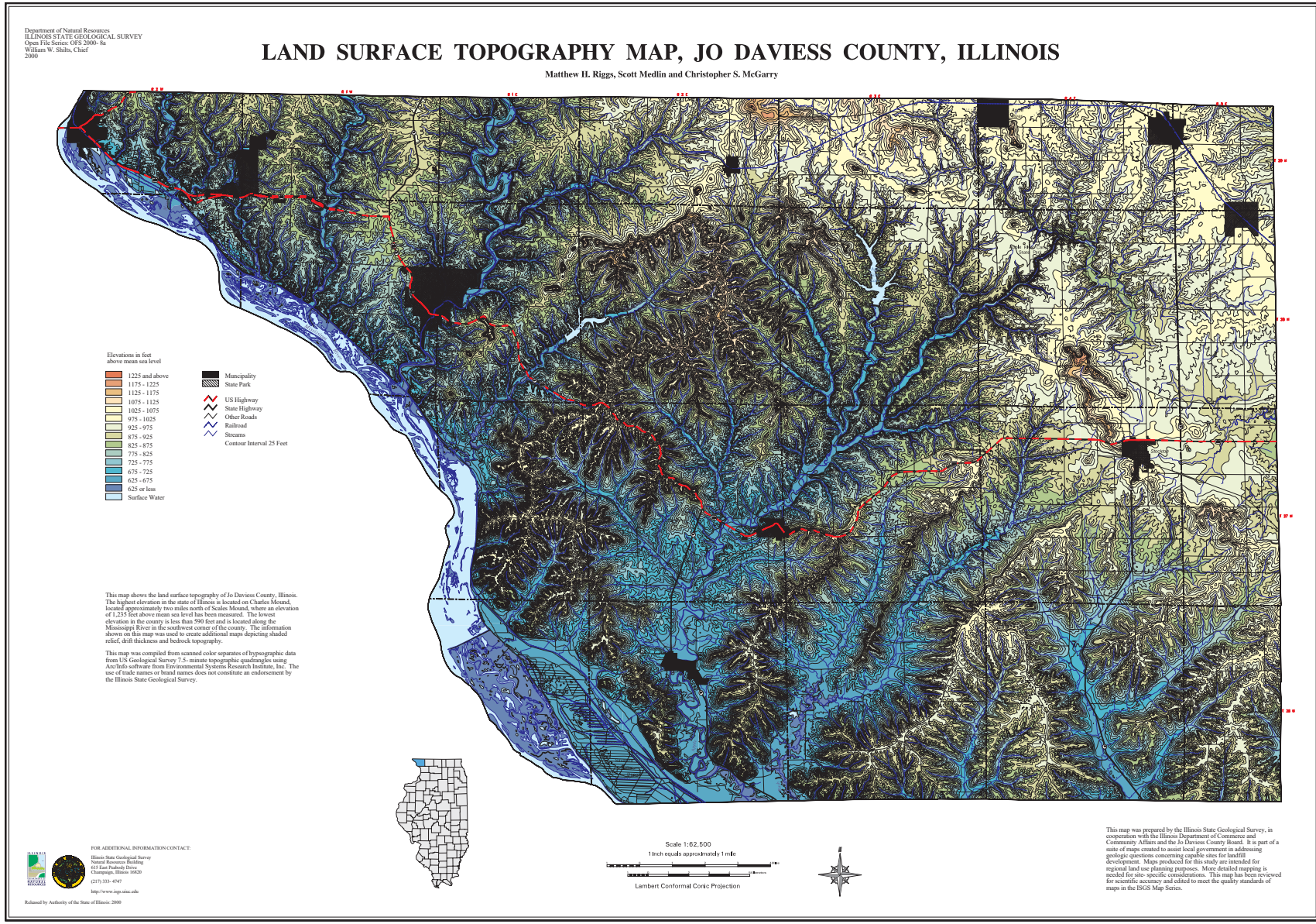




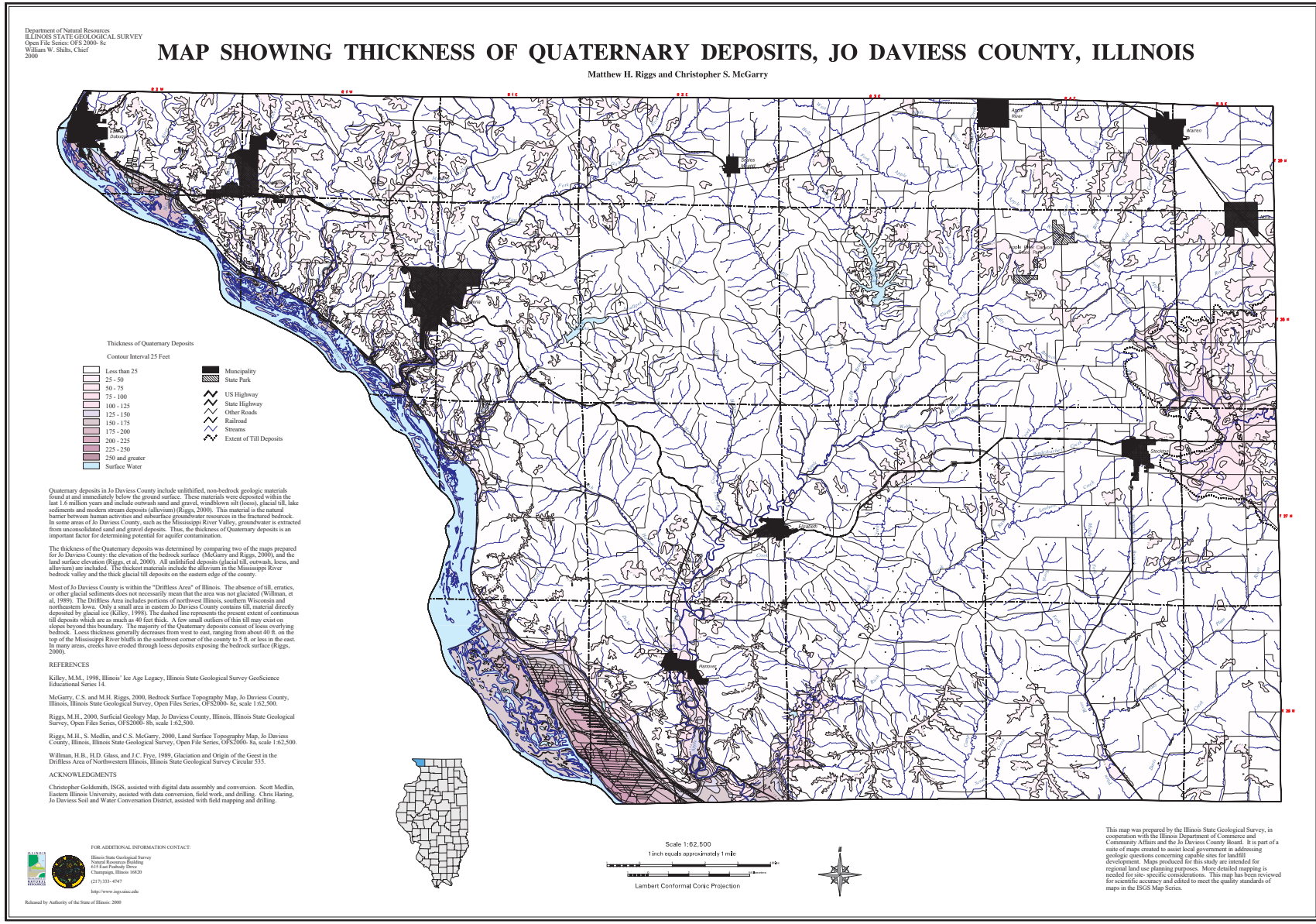
# Map A.2.D: Location of Data Points



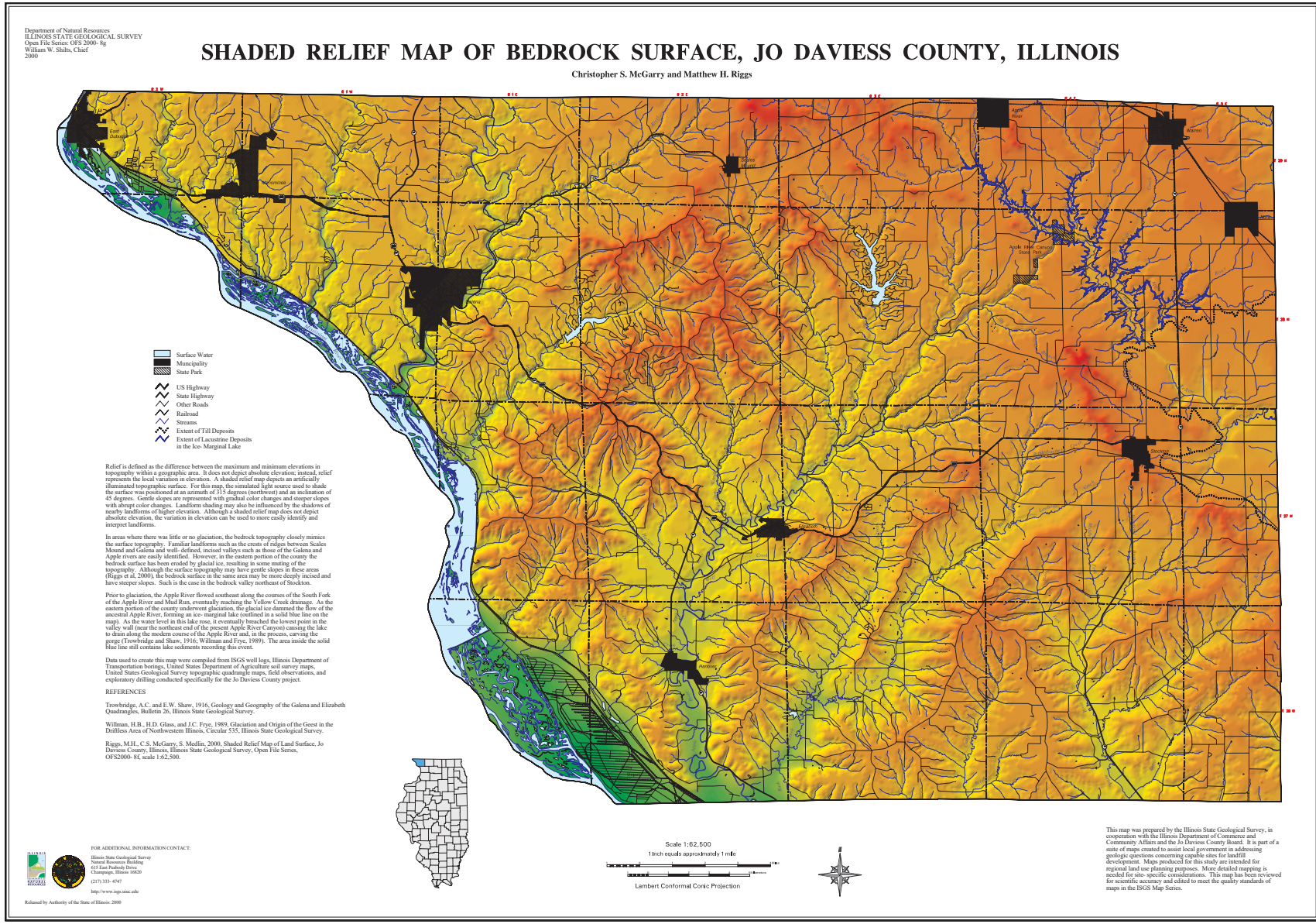
# Map A.2.E: Land Surface Topography



# Map A.2.F: Thickness of Quaternary Deposits



# Map A.2.G: Shaded Relief of Bedrock Surface

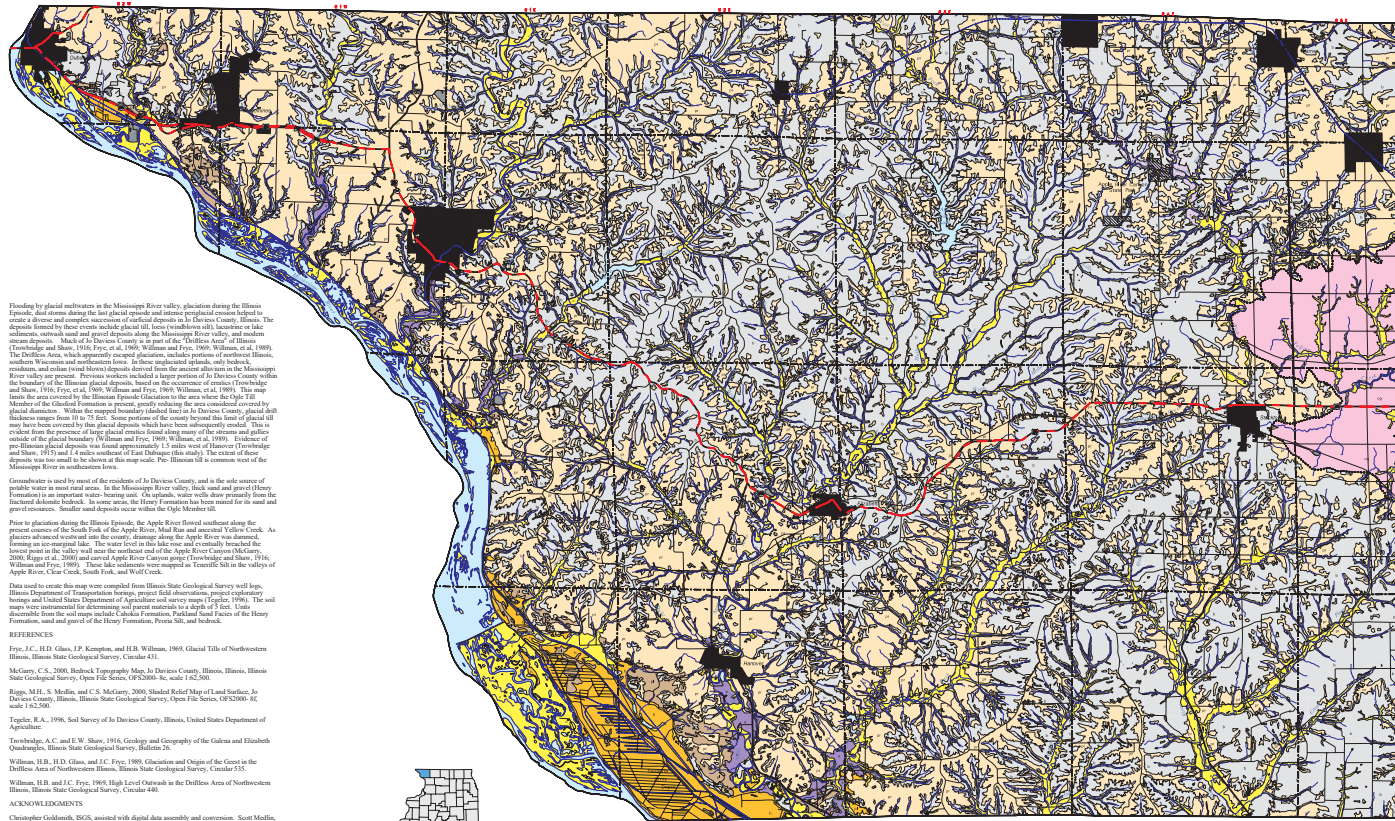


# Map A.2.H: Surficial Geology

## SURFICIAL GEOLOGY MAP, JO DAVIESS COUNTY, ILLINOIS

Matthew H. Riggs

Department of Natural Resources  
ILLINOIS STATE GEOLOGICAL SURVEY  
Open File Series, OFS 2009-16  
William W. Shook, Chief  
2009



Flowing by glacial meltwaters in the Mississippi River valley, glaciation during the Illinoian Epoch, that covers almost the entire region, deposited extensive till and sand and gravel deposits in a diverse and complex succession of surficial deposits in Jo Daviess County, Illinois. The deposits formed by these events are the glacial till, loess, and gravel. In addition to till, sand, and gravel, the Illinoian Epoch also deposited extensive sand and gravel deposits in the Mississippi River valley, and modern recent deposits. Much of Jo Daviess County is a part of the "Dixie Area" of Illinois (Townbridge and Shaw, 1916; Fry, et al., 1969; Williams and Fry, 1969; Williams et al., 1989). The Dixie Area, which represents extensive glacial deposits, includes modern Illinoian, southern Wisconsin and recent loess. In these unglaciated uplands, only bedrock, Wisconsin and modern loess, and gravel deposits derived from the Illinoian Epoch are present. The boundary of the Illinoian glacial deposits, based on the occurrence of certain (Townbridge and Shaw, 1916; Fry, et al., 1969; Williams and Fry, 1969; Williams et al., 1989). This map limits the area covered by the Illinoian Epoch (Glaciation) to the area where the Ogle River Member of the Glacial Formation is present, generally indicating the area considered covered by glacial deposits. Within the mapped boundary (dashed line) in Jo Daviess County, glacial till thickness ranges from 0 to 75 feet. Some portions of the county beyond the limit of glacial till may have been covered by fine glacial deposits, which have been subsequently eroded. This is evident from the presence of large glacial erratics found along some of the streams and gullies outside of the mapped boundary (Williams and Fry, 1969; Williams et al., 1989). Evidence of pre-Illinoian glacial deposits was found approximately 1.5 miles west of Hannox (Townbridge and Shaw, 1916) and 1.4 miles southeast of East Dubuque (this study). The extent of these deposits was not studied in this map. The Illinoian till is common west of the Mississippi River in northwestern Iowa.

Groundwater is used by most of the residents of Jo Daviess County, and is the sole source of potable water in most rural areas. In the Mississippi River valley, thick sand and gravel (Henry Formation) is an important water-bearing unit. On uplands, water wells draw primarily from the fractured dolomite bedrock. In some areas, the Henry Formation has been eroded for its sand and gravel resources. Smaller sand deposits occur within the Ogle Member till.

Prior to glaciation during the Illinoian Epoch, the Apple River flowed southeast along the present course of the South Fork of the Apple River, Shell Run and present Yellow Creek. As glacial meltwater moved into the county, drainage along the Apple River was altered, forming an ice marginal lake. The water level in this lake rose and eventually breached the lowlands and the valley walls to the west and to the Apple River valley (McGarry, 2000; Riggs et al., 2000) and lateral Apple River Canyon gully (Townbridge and Shaw, 1916; Williams and Fry, 1969). These lake sediments were eroded as "fencerail" till in the valleys of Apple River, Clear Creek, South Fork, and Wolf Creek.

Data used to create this map were compiled from Illinois State Geological Survey well logs, Illinois Department of Transportation bridge project field observations, geologic maps, and other sources. The map was prepared for the Illinois State Geological Survey in 1998. The map was revised for the Illinois State Geological Survey in 2009. The map was revised for the Illinois State Geological Survey in 2009. The map was revised for the Illinois State Geological Survey in 2009.

**REFERENCES**

Fry, J.C., H.D. Glass, J.P. Kempton, and H.B. Williams, 1969. Glacial Till of Northwestern Illinois. Illinois State Geological Survey, Circular 411.

McGarry, C.S., 2000. Bedrock Topography Map, Jo Daviess County, Illinois. Illinois State Geological Survey, Open File Series, OFS2000-16, scale 1:62,500.

Riggs, M.H., S. Medina, and C.S. McGarry, 2000. Shaded Relief Map of Land Surface, Jo Daviess County, Illinois. Illinois State Geological Survey, Open File Series, OFS2000-16, scale 1:62,500.

Taylor, R.A., 1996. Soil Survey of Jo Daviess County, Illinois. United States Department of Agriculture.

Townbridge, A.C. and E.W. Shaw, 1916. Geology and Geography of the Galena and Elizabeth Quadrangles. Illinois State Geological Survey, Bulletin 26.

Williams, H.B., H.D. Glass, and J.C. Fry, 1969. Glaciation and Origin of the Gullies in the Dixie Area of Northwestern Illinois. Illinois State Geological Survey, Circular 135.

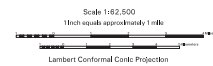
Williams, H.B. and J.C. Fry, 1969. High Level Outwash in the Dixie Area of Northwestern Illinois. Illinois State Geological Survey, Circular 448.

**ACKNOWLEDGMENTS**

Christopher Goldsmith, ES&S, assisted with digital data assembly and conversion. Scott Moffitt, Eastern Illinois University, and Dan Harms, Jo Daviess Soil and Water Conservation District, assisted with field work and drilling.

FOR ADDITIONAL INFORMATION CONTACT:  
Illinois State Geological Survey  
615 Laramie Parkway  
Urbana, Illinois 61820  
618/243-4242  
http://www.isgs.uiowa.edu

Revised by authority of the Board of Illinois, 2009



This map was prepared by the Illinois State Geological Survey, in cooperation with the Illinois Department of Commerce and Community Affairs and the Jo Daviess County Board. It is a part of a continuing series of maps prepared by the Illinois State Geological Survey for regional land use planning purposes. More detailed mapping is needed for site-specific considerations. This map has been reviewed for scientific accuracy and edited to meet the quality standards of maps in the OGS Map Series.

- SURFICIAL SEDIMENTS**
- ILLINOIAN EPOCH** (postglacial, younger than 12,000 years old)
    - Clayey Formation**  
Silt, clay, and sand, stratified, occurs in modern creek valleys and river channels and is 2 to 25 feet thick. Includes significant amounts of redoximorphic loess. Overlies black sand and gravel (Henry Formation) in the floodplains and backwater channels of the broad Mississippi River valley.
    - Henry Formation**  
Sand and gravel, stratified, up to 200 feet thick in the Mississippi River valley. Can include up to 30 feet of surficial dune sand.
    - Parkland Sand Facies**  
Sand, well sorted, stratified, approximately 5-30 feet thick, occurs as sheet sand or dune sand. Mapped on uplands and in some regions of the Mississippi River valley overlying the Henry Formation.
    - Fencerail Formation**  
Silt and clay, laminated, occurs as slackwater lake deposits along the Mississippi River, Little Missouri River, Sissouri River, Galena River, Bush Creek, and Apple River in western Jo Daviess County.
    - Poona and Roman Silts**  
Silt fines. Mapped only where < 5 feet thick and where glacial till is absent. Loaded with carbonates from typically 4-12 feet below the land surface. Loess covers most of the county, and gradually decreases in thickness from 15 feet in western areas, to 15-20 feet in central areas, to 10-15 feet in northeastern areas on unglaciated uplands. Poona Silt comprises most of the unit, with the underlying Roman Silt < 5 feet thick. Laminated Silt (Illinoian Epoch) loess and carbonates, containing the Sangamon Canal, may be present beneath Wisconsin Epoch loess in unglaciated areas.
    - SANGAMON EPOCH** (approximately 13,000 - 55,000 years old)
      - Nondeposition, erosion or weathering of underlying units (formation or Sangamon Canal)**
    - ILLINOIAN EPOCH** (approximately 20,000 - 130,000 years old)
      - Terraced silt**  
Silt and clay, massive or laminated, along Apple River and South Fork Middle River in eastern Jo Daviess County north of the Illinoian Epoch glacial margin. These lacustrine sediments were deposited in slackwater lakes in valleys drained by glacial ice or outwash.
      - Ogle Member of Glacial Formation (5 - 50 feet thick)**  
Diatomite, yellow, brown to gray, varies in texture from sandy loam, loam, silt loam, and silt clay, includes lenses of stratified sand and gravel. The Sangamon Canal occurs in the upper 5-7 feet. This unit is overlain by 3-15 feet of Wisconsin Epoch loess and is typically underlain by 0-15 feet of residual or sorted Quaternary drift above bedrock.
    - ORDOVICIAN AND SILURIAN BEDROCK**  
Bedrock at surface or below < 5 feet of loess, siltstone, diatomite or sandstone.  
Dolomite and shale of the Galena and Plattville Groups (dolomite), Maquoketa Group (Ordovician shale), and undivided Shinarump dolomite. The medium to dolomite is a red clay, 4-6 feet thick, formed by chemical alteration of bedrock; it is sometimes underlain by 1 foot of dolomite sand.

- Disturbed Land**
- Water**
- Municipality**
- State Park**
- State Highway**
- US Highway**
- Other Roads**
- Railroad**
- Stream**
- Extent of Till Deposits**



05:32:47 pm  
01/29/2024

# Appendix III

## Public Engagement

# Public Outreach

Development of Plan Jo Daviess 2045 included the following engagement activities which helped the consultant team identify the vision, establish goals, and develop actions for implementation:

- Pop-Up Meetings
- Community Survey
- Project Website
- Crowdsourc Map
- Stakeholder Interviews and Focus Groups
- Public Meetings (3)
- Digital/Media Outreach

## Steering Committee Meetings

Development of Plan Jo Daviess 2045 was led by a steering committee. Members of the committee were identified by County leaders and the consultant team. Activities that led discussion in the meetings included a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, existing land use review, recreation and cultural visioning, and review of the proposed goals and strategies.

## Public Meetings

Three public meetings were held at various locations around the County (Elizabeth, Galena, and East Dubuque). These meetings allowed members of the community to participate in SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis, cultural visioning, and discussion of current and future goals for the community.

The third public meeting was an Open House. Those that attended were able to learn more about the planning process, development of the Comprehensive Plan, and review feedback recieved from the online community survey and previous public and Steering Committee Meetings, as well as the draft goals and objectives that were developed.

### Goals and Objectives

<b>Goal I: Promote and Preserve Human Resources</b> <b>High Priority Objectives:</b> <ul style="list-style-type: none"><li>• Encourage retention and creation of jobs attractive to families and youth.</li><li>• Plan for services which will meet the needs of an increasing senior population.</li></ul> <b>Moderate Priority Objectives:</b> <ul style="list-style-type: none"><li>• Encourage selective investment consistent with county and community plans.</li><li>• Encourage activities which bring local people together and promote community spirit.</li><li>• Promote activities and projects which enhance awareness of heritage and preservation of historical assets.</li></ul>	<b>Goal IV: Preserve Scenic Beauty</b> <b>High Priority Objectives:</b> <ul style="list-style-type: none"><li>• Identify and map scenic routes in the county as an informational tool.</li><li>• Develop a plan for conserving scenic areas through zoning, easements, acquisition, or purchase of development rights.</li><li>• Prohibit commercial development along highways and at rural interchanges except by county/community agreement within contiguous growth areas.</li></ul> <b>Moderate Priority Objectives:</b> <ul style="list-style-type: none"><li>• Identify areas appropriate for public access (e.g. scenic overlooks, parks) and develop accordingly.</li><li>• Limit billboards in scenic areas.</li><li>• Establish consistent informational signage.</li><li>• Develop a county open space and recreation plan.</li><li>• Consider county application to IDNR for Greenway Planning Grant (Note: This has been accomplished).</li><li>• Work with IDNR, local communities and surrounding counties (in Illinois, Wisconsin, and Iowa) to encourage</li></ul>
<b>Goal II: Promote Vibrant Communities</b> <b>High Priority Objectives:</b> <ul style="list-style-type: none"><li>• Encourage and, when possible, assist in the development of current community comprehensive plans.</li><li>• Encourage and, when possible, assist in the development of infrastructure improvements designed to meet community development goals.</li><li>• Direct development to existing development centers where infrastructure and services are readily available or easily provided.</li><li>• Encourage development of affordable housing and senior housing within communities (see Housing Study strategies). "Promoted to high priority based on community and stakeholder feedback"</li></ul> <b>Moderate Priority Objectives:</b> <ul style="list-style-type: none"><li>• Respect the desires of development centers in the consideration of all development proposals for property within the role and a half or Contiguous Growth Areas surrounding those centers.</li><li>• Explore cooperative efforts to provide services efficiently (e.g. County building inspector contracting services to communities).</li></ul>	<b>Goal V: Support Agriculture</b> <b>High Priority Objectives:</b> <ul style="list-style-type: none"><li>• Designate an Agriculture Preservation Area that encompasses large contiguous areas of prime and important farmland, for use as an informational tool, locating areas where non-agricultural development is to be limited.</li><li>• Require development to provide buffer strips between the development and agricultural uses.</li><li>• Explore potential of Agri-tourism. "Promoted to high priority based on community and stakeholder feedback"</li></ul> <b>Moderate Priority Objectives:</b> <ul style="list-style-type: none"><li>• Encourage and facilitate access to new markets for agricultural products (e.g. organizing special marketing cooperatives for hay, dairy products, organic crops, genetically altered crops and seed, as well as small "niche" markets for specialty crops and products).</li><li>• Encourage local farm support businesses providing equipment, fertilizer, feed, seed, parts, repair shops and technical support.</li><li>• Improve public awareness about the realities of rural living in Jo Daviess County.</li><li>• Improve quality of secondary roads.</li></ul>
<b>Goal III: Support Economic Development and Growth</b> <b>High Priority Objectives:</b> <ul style="list-style-type: none"><li>• Support creation and creation of jobs providing wages sufficient to support families.</li><li>• Support U.S. Route 20 4 lane development in a manner that will encourage development in communities and their contiguous growth areas rather than in rural areas.</li><li>• Maintain county wide development effort that coordinates and builds on local community efforts.</li><li>• Improve transportation (pedestrian linkages, roadways, public transportation, river transportation).</li><li>• Improve communication technology.</li><li>• Build on tourism success, focusing on the natural, historical and cultural assets of the county.</li><li>• Improve and support education, job training and retaining efforts.</li><li>• Involve Township Road Commissioners on all development proposals within their jurisdiction.</li><li>• Encourage appropriate signage.</li></ul>	

## Pop-Up Meeting: Manufacturing Day

MSA Staff attended Manufacturing Day, an event facilitated by NWILED that invites students from High Schools in both Jo Daviess and Carroll Counties to learn about a variety of career options in manufacturing, trades, and beyond. Students were asked to place stickers on boards of what careers they were interested in and what activities they liked to do in their spare time, as well as answer a short survey about current and future conditions of Jo Daviess County.



**What Kind of Career(s) Are You Interested In?**

<b>Agriculture, Food, and Natural Resources</b> <ul style="list-style-type: none"> <li>• Crop Production</li> <li>• Farm Production</li> <li>• Food Processing</li> <li>• Horticulture</li> <li>• Plant Production</li> </ul>	<b>Architecture, Development, and Construction</b> <ul style="list-style-type: none"> <li>• Architecture</li> <li>• Construction Management</li> <li>• Drafting</li> <li>• Electrical</li> <li>• Engineering</li> <li>• Environmental</li> <li>• Industrial</li> <li>• Manufacturing</li> </ul>	<b>Finance</b> <ul style="list-style-type: none"> <li>• Accounting</li> <li>• Finance</li> <li>• Insurance</li> <li>• Investment</li> <li>• Management</li> <li>• Marketing</li> <li>• Sales</li> <li>• Services</li> </ul>	<b>Manufacturing</b> <ul style="list-style-type: none"> <li>• Manufacturing Engineering</li> <li>• Manufacturing Technology</li> <li>• Production</li> <li>• Quality Control</li> <li>• Safety</li> <li>• Welding</li> </ul>
<b>Government</b> <ul style="list-style-type: none"> <li>• Library</li> <li>• Office Management</li> <li>• Public Administration</li> <li>• Public Safety</li> <li>• Social Science</li> </ul>	<b>Healthcare</b> <ul style="list-style-type: none"> <li>• Health Services</li> <li>• Health Services Administration</li> <li>• Health Services Management</li> <li>• Health Services Technology</li> <li>• Health Services Training</li> </ul>	<b>Hospitality and Tourism</b> <ul style="list-style-type: none"> <li>• Event Management</li> <li>• Food and Beverage</li> <li>• Hospitality Management</li> <li>• Travel</li> <li>• Tourism</li> </ul>	<b>Marketing, Sales, and Service</b> <ul style="list-style-type: none"> <li>• Advertising</li> <li>• Business Development</li> <li>• Business Management</li> <li>• Business Operations</li> <li>• Business Strategy</li> <li>• Business Training</li> </ul>
<b>Information Technology</b> <ul style="list-style-type: none"> <li>• Information Systems</li> <li>• Information Systems Management</li> <li>• Information Systems Technology</li> <li>• Information Systems Training</li> <li>• Information Systems Administration</li> </ul>	<b>Arts, Audio/Visual Technology and Communications</b> <ul style="list-style-type: none"> <li>• Audio Production</li> <li>• Audio Production Management</li> <li>• Audio Production Technology</li> <li>• Audio Production Training</li> <li>• Audio Production Administration</li> </ul>	<b>Human Services</b> <ul style="list-style-type: none"> <li>• Child Development</li> <li>• Child Development Management</li> <li>• Child Development Technology</li> <li>• Child Development Training</li> <li>• Child Development Administration</li> </ul>	<b>Science, Technology, Engineering, and Mathematics</b> <ul style="list-style-type: none"> <li>• Biotechnology</li> <li>• Biotechnology Management</li> <li>• Biotechnology Technology</li> <li>• Biotechnology Training</li> <li>• Biotechnology Administration</li> </ul>
<b>Business Management, and Administration</b> <ul style="list-style-type: none"> <li>• Business Administration</li> <li>• Business Administration Management</li> <li>• Business Administration Technology</li> <li>• Business Administration Training</li> <li>• Business Administration Administration</li> </ul>	<b>Education and Training</b> <ul style="list-style-type: none"> <li>• Education</li> <li>• Education Administration</li> <li>• Education Management</li> <li>• Education Technology</li> <li>• Education Training</li> <li>• Education Administration</li> </ul>	<b>Law, Public Safety, Corrections, and Security</b> <ul style="list-style-type: none"> <li>• Law</li> <li>• Law Administration</li> <li>• Law Technology</li> <li>• Law Training</li> <li>• Law Administration</li> </ul>	<b>Transportation, Distribution, and Logistics</b> <ul style="list-style-type: none"> <li>• Air Transportation</li> <li>• Air Transportation Management</li> <li>• Air Transportation Technology</li> <li>• Air Transportation Training</li> <li>• Air Transportation Administration</li> </ul>

**What do you like to do on the weekend?**

Shopping	Ski/Snowboard	Hunting	Hike
Play	Local Events/Festivals	Go Fishing	Go Boating
Go to a Restaurant	Read a Book	E-bike	Visit a Museum
Watch a Movie	Go to a Game	Visit a Museum	Watch a Musical Play
Go Fishing	Go Swimming/Water Park	Watch a Musical Play	Visit a Coffee Shop
Go Camping	Go Ice Skating	Visit a Coffee Shop	Visit a Coffee Shop
Crafts/Art	Go to a Park	Visit a Coffee Shop	Concert

What other activities do you like to do that we may have missed?



# JO DAVIESS COUNTY – PLANNING SURVEY

This is a survey for the people of Jo Daviess County and neighboring residents to assist in the development of a vision, goals and strategies to update the Jo Daviess County Comprehensive Plan.

## COMPILED RESULTS - 85 SURVEYS COMPLETED 10/05/2023

**Please Circle. How many years have you lived in Jo Daviess County or surrounding area?**

Less than one year – 8	16 to 20 years - 12
1 to 5 years – 14	21 to 30 years - 1
6 to 10 years – 6	31 to 40 years - 0
11 to 15 years - 44	41 to 50 years – 0

**Please Circle. What are the TOP THREE (3) items that would keep or bring you back to the Jo Daviess County Area?**

- 45 Improved Roads
- 40 More/Better Shopping
- 31 More Parks & Trails
- 28 More Farming
- 16 More Employment Opportunities
- 15 More Rural Event Venues & Businesses
- 11 Better Access to Healthcare
- 10 More Housing in Cities/ Communities
- 9 More Housing in the Rural Area
- 8 More Roads
- 7 Improved Water Quality
- 6 More Businesses Along US Route 20
- 6 Less Farming
- 3 More Non-Agricultural Industry
- 1 Less Housing in the Rural Areas
- 1 Other: Marketing

**What is your favorite part about living in the Jo Daviess County area?**

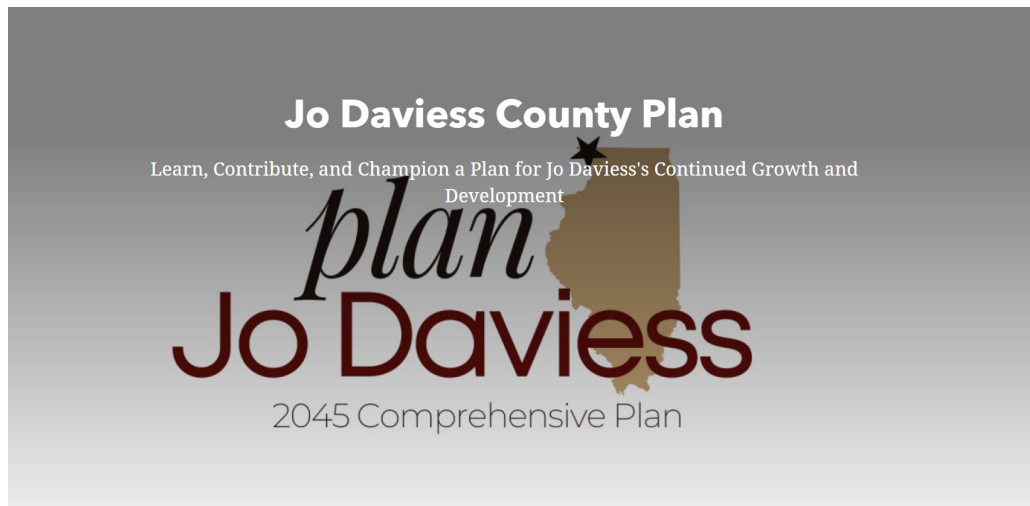
6 Farms	1	Ice Cream Shops	Easy to travel to different places in a short amount of time
2 School	1	Driving	2 Local Events
19 Friends/Family	1	Sports	3 The Peace
11 The People	1	Small Business	1 The Fair
2 Less Noise	3	Safety	1 Country Open Space
8 The Views	5	It is kept Small	1 The environment
1 The weather	1	The Shopping	

**What is your least favorite part about living in the Jo Daviess County area?**

2 Potholes	1	Littering	1 Small Towns
4 Nothing	1	No Cool Stores	1 Working
6 It is boring	16	Not a lot of places to go to/Things to do	1 No Parks
13 People/Tourists	2	The Drive to get anywhere	1 All the Farms
1 Traffic	8	The Roads/ US 20	2 How small it is
4 The School	3	The Corn	1 NO Ocean
1 Not a lot of people	2	Smell of Farms/ Poop Smell	1 It is Cold
1 The Open Space	1	Lack of Businesses	1 The "Manor"
1 Tractors on the main roads			

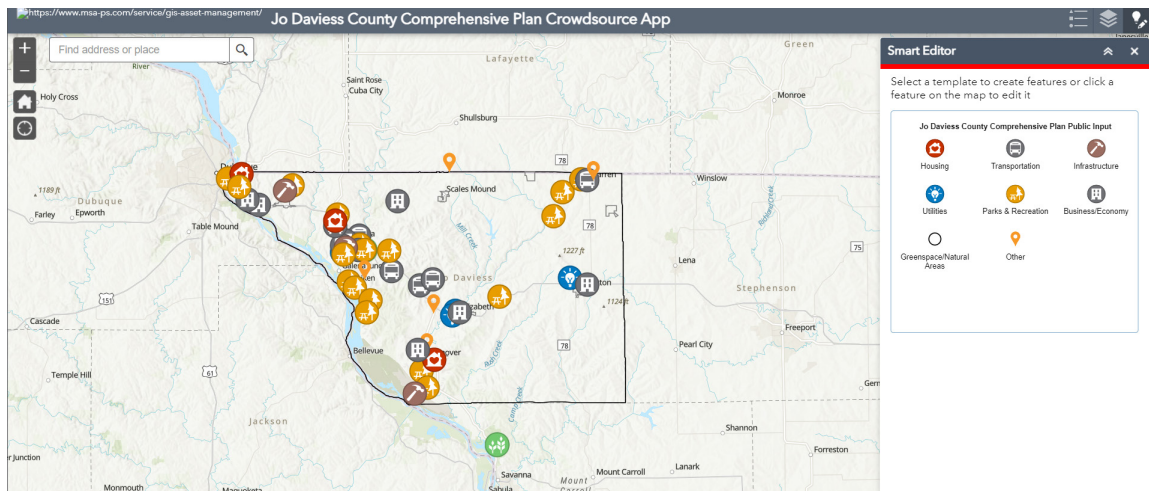
## Online Engagement

### Project Website



The Plan Jo Daviess 2045 project website provided a space to share project information and a venue for public comments throughout the planning process. Here, the project team shared information about planning, event notices, and draft plan documents.

### Crowdsource Map



A crowdsourcing map is an interactive mapping tool that allows community members to collaboratively map strengths, opportunities, weaknesses, and threats for community elements related to the Iowa Smart Planning Law including housing, economic development, infrastructure, natural resources, parks and recreation, transportation, and utilities. Each element included options to identify a selection as a strength, weakness, opportunity, or threat. Participants could also provide comments to provide more insight into their ideas identified on the map. Since the application was open source and available to the public, feedback was visible to anyone throughout the collection period. Although feedback was visible, participation was anonymous.

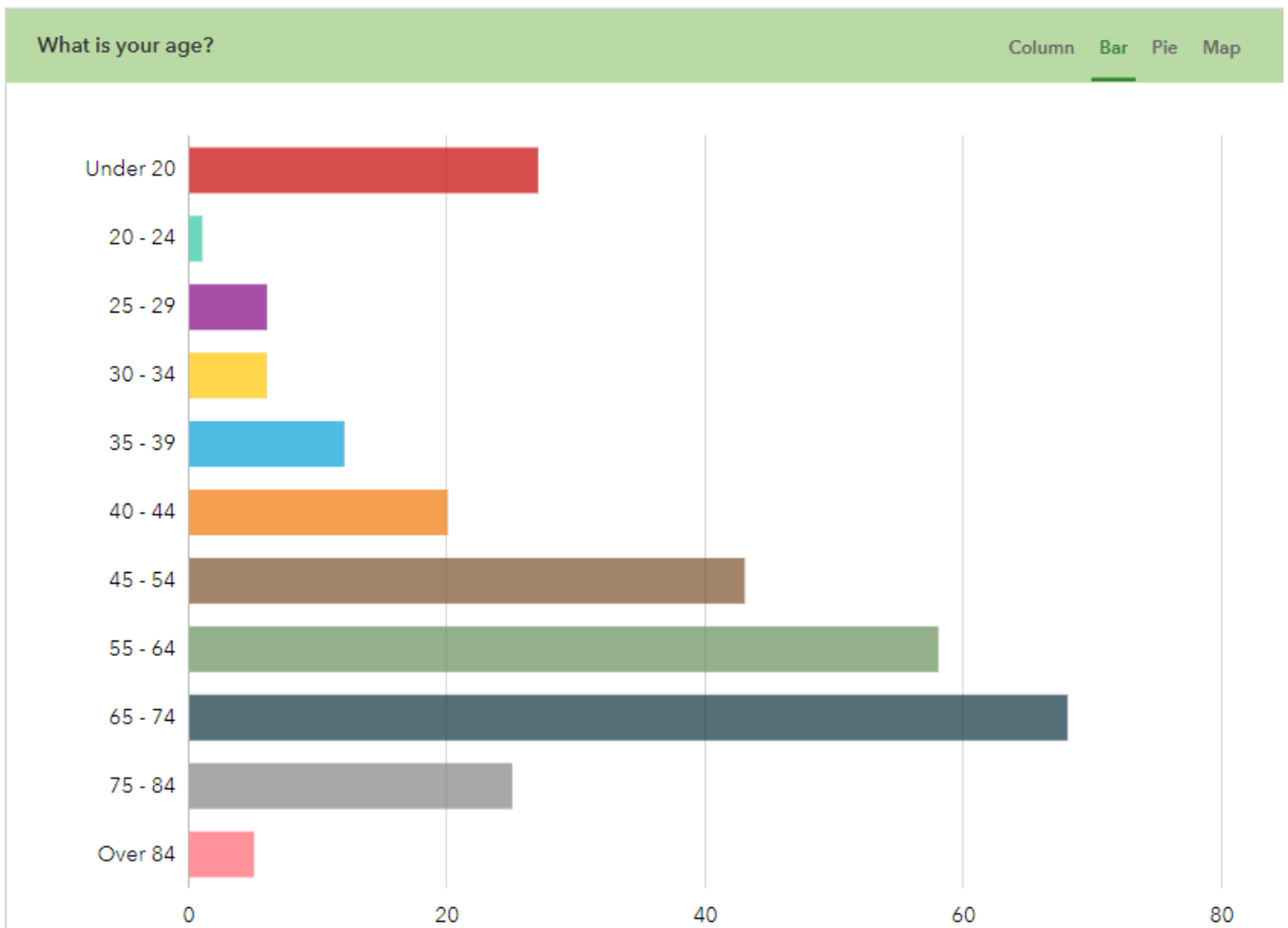
### Jo Daviess County - Planning Survey

This is a survey for the people of Jo Daviess County to assist in the development of a vision, goals, and strategies to update the 2012 Comprehensive Plan.

Please take a couple minutes of your time to complete this survey to assist the County in this planning process.

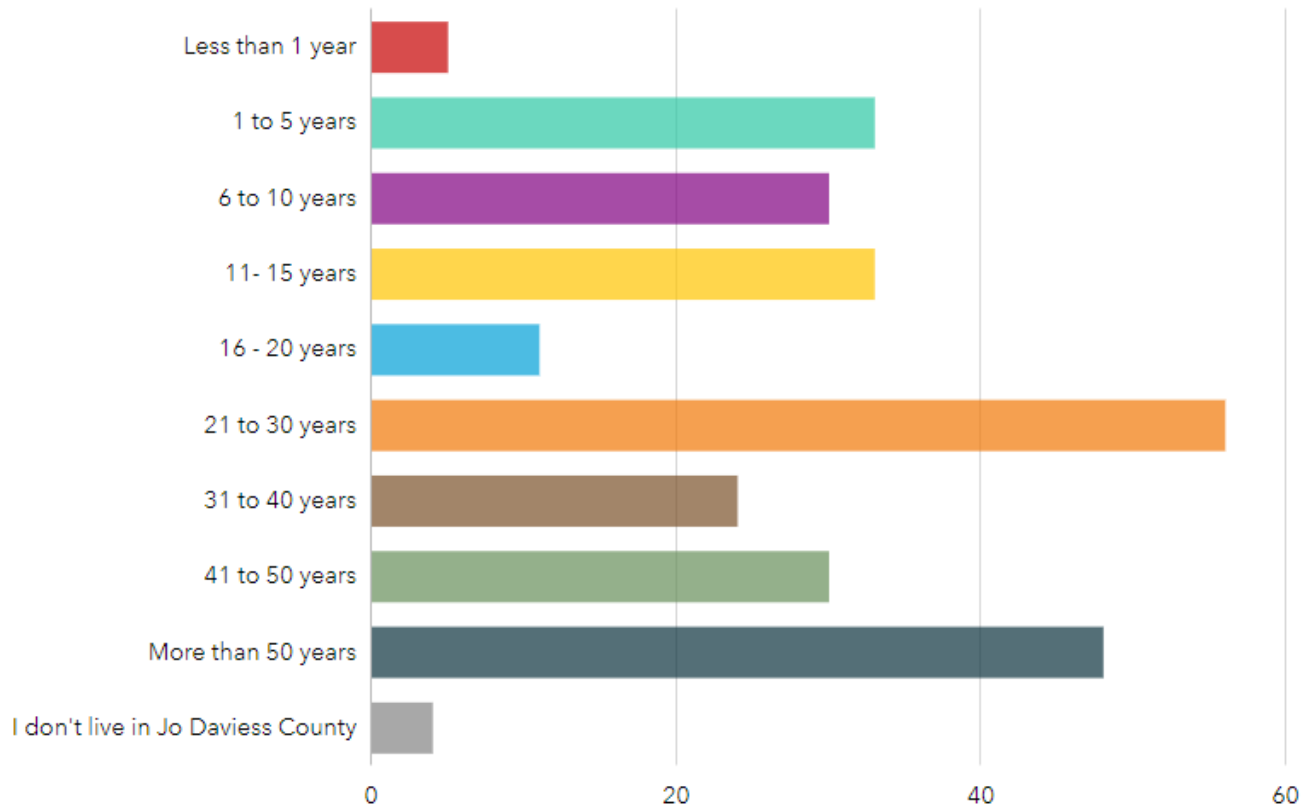
**Where do you reside?**  
Please place a map marker at an near where you live within Jo Daviess County or nearby.

A community survey was created and available to community members. This included general questions and a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. Broad questions allowed the project team to collect community members' views and thoughts about Jo Daviess County in three categories: County character, development, and mobility. This input opportunity was hosted through ESRI and allowed users to participate via computer, tablet or smartphone.



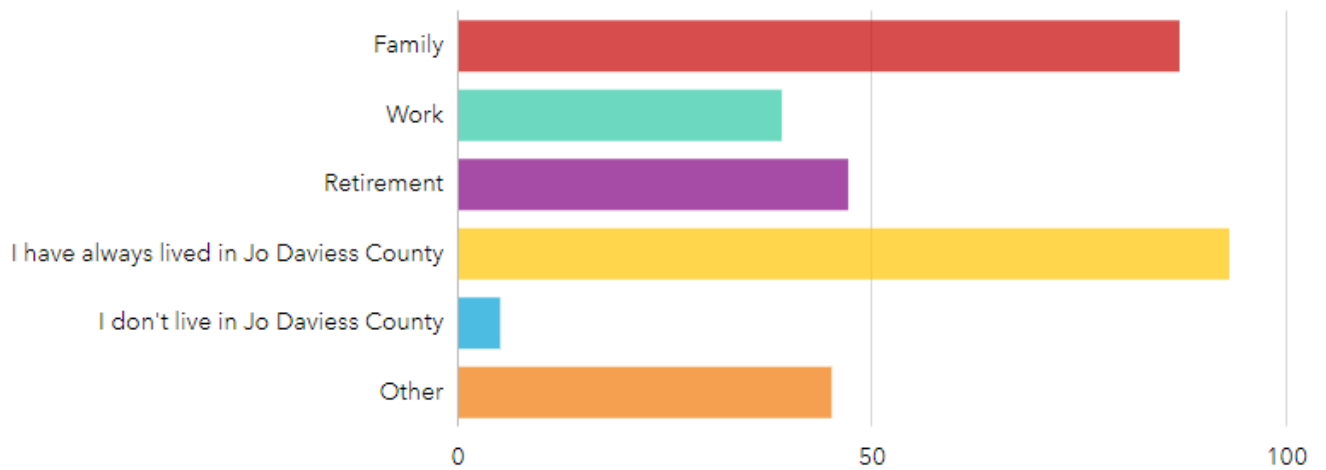
### How long have you lived in Jo Daviess County?

Column Bar Pie Map



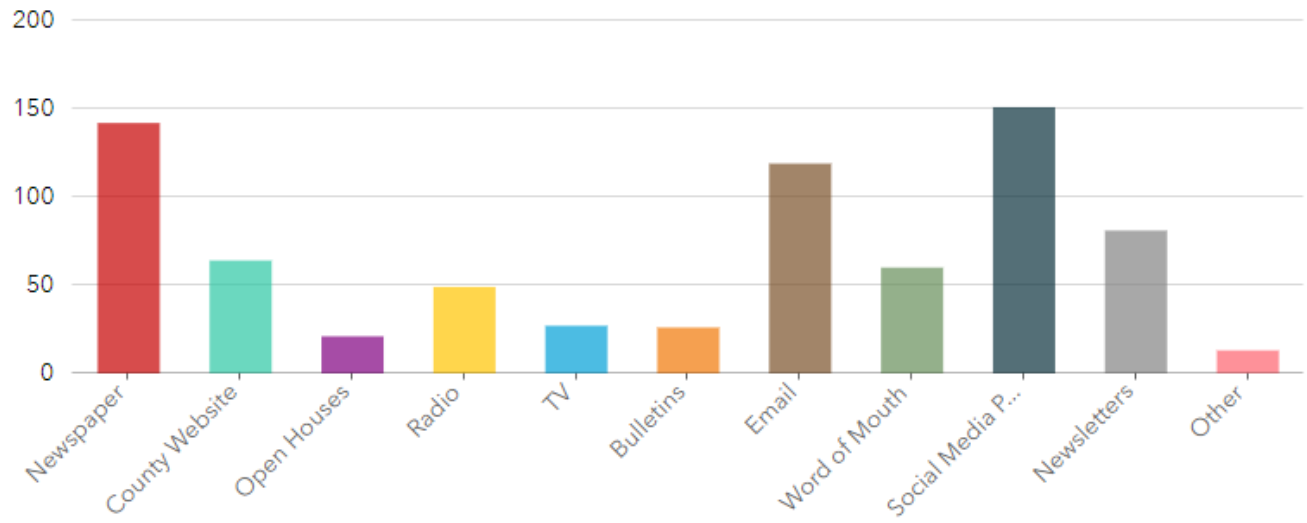
### What brought you to Jo Daviess County?

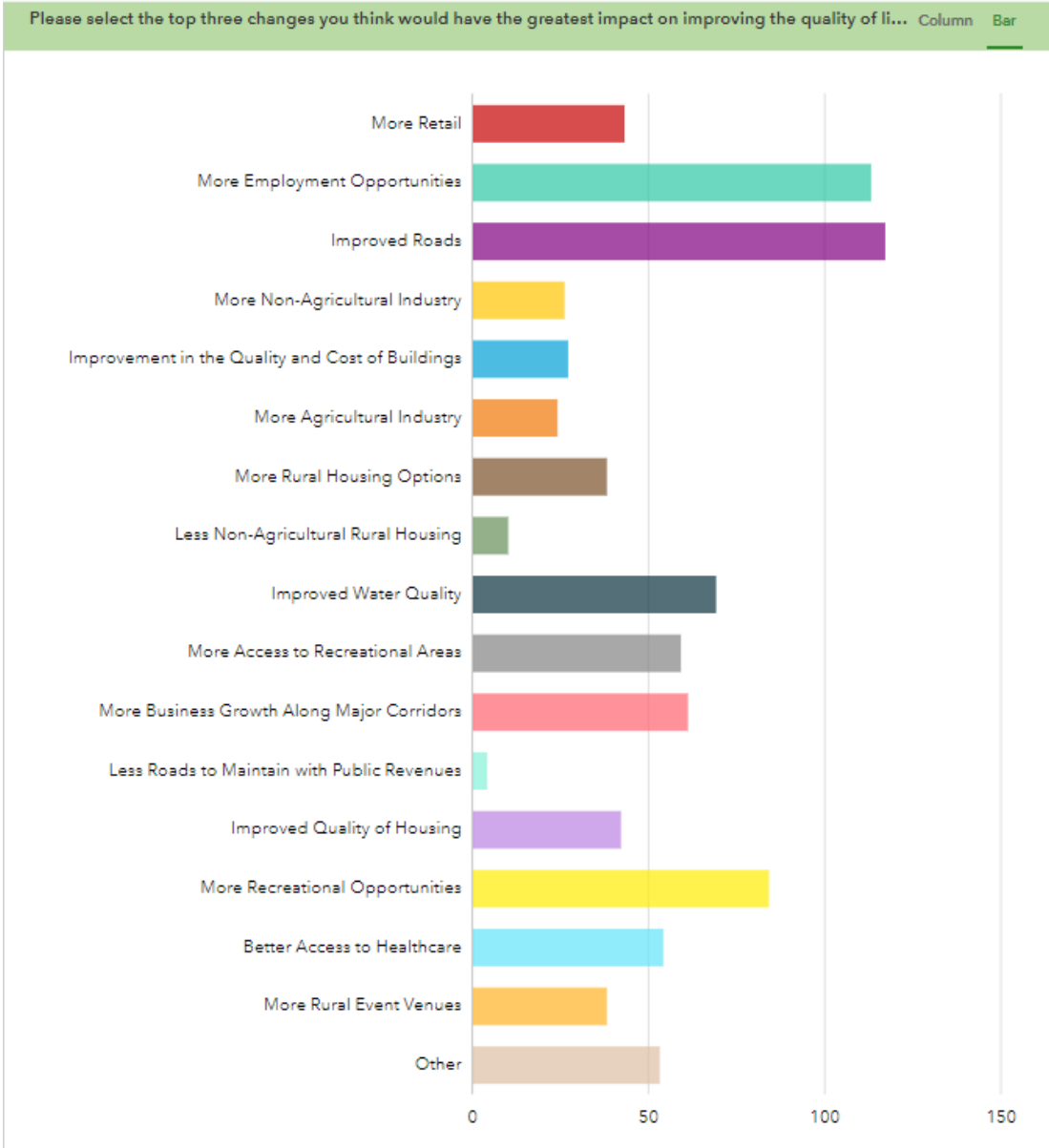
Column Bar



How do you prefer to hear about Jo Daviess County's news, events and announcements?

Column Bar





**Why do People Choose Jo Daviess County?**

1. Connection to Family
2. Scenic Beauty and Rural Environment
3. Small Town Living
4. Quality of Life:
5. Community and Amenities:
6. Work Opportunities:
7. Specific Features of Jo Daviess County
8. Safety and Low Crime
9. Retirement and Vacation Living

### Strengths

1. Natural Beauty
2. Community Support
3. Tourism
4. Quality of Life (Low crime rates, a rural atmosphere, and a friendly population)
5. Education/Schools
6. Space and Land Availability
7. High-Speed Internet
8. Existing Infrastructure

### Challenges

1. Limited Workforce and Builders
2. Business Unfriendliness and Regulations
3. Cost-related Challenges
4. Land Availability and Advertisement
5. Infrastructure and Accessibility
6. Community Dynamics and Resistance
7. Zoning Challenges
8. Affordability and Market Challenges
9. Community Identity and Tourism Emphasis
10. Infrastructure Improvements and Access
11. Housing Affordability and Availability
12. Government Leadership and Vision

### Opportunities

1. Affordable Housing
2. Job Diversification
3. Infrastructure Investment
4. Small Business Support
5. Technology and Remote Work
6. Attracting Families
7. Tourism Expansion
8. Zoning Changes
9. Education and Vocational Training
10. Advertisement and Marketing

### Strengths

1. Remote Work Opportunities
2. Connections to Other Communities
3. Alternative Roads Outside HWY 20
4. Rural Roads are in Better Condition than Other Places

### Challenges

1. Limited Transportation Options
2. Road Conditions and Infrastructure
3. Geographic and Terrain Challenges
4. Dependency on Personal Vehicles
5. Traffic/Parking Issues
6. Public Transportation
7. Winter Challenges
8. Infrastructure Improvements

### Opportunities

1. Trails and Bike/Pedestrian Friendly Options
2. Update Rail Services for Passenger Service
3. More Public Transportation Options
4. Improve and Maintain Sidewalks
5. Expansion of 4-lanes on HWY 20



### Strengths

1. Community Spirit
2. Low Violent Crime Rate
3. Friendly Population
4. Natural Environment
5. Low Taxes
6. Existing Amenities
7. Community Involvement
8. Tourism

### Challenges

1. Resistance to Change
2. Taxation and Costs
3. Infrastructure and Services
4. Economic Factors
5. Regulations and Political Influence
6. Population and Demographics
7. Healthcare
8. Education
9. Rural Focus and Agriculture
10. Tourism Impact

### Opportunities

1. Infrastructure Improvement
2. Economic Development
3. Healthcare Access
4. Affordable Housing
5. More Parks and Recreation Opportunities
6. Youth Engagement
7. Local Business Variety
8. Education and Job Opportunities
9. Environmental Preservation
10. Cultural and Community Programs