



Carroll County, Illinois

2008  
Comprehensive Plan

Adopted

**2008  
Comprehensive Plan  
Carroll County, Illinois**

Adopted by the Carroll County Regional Planning Commission on (DATE)

Adopted by the Carroll County Board on (DATE)

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## Table of Contents

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Introduction .....	vi
<b>Chapter 1</b>	<b>Issues and Opportunities for Planning</b>
Section 1.1	Brief History and Description of the Planning Area .....1.1
Section 1.2	Past Planning in Carroll County .....1.4
Section 1.3	The Comprehensive Planning Process .....1.4
Section 1.4	Demographic Trends .....1.5
Section 1.5	Population Projections .....1.14
Section 1.6	Additional Economic and Demographic Data .....1.16
Section 1.7	Community Goals, Objectives and Policies.....1.16
<b>Chapter 2</b>	<b>Housing</b>
Section 2.1	Housing Inventory .....2.1
Section 2.2	Additional Economic and Demographic Data .....2.6
Section 2.3	Housing Demand .....2.6
Section 2.4	Conclusions - Housing Analysis .....2.8
Section 2.5	Housing and Residential Development Goals, Objectives, Policies.....2.8
<b>Chapter 3</b>	<b>Transportation Facilities</b>
Section 3.1	Transportation Facility Inventory .....3.1
Section 3.2	Transportation Issues .....3.6
Section 3.3	Goals, Objectives, Policies .....3.6
<b>Chapter 4</b>	<b>Utilities and Community Facilities</b>
Section 4.1	Public Utilities Inventory .....4.1
Section 4.2	Analysis of Public Utility Needs .....4.2
Section 4.3	Community Facilities Inventory .....4.3
Section 4.4	Community Facilities Needs/Issues .....4.7
Section 4.5	Goals, Objectives, Policies .....4.8
<b>Chapter 5</b>	<b>Agriculture, Natural and Cultural Resources</b>
Section 5.1	Climate .....5.1
Section 5.2	Land Cover .....5.1
Section 5.3	Agricultural Resources .....5.2
Section 5.4	Natural Resources .....5.3
Section 5.5	Cultural Resources .....5.20
Section 5.6	Agricultural, Natural and Cultural Issues .....5.22
Section 5.7	Agricultural Resources Goals, Objectives and Policies .....5.22
Section 5.8	Natural Resources Goals, Objectives and Policies .....5.23
Section 5.9	Cultural Resources Goals, Objectives and Policies .....5.23

Chapter 6	Economic Development	
	Section 6.1	Introduction .....6.1
	Section 6.2	Economic Base Characteristics .....6.1
	Section 6.3	Additional Economic and Demographic Data .....6.7
	Section 6.4	Community Assessment: Strengths and Weaknesses Analysis .....6.7
	Section 6.5	Economic Development Programs .....6.8
	Section 6.6	Economic Development Issues/Conclusions .....6.13
	Section 6.7	Economic Development Goals, Objectives, Policies .....6.13
Chapter 7	Intergovernmental Cooperation	
	Section 7.1	Inventory of Intergovernmental Agreements .....7.1
	Section 7.2	Issues/Conclusions Regarding Intergovernmental Agreements .....7.1
	Section 7.3	Additional Opportunities for Intergovernmental Cooperation and Beneficial Agreements .....7.2
	Section 7.4	Goals/Objectives/Policies .....7.2
Chapter 8	Land Use	
	Section 8.1	Existing Land Use Within Carroll County .....8.1
	Section 8.2	Land Development and Market Trends .....8.3
	Section 8.3	Land Use Conflicts .....8.3
	Section 8.4	Projected Land Supply and Demand .....8.3
	Section 8.5	Goals, Objectives, Policies .....8.4
	Section 8.6	Future Land Use Recommendations .....8.5
	Section 8.7	Relationship Between Planned Land Use Designations and Future Zoning .....8.11
Chapter 9	Implementation	
	Section 9.1	Introduction .....9.1
	Section 9.2	Comprehensive Plan Adoption Procedures .....9.1
	Section 9.3	Comprehensive Plan Implementation .....9.1
	Section 9.4	Integration, Amendment, and Update of Comprehensive Plan Elements .....9.2
	Section 9.5	Monitoring/Formal Review of the Comprehensive Plan and Continuation of the Planning Process .....9.2

List of Tables:

Table 1.1	1900 - 2006 Population, Population Change and Population % Change .....1.5
Table 1.2	2000 - 2006 Population Change and Percent Change of Northwest Illinois Counties .....1.6
Table 1.3	2000 - 2006 Population, Population Change and Population % Change Carroll County Unincorporated and Carroll County Population Within Municipalities .....1.6
Table 1.4	1990 - 2006 Population, Population Change and Population % Change of Carroll County Municipalities .....1.7
Table 1.5	Distribution of Population by Ten-Year Age Groups .....1.8
Table 1.6	Households, Average Household Size and Household Type .....1.10
Table 1.7	Household Income 1990-2000 .....1.11
Table 1.8	Weighted Average Poverty Thresholds - 1989 and 1999 .....1.12
Table 1.9	Poverty Status 1989 and 1999 .....1.13
Table 1.10	Summary of Employment by Industry .....1.14
Table 1.11A	Methodology A Projected Population .....1.15
Table 1.11B	Methodology B Projected Population .....1.16

Table 1.11C	Methodology C Projected Population .....	1.16
Table 1.12D	Projected Population by IL DECO for Carroll County .....	1.16
Table 2.1	Comparison of Housing Occupancy .....	2.1
Table 2.2	Comparison of Total Housing Units and Structure Type .....	2.2
Table 2.3	Comparison of Housing Age .....	2.3
Table 2.4	Comparison of Owner-Occupied Housing Values .....	2.4
Table 2.5	Monthly Owner Costs as a Percentage of Household Income .....	2.5
Table 2.6	Monthly Renter Costs as a Percentage of Household Income .....	2.6
Table 3.1	Planned IDOT Highway Improvement Projects 2008 - 2013 .....	3.1
Table 5.1	Land Cover of Carroll County, Illinois .....	5.2
Table 5.2	Natural Areas with Geologic Features of Interest .....	5.6
Table 5.3	Stream Quality Data for IEPA Assessed Streams within Carroll County .....	5.13
Table 5.4	Wetland Type and Acreage .....	5.15
Table 5.5	Chance of Flooding Over a Period of Years .....	5.17
Table 5.6	Sites Listed on the National Register of Historic Places .....	5.21
Table 6.1	Comparison of Household and Per Capita Income .....	6.2
Table 6.2	Employment Status of Population 16 Years and Above (2000 Census) .....	6.3
Table 6.3	Labor Force Participation Characteristics 1990, 2000 and 2006 .....	6.3
Table 6.4	Carroll County Resident Employment by Occupation .....	6.4
Table 6.5	Estimated Distribution of County Employment by Industry (Percent) .....	6.5
Table 6.6	Mean Travel Time to Work .....	6.6
Table 6.7	Major Employers in Carroll County, Illinois .....	6.6
Table 8.1	Existing Land Use Within Carroll County .....	8.2
Table 8.2	Comparison of Equalized Assessed Valuations by Class of Property (Thousands of Dollars) in Assessment Years 2003, 2004 and 2005 .....	8.3

List of Figures:

Figure 1.1	Carroll County in Regional Context .....	1.2
Figure 1.2	Carroll County, Illinois .....	1.3
Figure 5.1	Carroll County Watershed Sub-Basins .....	5.11
Figure 5.2	Carroll County Local Watersheds .....	5.12
Figure 8.1	Conventional Subdivision vs. Open Space / Cluster Subdivision .....	8.7
Figure 8.2	Good vs. Poor Cluster Development Design .....	8.8

Appendices:

Appendix I - Northern Illinois Market Facts

**Appendix II - Maps**

**Map 3.1 Functional Transportation Classification, Carroll County, Illinois**

**Map 3.2 Average Daily Traffic (ADT) on U.S. and State Route, Carroll County, Illinois**

**Map 3.3 Average Daily Truck Traffic (ADTT) on U.S. and State Route, Carroll County, Illinois**

**Map 8.1 General Development Plan Map, Carroll County, Illinois**

**Appendix III - Geological Maps**

**Physiographic Division of Illinois**

**Aquifer Sensitivity of Carroll County, Illinois**

**Bedrock Geology of Carroll County, Illinois**

**Bedrock Topography of Carroll County, Illinois**

**Land Cover of Carroll County, Illinois**

**Locations of Data Points of Carroll County, Illinois**

**Potential Dolomite Resources of Carroll County, Illinois**

**Quaternary Deposits of Carroll County, Illinois**

**Shaded Relief of Carroll County, Illinois**

**Surface Slopes of Carroll County, Illinois**

**Surface Topography of Carroll County, Illinois**

**Appendix IV - Compiled Results of Public Meetings and On-line Survey**

## Introduction

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Welcome to the Carroll County, Illinois Comprehensive Plan. This Comprehensive Plan is the center-piece of the community development planning process, stating our community's development goals and outlining public policies for guiding future growth. It establishes an identifiable destination that allows both the governing body and private interests to plan and budget with an idea as to the direction the County may move in the future, and helps to ensure that future growth is not only anticipated, but planned for. The Plan functions as a practical guide to coordinate day-to-day decisions so they make sense in the future.

Planning a community's future is a complex exercise. The process involves an existing community with a population of longtime residents, newcomers and business people; a government structure whose composition can change yearly; the regulations imposed by state and federal government agencies; the character of the community and the plan devised by numerous developers.

Planning for the future of a community can also be controversial. There are those who seek new development for the jobs and the revenue it will bring. Others oppose it, fearing traffic congestion, loss of natural resources, loss of community identity and related expenditures. There are always those who feel that, if you do nothing, the lack of infrastructure improvements - sewers, water, roads, etc. - will greatly discourage development. History has repeatedly shown that this is not the case. The fact remains that change will occur, and the only question is whether the public or private sector will shape that change.

When it is the public sector that directs the change, there is always the fear that, because you have planned for it, you are encouraging it. That's a rationalization for avoiding planning. The real challenge is assuring that change occurs in concert with the goals and objectives of the community. This can be accomplished by taking an active planning approach. Only in visualizing the future of the community the way you want it to be and sticking to that vision can the vision become a reality.

The Comprehensive Plan is a key element in formulating the approach that a community will take in addressing the issues of land use, public policies toward development, and infrastructure requirements. The purpose of the Comprehensive Plan is to provide a framework for the County to ensure that a course, focused on a common goal, is maintained.

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 regulation 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); Housing (Chapter 2); Transportation Facilities (Chapter 3); Utilities and Community Facilities (Chapter 4); Agriculture, Natural and Cultural Resources (Chapter 5); Economic Development (Chapter 6); Intergovernmental Cooperation (Chapter 7); Land Use (Chapter 8); and, Implementation (Chapter 9).

According to the U.S. Census Bureau, Carroll County has shown a general downward trend in population since 1900. There have been only three Census periods since 1900 in which the County increased in population. Between 2000 and 2006 the county lost 639 residents (a decrease in population of 3.8%). However; future growth should be anticipated, foresight provided to anticipate the challenges associated with growth and development, and appropriate policies and planning process should be in place to address growth and development when and where it occurs. This Comprehensive Plan addresses these issues and provides a basis for the policies which will shape Carroll County in the future.

Citizen input/participation is an important component of the planning process. Numerous citizens have been involved in the development of this Comprehensive Plan, and their input is reflected in the goals and objectives formulated herein.



**CHAPTER 1**  
**Issues and Opportunities for Planning**

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The purpose of a comprehensive planning program is to promote orderly and beneficial development, helping to create a community that offers residents an attractive, efficient, and “resident-friendly” 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 Brief History and Description of the Planning Area**

Carroll County is located in northwestern Illinois, and is bordered by the Mississippi River (which forms the boundary between Iowa and Illinois) to the west, Jo Davies and Stephenson Counties to the north, Whiteside County to the south, and Ogle County to the east. Carroll County is the sixty-first (61<sup>st</sup>) largest county in Illinois, comprising twelve (12) townships totaling approximately 467 square miles (298,746 acres). Carroll County extends slightly over 18 miles from north to south and averages approximately 24 miles from east to west, where the greatest length is approximately 32 miles. Carroll County is largely rural, with over 90% of its land area in agricultural use.

Carroll County contains seven municipalities: the Village of Chadwick, the City of Lanark, the Village of Milledgeville, the City of Mt. Carroll, the City of Savanna, the Village of Shannon and the Village of Thomson. Carroll County also contains a large unincorporated residential community (Lake Carroll).

The first inhabitants of present-day Carroll County were native Americans. Research indicates that a Paleo-Native American culture existed in the region at least 10,000 years before the first French fur traders and trappers arrived. The first white men in the region may have encountered Native-Americans belonging to the Chippewa, Fox, Kickapoo, Ottawa, Potawatomi, Sauk and Winnebago tribes, as well as others. Native Americans were driven from the area by the 1880's.

The northern part of Illinois, as part of the Northwest Territory, was not included within a county organization until 1801 when it was placed in Saint Clair County as part of the Indiana Territory. Later, Saint Clair County became part of the Illinois Territory and remained so until 1812 when the name was changed to Madison County. All or portions of present-day Carroll County were subsequently included in Pike County (1821-23), Fulton County (1823-25), Henry and Putnam Counties (1825-27), and Jo Daviess County (1827-39). On February 22, 1839, the legislature formed, from a part of Jo Daviess County, the County of Carroll. The name of the county was chosen in honor of Charles Carroll (1737 - 1832), a statesman of the Revolutionary period, signer of the Declaration of Independence, and United States Senator from Maryland. Savanna served as the County seat from 1839 to 1850, at which time it was re-located to Mt. Carroll.

The first settlers in Carroll County arrived around 1828 in what is now Savanna, drawn to the abundant natural resources and transportation opportunities offered by the Mississippi River. Subsequent settlers were drawn to Carroll County by the fertile soils, numerous streams and abundant natural resources. Settlers selected claims around the edges of groves, or woods. The trees supplied logs for cabins, fire wood, rails for fences, and a certain amount of protection from wind. There were also springs and streams in the groves for their water supply.

The prairie soils, which covered 57.3 percent of the area of present-day Carroll County, were at first considered useless because no plow could bust through the dense prairie vegetation. Ogle County resident John Deere of Grand

Detour opened up the prairies to agriculture with the self-scouring plow. Over the years, Carroll County has become both a state and national leader in agricultural production. Agriculture has been, and will continue to be a key component of the County economy.

Industrial development originating in the later part of the 19th century has also played an important role in the history of the County. Industry throughout the county has helped diversify the economy of the region. Savanna became a major railroad hub after the arrival of the railroads in 1862, and other communities became agricultural and local economic centers. The era between 1940 and 1960 saw County economic trends typical of those felt throughout the nation. War-time growth and post-war slowdowns influenced gradual growth in the County's population and a steady diversification of the regional industrial base. However, the decades of the 1960's, 1970's and 1980's were a time when growth slowed and development leveled off. Industrial decline, particularly in the railroad and government employment sectors, have greatly influenced the County economy. The impact continued through the 1990's to the present.

Figure 1.1: Carroll County in Regional Context

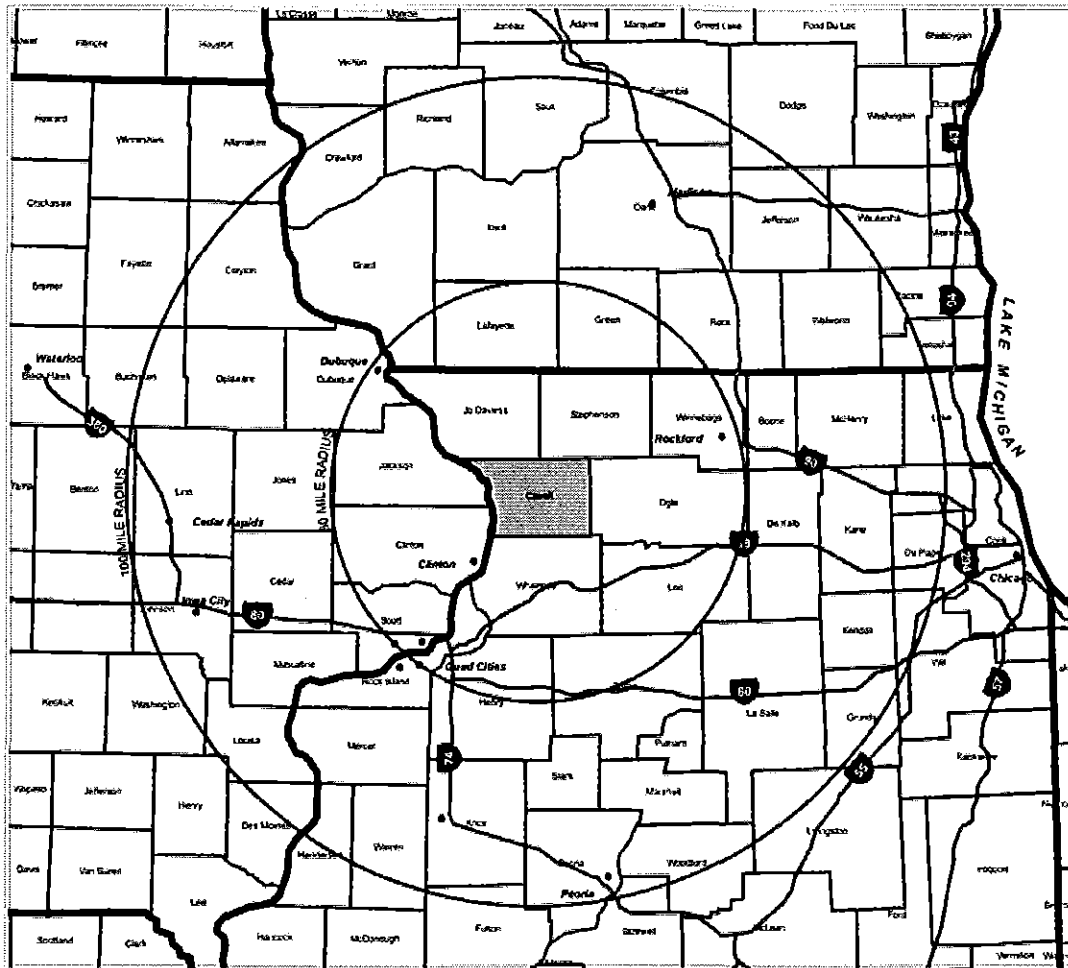


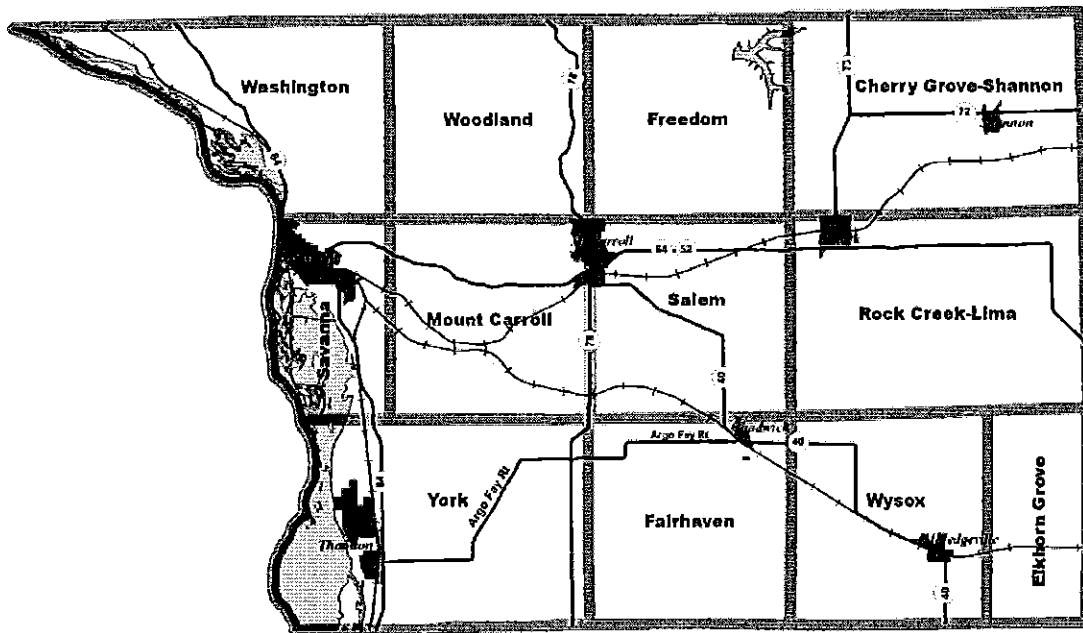
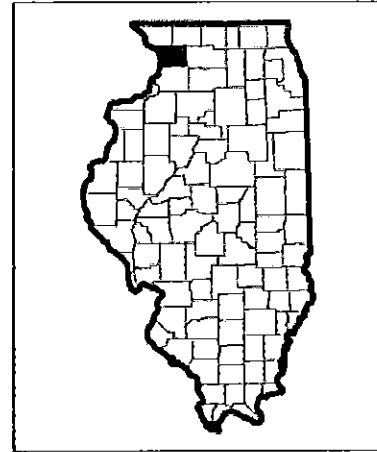
Figure 1.2: Carroll County, Illinois

**Carroll County, Illinois**

Population 2000: 16,674

Population 2006 (Est.): 16,035

Area (Sq. Mi.): 467



## **Section 1.2 Past Planning In Carroll County**

The Carroll County Board adopted a County comprehensive plan document in 2000. It has been determined that it is desirable to build upon this planning effort, and improve this document.

## **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 involves implementation of the plan and programs that will influence the day-to-day decisions made by government officials, private enterprise, and individuals. Plan implementation provides the means by which community goals can be achieved. Three major tools of implementation are the zoning ordinance, subdivision regulations, and capital improvements program. Zoning regulations act to control growth and development so that it is harmonious with the proposals and recommendations set forth in the Comprehensive Plan. They promote sound, orderly development directed toward the preservation of property values and the improvement of the overall appearance of the community. Subdivision regulations assure that new land divisions are designed in an orderly and efficient manner and are in accordance with the Comprehensive Plan. The capital improvements program is a long-range financial plan for major public improvements. It proposes the best means for utilizing available financial resources to provide residents with necessary facilities and services.

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 the development of the community. 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. As a collection of policies and plans designed to guide future growth and development, it will help ensure continuity over time as changes occur within Carroll County.

## Section 1.4 Demographic Trends

### A. Population Growth

Every 10 years the Federal government performs the National Census, and these Census results are the main source of the information used to understand how communities change over time. As indicated in Table 1.1 below, Carroll County has shown a general downward trend in population since 1900. There have been only three Census periods since 1900 in which the County increased in population. The County registered its most significant growth between 1940 and 1960, growing by 1,520 persons during this 20-year period, and registering its highest population since 1900 of 19,507. Since 1960, the County has decreased in population, with the largest loss in population being between 1980 and 1990.

The population trend seen in Carroll County is unlike that of the State of Illinois as a whole, which has seen an increase in population during each Census period since 1900. However, the trend of population loss in Carroll County is not unlike other Illinois rural counties with no major metropolitan area. Loss of industry and jobs has resulted in people leaving Carroll County in order to seek employment in urban areas.

**Table 1.1**  
**1900 - 2006 Population, Population Change and Population % Change**  
**Carroll County and State of Illinois**

Year	Carroll Co.			Illinois		
	Population	Change	% Change	Population	Change	% Change
1900	18,963	---	---	4,821,550	---	---
1910	18,035	(928)	(4.9)	5,638,591	817,041	16.9
1920	19,345	1,310	7.3	6,485,280	846,689	15.0
1930	18,433	(912)	(4.7)	7,630,654	1,145,374	17.7
1940	17,987	(446)	(2.4)	7,897,241	266,587	3.5
1950	18,976	989	5.5	8,712,176	814,935	10.3
1960	19,507	531	2.8	10,081,158	1,368,982	15.7
1970	19,276	(231)	(1.2)	11,113,976	1,029,127	10.2
1980	18,779	(497)	(2.6)	11,426,518	317,129	2.9
1990	16,805	(1,974)	(10.5)	11,430,602	3,188	0.0
2000	16,674	(131)	(0.8)	12,419,293	415,942	3.6
2006*	16,035	(639)	(3.8)	12,831,970	412,677	3.3

Source: U.S. Bureau of the Census  
\* July 1, 2006 Population

As seen in Table 1.2 below, the six-county area of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties (Northwest Illinois) grew by 3.7% between 1990 and 2000. During this period, Carroll County was the only county to lose population. However, between 2000 and 2006 the growth of Northwest Illinois as a whole has slowed to a nominal 0.3%, with Carroll, Lee, Stephenson and Whiteside showing population declines.

**Table 1.2**  
**2000 - 2006 Population, Population Change and Population % Change**  
**Northwest Illinois Counties**

	Carroll County	Jo Daviess County	Lee County	Ogle County	Stephenson County	Whiteside County	NW IL Counties
1990 Pop.	16,805	21,821	34,392	45,957	48,052	60,186	227,213
2000 Pop.	16,674	22,289	36,062	51,032	48,979	60,653	235,689
Pop. Ch.	(131)	468	1,670	5,075	927	467	8,476
Pop. % Ch.	-0.8	2.1	4.9	11.0	1.9	0.8	3.7
2006	16,035	22,594	35,701	54,826	47,388	59,880	236,424
Pop. Ch.	(639)	305	(361)	3,794	(1,591)	(773)	735
Pop. % Ch.	-3.8	1.4	-1	7.4	-3.2	-1.3	.03

Source: U.S. Bureau of the Census  
 July 1, 2006 Population

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, between 1990 and 2000 both the total municipal population and the unincorporated County population declined, resulting in an overall decrease in the County population (see Table 1.1 above). However, between 2000 and 2006 the County unincorporated population increased by 71 persons and the total municipal population declined again. The decline in the total municipal population was significantly greater than the increase in the unincorporated County population, and resulted in another population decrease in the overall County population.

In 1990, the sum of the population of all municipalities in Carroll County accounted for 59.3% of the total population of the County. This ratio remained nearly the same in 2000, as the population within municipalities accounted for 59.3% of the total population of the County. However, in 2006 the County population within municipalities decreased to 57.3% of the total population of the County. The decrease in the percentage of the County population located within municipalities can be attributed primarily to population losses of municipalities, rather than population gain in unincorporated areas of the County.

**Table 1.3**  
**2000 - 2006 Population, Population Change and Population % Change**  
**Carroll County Unincorporated and Carroll County Population Within Municipalities**

Year	Carroll Co. Unincorp.			Carroll County Municipal		
	Population	Change	% Change	Population	Change	% Change
1980	7,142	---	---	11,637	---	
1990	6,820	(322)	(4.5)	9,985	(1,652)	(14.2)
2000	6,782	(38)	(0.6)	9,892	(93)	(0.9)
2006*	6,853	71	1.0	9,182	(710)	(7.2)

Source: U.S. Bureau of the Census  
 July 1, 2006 Population

As seen in Table 1.4 below, the municipalities within Carroll County have experienced decreases in population over the previous three Census periods and through 2006 (population estimate). The only municipality that did not register a significant population decrease between 1980 and 2006 was the Village of Lanark, which registered a nominal population decrease of 3 (decrease of 0.2%).

**Table 1.4**  
**1990 - 2006 Population, Population Change and Population % Change**  
**Carroll County Municipalities**

	1980	1990	2000	2006*	1980-2006
Chadwick Pop.	631	557	505	481	---
Pop. Change	---	74	-52	-24	-150
Pop. % Change	---	-11.7	-9.3	-4.8	-23.8
Lanark Pop.	1,483	1,382	1,584	1,480	---
Pop. Change	---	-101	202	-104	-3
Pop. % Change	---	-6.8	14.6	-6.6	-0.2
Milledgeville Pop.	1,209	1,076	1,016	944	---
Pop. Change	---	-133	-60	-72	-265
Pop. % Change	---	-11.0	-5.6	-7.1	-21.9
Mt. Carroll Pop.	1,936	1,726	1,832	1,689	---
Pop. Change	---	-210	106	-143	-247
Pop. % Change	---	-10.8	6.1	-7.8	-12.8
Savanna Pop.	4,529	3,819	3,542	3,261	---
Pop. Change	---	-710	-277	-281	-1,268
Pop. % Change	---	-15.7	-7.3	-7.9	-28.0
Shannon Pop.	938	887	854	793	---
Pop. Change	---	-51	-33	-61	-145
Pop. % Change	---	-5.4	-3.7	-7.1	-15.5
Thomson Pop.	911	538	559	534	---
Pop. Change	---	-373	21	-25	-377
Pop. % Change	---	-40.9	3.9	-4.5	-41.4

Source: U.S. Bureau of the Census  
July 1, 2006 Population

**B. Age Distribution**

Table 1.5 below details the number of Carroll 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 the table 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  
Carroll County, Illinois**

	1990	2000	Cohort Change 1990-2000	Cohort % Change 1990-2000	Class Change 1990-2000	Class % Change
Under 5 Years		925	---	---	(150)	-13.95%
5 - 14 years	2,411		(507)	-21.03%	53	2.20%
15-24 years		1,904	(241)	-12.07%	(93)	-4.66%
25-34 years	2,300		185	8.04%	(544)	-23.65%
35-44 years		2,485	6	0.26%	199	8.71%
45-54 years	1,793		(830)	-46.29%	499	27.83%
55-59 years		963	(35)	-4.07%	102	11.85%
60-64 years	943		719	76.25%	(117)	-12.41%
65-74 years		1,662	(588)	-34.21%	(57)	-3.32%
75-84 years	1,032		(614)	-59.50%	99	9.59%
85 years and over		418	---	---	30	7.73%
Median Age	37.5	40.7	---	---	-0.6	-1.70%

Source: U.S. Bureau of the Census

The 5-14 year old cohort decreased over 21%, and the 15-24 year old cohorts decreased over 12% between 1990 and 2000. However, the 25-34 year old cohort increased by over 58%. This trend is indicative of fewer families with children in the County, and young adults leaving the County. A somewhat promising trend is the increase in the 25-34 year old cohort (showing an increase of over 8% between 1990 and 2000), and the nominal increase in the 35-44 year old cohort. However, the 45-54, 55-69, 65-74 and 75-84 year old cohorts all showed substantial decreases between 1990 and 2000. The 60-64 year old cohort showed a substantial increase of 76.25% between 1990 and 2000, indicating that more elderly people are entering the County. The overall trend is toward an aging population in Carroll County, with younger persons leaving the County.

Figure 16B of Appendix I (Northern Illinois Market Facts) details the County's and North Illinois Region's age distribution in 2006 by percent of population. According to this data, 56.3% of the County's population is between 20 and 64 years of age (compared to 60.3% for Northern Illinois as a whole). Carroll County's older age groups (65-74 and over 74) comprise 19.6% of the County's population (compared to only 11.0% for Northern Illinois as a whole). The youngest age groups (under 5 to 19 years of age) comprise 23.8% of Carroll County's population (compared to 28.7% for Northern Illinois as a whole).



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. The median age for the County has been increasing rather significantly - yet another indication of an aging population. In 1980 the median age for Carroll County was 33.2; in 1990 the median age was 37.5; in 2000 the median age was 40.7; and, according to Woods & Poole data as found in the Northern Illinois Market Facts published by Northern Illinois University’s Center for Governmental Studies, the median age in 2006 was 43.4. For comparison, the median age for Illinois as a whole in 2006 was 35.6, which is 18% lower than Carroll County. In 2006, Carroll County had the highest median age in the six-county Northwest Illinois region (Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties). The average median age of the counties in the Northwest Illinois region in 2006 was 41.2.

### C. Education Levels

Figure 16E of Appendix I (Northern Illinois Market Facts) details the current highest educational attainment in 1980, 1990, 2000 and 2006.

Between 1980 and 2006 the County population has become more educated. The population with a high school education has decreased from 45.5% in 1980 to 43.2% in 2006; the number of persons with some college increased from 10.3% in 1980 to 27.8% in 2006; and, the number of persons with four or more years of college increase from 9.6% in 1980 to 14.3% in 2006.

### D. Households and Income

The Carroll 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 1990 and 2000. Family households have seen their number increase, although the percentage of total households has decreased between 1990 and 2000. Non-family households have increased from 1990 to 2000 in both number (from 1,854 to 2,113) and percentage of total households (from 27.9% to 31.1%). Married-couple households have seen both their number and percentage of family households decrease between 1990 and 2000. Single-father households have increased from 3.4% of family households in 1990 to 4.6% in 2000. Single-mother headed family households have increased from 10.1% of family households in 1990 to 10.7% in 2000. The Persons Per Household (Average Household Size) calculation for the County has decreased slightly from 2.49 in 1990 to 2.42 in 2000 to an estimated 2.37 in 2006 (Woods & Poole, 2006).

Figure 16D of Appendix I (Northern Illinois Market Facts) provides household trends and projections for the County. Note that the number of households is estimated to be 6,676 in 2006, a decrease of 1.7% from 2000 and a continuation of the trend in a decreasing number of households. The number of households is projected to continue to decrease into the future, with 6,599 households projected for 2015 - a decrease of 1.2% from 2006.

**Table 1.6**  
**Households, Average Household Size and Household Type**  
**Carroll County, Illinois**

	1990	2000	Change (+/-)	% Change
<b>Households</b>	6,638	6,794	156	2.35%
<b>Average Household Size</b>	2.49	2.42	(0.07)	-2.81%
<b>Households by Type:</b>				
<b>Family Households</b> <i>(% of Total Households)</i>	4,784 <i>(72.1%)</i>	4,681 <i>(68.9%)</i>	-103	-2.15%
Married-couple families <i>(% of Family Households)</i>	4,139 <i>(86.5%)</i>	3,965 <i>(84.7%)</i>	-174	-4.20%
Other family, male householder <i>(% of Family Households)</i>	164 <i>(3.4%)</i>	214 <i>(4.6%)</i>	50	30.49%
Other family, female householder <i>(% of Family Households)</i>	481 <i>(10.1%)</i>	502 <i>(10.7%)</i>	21	4.37%
<b>Non-Family Households</b> <i>(% of Total Households)</i>	1,854 <i>(27.9%)</i>	2,113 <i>(31.1%)</i>	259	13.97%
Householder living alone <i>(% of Total Non-Family Households)</i>	1,683 <i>(90.8%)</i>	1,857 <i>(87.9%)</i>	174	10.34%
Householder 65 years and older <i>(% of Total Non-Family Households)</i>	934 <i>(50.4%)</i>	942 <i>(44.6%)</i>	8	0.86%

Source: U.S. Bureau of the Census

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 Carroll County.

**Table 1.7**  
**Household Income 1990 - 2000**  
**Carroll County, Illinois**

Household Income (\$)	1990	2000	Change (+/-)	% Change
Less than 10,000	1,063 (16.1%)	536 (7.9%)	(527)	-49.6%
10,000 - 14,999	700 (10.6%)	516 (7.6%)	(184)	-26.3%
15,000 - 24,999	1,414 (21.4%)	1,065 (15.7%)	(349)	-24.7%
25,000 - 34,999	1,273 (19.3%)	1,082 (16.0%)	(191)	-15.0%
35,000 - 49,999	1,230 (18.6%)	1,428 (21.1%)	198	16.1%
50,000 - 74,999	656 (9.9%)	1,295 (19.1%)	639	97.4%
75,000 - 99,999	135 (2.0%)	497 (7.3%)	362	268.1%
100,000 - 149,999	102 (1.5%)	213 (3.1%)	111	108.8%
150,000 - 199,999	31 (0.5%)	69 (1.0%)	38	122.6%
200,000 or more	--- ---	75 (1.1%)	75	---
Total Households	6,604 (100%)	6,776 (100%)	172	2.6%
Median Household Income (\$)	25,758	37,148	11,390	44.2%

Source: U.S. Bureau of the Census

Table 1.8 above describes how household incomes have changed between 1990 and 2000. It is a testimony to both the inflation of wages and the increased earning power of the residents of the Carroll County that the percentage of households making greater than \$50,000 per year has increased from 14.0% in 1990 to 31.7% in 2000. Median household income has increased from \$25,758 to \$37,148 over the same period, a 44.2% increase. This percentage increase in median household income is similar to Illinois as a whole (44.5%). The median household income for Illinois was 25.2% higher than Carroll County in 1990 (\$32,252), and 25.4% higher than Carroll County in 2000 (\$46,590), another indication that median household income is increasing at similar pace State-wide compared to the County.

Figure 16X of Appendix I (Northern Illinois Market Facts) presents household income data in a slightly different and more generalized format. This data verifies that the trend toward higher income levels is continuing. In 2006, the median household income has increased 5.9% over 2000 to \$39,350. Also, the income ranges of less than \$25,000 and \$25,000-50,000 decreased as a percentage of households with money income, while income ranges of \$50,000-100,000 and more than \$100,000 increased as a percentage of households with money income.

Carroll County has the lowest median household income in the six-county Northwest Illinois region (Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties). The average median income for the Northwest Illinois region in 2004 was \$43,071.33, which is 10.2% higher than the median income of Carroll County (\$39,086). (U.S. Census Bureau, State and County QuickFacts)

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). Table 1.8 below outlines poverty thresholds for years 1989 and 1999. Table 1.9 lists the Census information on poverty for the total number of residents and children within Carroll County.

Poverty status declined within Carroll County between 1989 and 1999 among individuals (11.7% to 9.6% of the population) and children (17.1% to 13.7%). Compared to Illinois as a whole, poverty status among individuals decreased between 1990 and 2000 from 11.9% to 10.7% of the population, while poverty status among children decreased from 16.8% to 14.3%.

**Table 1.8**  
**Weighted Average Poverty Thresholds - 1989 and 1999**

Size of Family Unit	1989	1999	2005
One Person	\$6,310	\$8,501	\$9,973
Two Persons	\$8,067	\$10,869	\$12,755
Three Persons	\$9,885	\$13,290	\$15,577
Four Persons	\$12,674	\$17,029	\$19,971
Five Persons	\$14,990	\$20,127	\$23,613
Six Persons	\$16,921	\$22,727	\$26,683
Seven Persons	\$19,162	\$25,912	\$30,249
Eight Persons	\$21,328	\$28,967	\$33,610
Nine Persons or more	\$25,480	\$34,417	\$40,288

Source: U.S. Bureau of the Census

**Table 1.9**  
**Poverty Status 1989, 1999 and 2005**  
**Carroll County, Illinois**

	1989	1999	2005 (est.)	Change (+/-) 1989-2005	% Change 1989-2005
Individuals	16,455	16,376			
Below Poverty Level	1,927 <i>11.7%</i>	1,579 <i>9.6%</i>	1,725 <i>10.9</i>	(202)	-10.5%
Children	4,109	3,989			
Below Poverty Level	702 <i>17.1%</i>	548 <i>13.7%</i>	578 <i>16.9</i>	(124)	-17.7%

Source: U.S. Bureau of the Census

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 Carroll County. The discussion of the County economy will take place within the Economic Development Element of this Comprehensive Plan. It should be noted that the method used for classifying industries was changed between the 1990 and 2000 Census, and therefore the information included in the industry categories of Table 1.11 is not entirely consistent for comparison between those years. The table attempts to place the two Census years in a useable context.

**Table 1.10**  
**Summary of Employment by Industry**  
**Carroll County, Illinois**

<b>Industry</b>	<b>1990</b>	<b>2000</b>	<b>Change (+/-)</b>	<b>% Change</b>
Agriculture, forestry, fishing and hunting, and mining	1,011	502	(509)	-50.3%
Construction	485	587	102	21.0%
Manufacturing	1,678	2,024	346	20.6%
Wholesale trade	247	245	(2)	-0.8%
Retail trade	1,090	697	(393)	-36.1%
Transportation and warehousing, and utilities	552	512	(40)	-7.2%
Information	---	117	117	---
Finance, insurance, real estate, and rental and leasing	412	383	(29)	-7.0%
Professional, scientific, management, administrative, and waste management services	324	284	(40)	-12.3%
Educational, health and social services	976	1,302	326	33.4%
Arts, entertainment, recreation, accommodation and food services	261	461	200	76.6%
Other services (except public administration)	194	333	139	71.6%
Public administration	437	277	(160)	-36.6%
<b>Total Employed Persons 16 Years and Over</b>	<b>7,667</b>	<b>7,724</b>	<b>57</b>	<b>0.7%</b>

Source: U.S. Bureau of the Census

### 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 estimate 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.

Carroll County has experienced decreasing population in every Census year since 1960. The population decreased by 131 persons, or 0.8% between 1990 and 2000, and is projected to continue to decrease at a similar rate. Population decrease in Carroll County is likely a result of the decline in the number and persons per household, along with the total number of households in the County, which increased 2.35% between 1990 and 2000. However, according to the Northern Illinois Market Facts, the 2006 estimate of households in Carroll County was 1.7% lower than 2000. It is assumed that this trend of declining numbers of households will continue into the future. According to the 2000 Census (Table 1.7 above), Carroll County averaged 2.42 persons per household (PPH) in 6,794 households. In 2006, the estimated number of PPH declined to 2.37. It is anticipated that this trend of a declining number of persons per household will continue into the future.

To estimate the Carroll County population for 2010, 2020 and 2030, 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 2020, 2030 and 2040 using a simple mathematical progression projection assuming a 1.5% decrease per 10-year period for housing units and a 3.9% 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 of 2.5% of the population does not live in a household, the estimated population in households was then increased by 2.5% to yield the total projected population.

**Population Projection Methodology B:**

The 10-year growth rates from 1990-2000, and 2000-2006 were divided by the number of years per period to yield an annual growth rate. The annual growth rates per decade and six-year period (2000-2006) were averaged to yield an average annual growth rate between 1990 and 2006 of -0.36%. This average annual growth rate was then used to project the population for 2020, 2030 and 2040.

This population projection does not include any large-scale development of vacant land for residential uses within the planning period. Large-scale residential development could have a significant impact on the number of housing units, households and the County's population.

**Table 1.11A  
Methodology A Projected Population  
Carroll County, Illinois**

<b>Year</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>
<b>Population</b>	14,700	13,800	12,940

**Table 1.11B  
Methodology B Projected Population  
Carroll County, Illinois**

<b>Year</b>	2020	2030	2040
<b>Population</b>	15,245	14,705	14,185

Calculating an average of the projected populations of the two methodologies yields somewhat of a hybrid result of the two population projection methodologies.

**Table 1.11C  
Projected Population  
Based on Average Projected Population of Methodology A and Methodology B  
Carroll County, Illinois**

<b>Year</b>	2020	2030	2040
<b>Population</b>	14,973	14,253	13,563

The Illinois Department of Commerce and Economic Opportunity (IDCEO) provides population projections for Illinois counties. The IDCEO population projections for Carroll County are below in Table 1.10D.

**Table 1.11D  
Projected Population by IL Dept. of Commerce and Economic Opportunity  
Carroll County, Illinois**

<b>Year</b>	2010	2020	2030
<b>Population</b>	16,368	17,003	17,729

Source: Illinois Department of Commerce and Economic Opportunity

The 2007 Edition of *Northern Illinois Market Facts* published by Northern Illinois University also provides a population projection (from Woods & Poole) for the year 2015 of 15,543, which corresponds closely to the population projections in Table 1.12B, above.

**Section 1.6 Additional Economic and Demographic Data**

*Northern Illinois Market Facts*, published annually by Northern Illinois University, Center for Governmental Studies, is an annual compilation of economic and demographic data for a fourteen-county area (Boone, Bureau, Carroll, DeKalb, Grundy, Jo Daviess, Kendall, LaSalle, Lee, Ogle, Putnam, Stephenson, Whiteside and Winnebago counties) in northern Illinois. A regional overview and maps are included. In order to provide timely data without the need to update the text of this Comprehensive Plan document, *Northern Illinois Market Facts* is hereby incorporated in this document as Appendix I. The most recent version of *Northern Illinois Market Facts* should be included in said Appendix I, and previous versions may be retained or discarded.

**Section 1.7 Community Goals, Objectives and Policies**

The following goals, objectives and policies provide the framework for guiding future community development activities within Carroll County. Goals are stated as desirable conditions to strive for in the future. They are common ideals of the community that can be achieved through the actions of government leaders, private enterprise and individuals. Objectives are general targets to be achieved along the path of satisfying community goals. Policies are methods of action to accomplish these stated objectives. Together these three pieces express the uniqueness of the community while stating changes that will produce desirable patterns for growth and development.



A. Goal:

Carroll County shall pursue policies that preserve and enhance its current living environment. It is the goal of the County to maintain the overall aesthetic quality of its residential, recreational, commercial and industrial areas.

B. Objectives:

1. Promote the maintenance and improvement of existing development within Carroll County.
2. New development should be designed in a manner that allows urban services to be most efficiently and economically provided.
3. Ensure that newly developed or redeveloped areas are compatible with existing uses of land.
4. To improve long range fiscal planning for the County.

C. Policies:

1. Carroll County should implement the recommendations of the Comprehensive Plan to promote quality of life and economic vitality.
2. Current implementation tools, such as the zoning ordinance and subdivision regulations, and other County ordinances should continue to be used and enforced, and updated and/or modernized as necessary and desirable.
3. The County should develop a capital improvement program to address future transportation, communication and other public needs.
4. The County should encourage development which protects and enhances the County's tax base.
5. A Regional Planning Commission should be established to maintain an active role in assessing County needs, evaluating development, and utilizing the planning process as a means of accomplishing the recommendations contained in the Comprehensive Plan.

**CHAPTER 2**  
**Housing in Carroll County**

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**Section 2.1 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 1990 and 2000, Carroll County experienced a net increase of 464 units to its housing stock (Table 2.1). Over that time period, Carroll County owner-occupied housing units increased by 9.3%, while renter-occupied housing units decreased by 15.3%. Illinois overall had a lower percentage of owner-occupied housing units in the 2000 Census year (67.3% to 71.8%), and a higher percentage of renter-occupied housing units (32.7% to 28.2%).

**Table 2.1**  
**Comparison of Housing Occupancy**  
**Carroll County and State of Illinois**

	<b>Carroll County 1990</b>	<b>Carroll County 2000</b>	<b>Illinois 1990</b>	<b>Illinois 2000</b>
<b>Occupied Housing Units</b> <i>% of Total Housing Units</i>	6,638 88.7%	6,794 85.5%	4,202,240 93.3%	4,591,779 94.0%
<b>Owner-occupied</b> <i>% of Occupied Units</i>	4,767 71.8%	5,209 76.7%	2,699,182 64.2%	3,088,884 67.3%
<b>Renter-occupied</b> <i>% of Occupied Units</i>	1,871 28.2%	1,585 23.3%	1,503,058 35.8%	1,502,895 32.7%
<b>Vacant Housing Units</b> <i>% of Total Housing Units</i>	843 11.3%	1,151 14.5%	304,035 6.7%	293,836 6.0%
<b>Total Housing Units</b>	7,481	7,945	4,506,275	4,885,615

Source: U.S. Bureau of the Census

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, Carroll County has a homeowner vacancy rate of 1.5% and a rental vacancy rate of 6.2%. Table 2.1 shows that Carroll County had an overall year 2000 vacancy rate of 14.5% (up 36.5% from 1990), a rate significantly higher than 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 2.2 below compares the distribution of structure types within Carroll County with the State of Illinois as a whole, over two Census periods. In the year 2000, single-family homes (1-unit detached) made up 84.3% of Carroll County housing units, a significantly higher percentage than Illinois (57.9%). The single-family detached homes within Carroll County increased in number and 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. Carroll County has seen an increase in the number 5-9 and 10 or more unit housing units, and a decrease in the number of 1-unit attached and mobile home, trailer or other housing units. Illinois as a whole has seen increases in the number of all types of structures with the exception of mobile home, trailer or other housing units.

**Table 2.2**  
**Comparison of Total Housing Units and Structure Type**  
**Carroll County and State of Illinois**

	<b>Carroll County 1990</b>	<b>Carroll County 2000</b>	<b>Illinois 1990</b>	<b>Illinois 2000</b>
<b>1 Unit Detached</b>	6,113 <i>81.7%</i>	6,699 <i>84.3%</i>	2,545,319 <i>56.5%</i>	2,831,011 <i>57.9%</i>
<b>1-Unit Attached</b>	83 <i>1.1%</i>	62 <i>0.8%</i>	159,607 <i>3.5%</i>	235,485 <i>4.8%</i>
<b>2-4 Units</b>	507 <i>6.8%</i>	483 <i>6.1%</i>	653,728 <i>14.5%</i>	656,559 <i>13.4%</i>
<b>5-9 Units</b>	82 <i>1.1%</i>	83 <i>1.0%</i>	292,480 <i>6.5%</i>	301,361 <i>6.2%</i>
<b>10 or more Units</b>	150 <i>2.0%</i>	187 <i>2.4%</i>	669,557 <i>14.9%</i>	702,649 <i>14.4%</i>
<b>Mobile home, trailer or other</b>	546 <i>7.3%</i>	431 <i>5.4%</i>	185,584 <i>4.1%</i>	158,550 <i>3.2%</i>
<b>Total Housing Units</b>	7,481 <i>100%</i>	7,945 <i>100%</i>	4,506,275 <i>100%</i>	4,885,615 <i>100%</i>

Source: U.S. Bureau of the Census

**C. Housing Conditions: Age and Value**

Age is often used as a measure of a houses 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 2.3 below shows a comparison of housing age between Carroll County and the State of Illinois as a whole.

**Table 2.3  
Comparison of Housing Age  
Carroll County and State of Illinois**

<b>Year Structure Built</b>	<b>Carroll County 1990</b>	<b>Carroll County 2000</b>	<b>Illinois 1990</b>	<b>Illinois 2000</b>
1999 to March 2000	---	80 <i>1.0%</i>	---	79,970 <i>1.6%</i>
1995 to 1998	---	452 <i>5.7%</i>	---	256,641 <i>5.3%</i>
1990 to 1994	---	400 <i>5.0%</i>	---	268,350 <i>5.5%</i>
1980 to 1989	583 <i>7.8%</i>	493 <i>6.2%</i>	529,389 <i>11.7%</i>	473,462 <i>9.7%</i>
1970 to 1979	1,069 <i>14.3%</i>	899 <i>11.3%</i>	830,606 <i>18.4%</i>	798,295 <i>16.3%</i>
1960 to 1969	855 <i>11.4%</i>	708 <i>8.9%</i>	746,181 <i>16.6%</i>	715,007 <i>14.6%</i>
1940 to 1959	1,442 <i>19.3%</i>	1,520 <i>19.1%</i>	1,178,945 <i>26.2%</i>	1,190,514 <i>24.4%</i>
1939 or earlier	3,532 <i>47.2%</i>	3,393 <i>42.7%</i>	1,221,154 <i>27.1%</i>	1,103,376 <i>22.6%</i>

Source: U.S. Bureau of the Census

Housing value is another important aspect for gauging the overall condition of the current housing stock. The value of housing has risen significantly since 1990 in Carroll County and in the State of Illinois as a whole. Table 2.4 shows the distribution of specified housing values across various price ranges, as well as the median home price, for Carroll County and the State of Illinois. In 1990 Carroll County had 69.8% of its housing units valued at less than \$50,000. By 2000, only 28.0% of housing units remained valued at less than \$50,000. According to data from the 2000 Census, just over one-half of specified housing units in Carroll County (50.6%) were valued between \$50,000 and \$99,999; 12.3% were valued between \$100,000 and \$149,999; 5.0% of the housing units were valued between \$150,000 and \$199,999; and, 4.1% of the housing units were valued at \$200,000 or more. The 2000 median value for housing within Carroll County was \$68,700. This was 47.5% lower than the median value for Illinois as a whole (\$130,800), and 17.7% lower than the average median value for the six-county Northwest Illinois region (\$83,500).

**Table 2.4**  
**Comparison of Owner-Occupied Housing Values**  
**Carroll County and State of Illinois**

	<b>Carroll County 1990</b>	<b>Carroll County 2000*</b>	<b>Illinois 1990</b>	<b>Illinois 2000*</b>
<b>Less than \$50,000</b>	2,510 69.8%	1,156 28.0%	525,054 25.2%	230,049 9.3%
<b>\$50,000 - \$99,999</b>	946 26.3%	2,087 50.6%	786,610 37.7%	651,605 26.4%
<b>\$100,000 - \$149,999</b>	101 2.8%	508 12.3%	403,218 19.3%	583,409 23.6%
<b>\$150,000 - \$199,999</b>	20 0.6%	207 5.0%	183,679 8.8%	429,311 17.4%
<b>\$200,000 or more</b>	17 0.5%	168 4.1%	186,147 8.9%	575,964 23.3%
<b>Median Value**</b>	<b>\$60,820</b>	<b>\$68,700</b>	<b>\$105,546</b>	<b>\$130,800</b>

Source: U.S. Bureau of the Census

\*Based on sample data

\*\*Adjusted for inflation

Note: Specified owner-occupied units include only single-family houses on less than 10 acres without a business or medical office on the property. The data for "specified unit" excludes mobile homes, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings.

D. Housing Affordability

According to the US 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 home owners (Table 2.5) and renters (Table 2.6). The following information is 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. The "not computed" category represents units occupied by households reporting no income or a net loss, or for which no cash rent was paid. Table 2.5 below shows monthly housing costs for home owners as a percentage of their household income for Carroll County and Illinois as a whole. In 1999, 84.6% of the households within Carroll County paid less than 30% of their monthly income toward housing costs, and those units were therefore considered affordable to those living in them. This percentage is higher than that of Illinois as a whole (78.3%).

**Table 2.5**  
**Monthly Owner Costs as a Percentage of Household Income**  
**Carroll County and State of Illinois**

	<b>Carroll County 1989</b>	<b>Carroll County 1999</b>	<b>Illinois 1989</b>	<b>Illinois 1999</b>
<b>Less than 20%</b>	2,581 72.1%	2,714 65.8%	1,257,209 59.5%	1,336,560 54.1%
<b>20% to 24%</b>	322 9.0%	515 12.5%	297,733 14.1%	356,666 14.4%
<b>25% to 29%</b>	178 5.0%	258 6.3%	198,430 9.4%	241,928 9.8%
<b>30% to 34%</b>	154 4.3%	155 3.8%	115,368 5.5%	151,094 6.1%
<b>35.0% or more</b>	311 8.7%	445 10.8%	233,331 11.0%	368,276 14.9%
<b>Not Computed</b>	36 1.0%	39 0.9%	11,351 0.5%	15,814 0.6%

Source: U.S. Bureau of the Census

Table 2.6 below shows monthly housing costs for renters as a percentage of their household income for Carroll County and Illinois as a whole. In 1999, 68.3% of renters in Carroll County were paying a monthly rent which was affordable to them. This percentage is higher than that of Illinois (56.8%) as a whole.

**Table 2.6**  
**Monthly Renter Costs as a Percentage of Household Income**  
**Carroll County and State of Illinois**

	Carroll County 1989	Carroll County 1999	Illinois 1989	Illinois 1999
Less than 20%	649 43.4%	616 45.8%	468,541 31.9%	523,787 35.2%
20% to 24%	247 16.5%	186 13.8%	204,074 13.9%	194,637 13.1%
25% to 29%	125 8.4%	153 11.4%	161,720 11.0%	149,844 10.1%
30% to 34%	87 5.8%	72 5.3%	116,060 7.9%	104,711 7.0%
35.0% or more	256 17.1%	177 13.2%	450,362 30.6%	420,404 28.3%
Not Computed	133 8.9%	142 10.5%	69,605 4.7%	94,121 6.3%

Source: U.S. Bureau of the Census

## Section 2.2 Additional Economic and Demographic Data

*Northern Illinois Market Facts*, published annually by Northern Illinois University, Center for Governmental Studies, is an annual compilation of economic and demographic data for a fourteen-county area (Boone, Bureau, Carroll, DeKalb, Grundy, Jo Daviess, Kendall, LaSalle, Lee, Ogle, Putnam, Stephenson, Whiteside and Winnebago counties) in northern Illinois. A regional overview and maps are included. In order to provide timely data without the need to update the text of this Comprehensive Plan document, *Northern Illinois Market Facts* is hereby incorporated in this document as Appendix I. The most recent version of *Northern Illinois Market Facts* should be included in said Appendix I, and previous versions may be retained or discarded.

## Section 2.3 Housing Demand

### A. Population Trends

Carroll County has shown a general downward trend in population since 1900. There have been only three Census periods since 1900 in which the County increased in population. The County registered its most significant growth between 1940 and 1960, growing by 1,520 persons during this 20-year period, and registering its highest population since 1900 of 19,507. Since 1960, the County has decreased in population, with the largest loss in population being between 1980 and 1990.

The population trend seen in Carroll County is unlike that of the State of Illinois as a whole, which has seen an increase in population during each Census period since 1900. However, the trend of population loss in Carroll County is not unlike other Illinois rural counties with no major metropolitan area. Loss of industry and jobs has resulted in people leaving Carroll County in order to seek employment in urban areas.

The six-county area of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside Counties (Northwest Illinois) grew by 3.7% between 1990 and 2000. During this period, Carroll County was the only county to lose population. However, between 2000 and 2006 the growth of the Northwest Illinois counties as a whole has slowed to a nominal 0.3%, with Carroll, Lee, Stephenson and Whiteside showing population declines.

#### B. Household Trends

The average number of residents that inhabit each home or apartment is identified by the U.S. Census as *persons per household*, or 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. The current decrease in population in Carroll County is likely being caused by a decline in the number of persons per household, as younger persons leave their parents homes and the County. This trend is accounted for by an increasing median age for County residents, and the declining numbers in the younger age classes and age cohorts as shown in Table 1.5. The number of new housing units available within Carroll County will increase modestly into the future, leaving persons per household as a main determinant of the number of residents within Carroll County. According to the 2000 Census (Table 1.7), Carroll County averaged 2.42 persons per household (PPH) in 6,794 households. According to the 2007 *Northern Illinois Market Facts*, in 2006 Carroll County averaged an estimated 2.37 persons per household in an estimated 6,676 households. It is anticipated that this average will decrease into the future based on the existing trend. According to the 2007 *Northern Illinois Market Facts*, persons per household in Carroll County is projected to decrease to 2.32 in 2015, and the number of households is projected to decrease to 6,599.

#### C. Housing Development Environment

Of the land devoted to urban development, no single land use demands greater acreage than residential activities. In 2008, 2.7% of the total land area of Carroll County contains residential development. The *Transportation, Utilities and Community Facilities*, and *Land Use* chapters will provide a more detailed analysis of the following topics, but a brief summary is included here to provide some context for housing unit development.

##### Infrastructure:

1. **Transportation:** There is a sufficient transportation network to allow for an economic and efficient expansion of housing in Carroll County where housing expansion is appropriate.
2. **Water Distribution System:** The County does not provide public water supply. Municipal water supplies may be available within and adjacent to municipalities within the County.
3. **Sanitary Sewage Treatment and Collection:** The County does not provide sanitary sewage treatment and collection. Rural-type residential development will most likely require the use of on-site sewage disposal systems. Municipal sanitary sewage treatment and collection systems may be available within and adjacent to municipalities within the County.

**Developable land:** There is an ample amount of vacant developable land within Carroll County to provide for future housing units.

#### D. Housing Issues Identified by the Plan Commission

1. There is a lack of new housing in the County.
2. There is a lack of housing options in the County.
3. Older housing in the County is in need of rehabilitation.
4. There is a lack of senior and assisted living housing in the County.
5. There is a lack of low-income housing in the County.



#### **Section 2.4: Conclusions – Housing Analysis**

- A. Between 1990 and 2000, Carroll County experienced a net increase of 464 units to its housing stock (Table 2.1). In the year 2000, single-family homes (1-unit detached) made up 84.3% of Carroll County housing units, which is significantly higher than Illinois as a whole (Table 2.2).
- B. The overall housing vacancy rate of 14.5% indicates that there is an adequate supply of available housing within the County.
- C. According to 2000 Census data, 61.8% of Carroll County’s housing units were built before 1960, while 17.9% of the housing units were built between 1980 and 2000.
- D. The 2000 median value for housing within Carroll County was \$68,700. This was 47.5% lower than the median value for Illinois as a whole (\$130,800).
- E. In 1999, 84.6% of the households within Carroll County paid less than 30% of their monthly income toward housing costs, and those units were therefore considered affordable to those living in them. This percentage is higher than that of Illinois as a whole (78.3%). In 1999, 68.3% of renters were paying a monthly rent which was affordable to them. This percentage is higher than that of Illinois (56.8%) as a whole.
- F. There is an ample amount of vacant developable land within the County to provide for future new housing units.

#### **Section 2.5: Housing and Residential Development Goals, Objectives, Policies**

Because of its major impact on community growth and development, efforts must be taken to protect the existing housing supply through effective building and land use code enforcement and to promote compact growth of new residential neighborhoods in areas that can be served conveniently and economically with public facilities and utilities.

##### **A. Goal**

To preserve or improve the quality and integrity of existing residential housing and neighborhoods, and encourage the provision of an adequate, affordable supply and choice of housing for all residents.

##### **B. Objectives**

1. Protect existing residential neighborhoods from intrusion by non-compatible or undesirable land use activities. Neighborhood design enhances community character.
2. Promote an adequate supply and choice of owner and renter type housing units to serve the current and future residents of Carroll County.
3. Promote decent, safe, sanitary, energy efficient and sustainable housing that contains a variety of housing styles and creativity in design.
4. Be sensitive and aware of the housing issues of our senior citizens and those with special needs.
5. Promote the rehabilitation of historic and substandard homes in the community in order to provide a decent and safe living environment for all residents.
6. Promote housing development that takes into consideration the protection of natural resources and open spaces.
7. Ensure that new residential development pays its “fair share” of costs relative to its impact on the local taxing districts, and does not create a burden on existing tax payers.

### C. Policies

1. Carroll County should continue to use the zoning ordinance to maintain the character of existing residential neighborhoods, ensure that new residential developments are located in suitable areas and ensure that residential development proposals meet density standards.
2. Effective building and housing codes should be adopted to ensure the quality, safety, energy efficiency and environmental sustainability of new and existing housing units.
3. Any new elderly housing developments should be located in areas accessible to commercial, recreational, medical, and other necessary facilities and services.
4. Work with local taxing districts to ensure that adequate public facilities and services are available and/or can be provided to new development, and that adequate fees are paid by new development to offset its impact.

**CHAPTER 3**  
**Transportation Facilities**

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**Section 3.1 Transportation Facility Inventory**

**A. Roads & Highways**

The existing functional class system (see Appendix II Maps, Map 3.1 Functional Transportation Classification, Carroll County, Illinois) categorizes streets and highways according to their two primary purposes: 1) to move vehicles (traffic mobility), and 2) to serve adjacent land (land access). Arterials accommodate the movement of vehicles, while local road and streets provide a land access function (farms, residential areas, etc.). Collectors serve both local and through traffic by providing a connection between arterials and local roads. The Carroll County road system, exclusive of municipal streets (unless considered a collector that is part of the County-wide transportation system), consists of a total of approximately 732.3 miles of public roadway within the unincorporated area of the County. State highways account for 108.4 miles; County highways account for approximately 124.6 miles; township roads account for approximately 499.3 miles.

**1. Arterials**

IL Route 40, IL Route 72, IL Route 73, IL Route 84, and U.S. Highway 52/IL Route 64 serve as arterial transportation routes both to and through 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 II Maps, Map 3.2 Average Daily Traffic (ADT) on U.S. and State Routes and Map 3.3 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 it.

IDOT is planning future highway improvement projects on U.S. Highways and State Routes. The following projects (Table 3.1 below) are planned for Fiscal Years 2008-20013:

**Table 3.1**  
**Planned IDOT Highway Improvement Projects 2008 through 2013**  
**Carroll County, Illinois**

<b>Route Street Name</b>	<b>Location / Improvement</b>	<b>Estimated Cost</b>
US 52 and IL Route 64	Mississippi River & BNSF Railroad in Savanna (Illinois lead agency; Iowa and Illinois will share cost equally) / Bridge deck repairs	\$1,225,000*
US 52 and IL Route 64	Carroll Creek 1.7 miles east of IL Route 78 / Bridge beam replacement; new bridge deck	\$350,000*
US 52 and IL Route 64	Carroll Creek 3.1 miles east of IL Route 78 / Bridge beam replacement; new bridge deck	\$165,000*
US 52 and IL Route 64	US 52 at IL Route 64 / Intersection reconstruction (Carroll and Ogle Counties)	\$3,625,000*
IL Route 40	IL Route 78 to School Street in Chadwick (8.24 miles) / Resurfacing	\$2,080,000

Route Street Name	Location / Improvement	Estimated Cost
IL Route 40	0.5, 0.8 and 1 mile south of Timber Lake Road / Culvert replacement	\$450,000
IL Route 40	0.5, 0.8 and 1 mile south of Timber Lake Road / Land acquisition	\$20,000
IL Route 40	Otter Creek 1.3 miles west of Milledgeville / Bridge beam replacement; new bridge deck	\$85,000*
IL Route 40	Stoner Street to Adams Street in Milledgeville (1.16 miles) / Resurfacing; cold milling	\$700,000
IL Route 40	Adams Street in Milledgeville to south of 26 <sup>th</sup> Street in Sterling (Carroll and Whiteside Counties) / Resurfacing; drainage (12.31 miles)	\$3,200,000
IL Route 64 and US 52	Three culverts between IL Route 73 to Ogle County line / Culvert replacement	\$900,000*
IL Route 64 and US 52	Three (3) culverts between IL Route 73 to Ogle County line / Land acquisition	\$60,000*
IL Route 73	North of Peace & Quiet Road / Culvert extension	\$225,000*
IL Route 73	North of Peace & Quiet Road / Land acquisition	\$40,000*
IL Route 73	At Payne Road 1 mile north of IL Route 72 / Vertical re-alignment; intersection improvement; culvert replacement (0.28 mile)	\$1,900,000*
IL Route 73	At Payne Road 1 mile north of IL Route 72 / Land acquisition	\$20,000*
IL Route 78	JoDaviess County line to Carroll Creek in Mt. Carroll / Resurfacing (7.43 miles)	\$2,260,000*
IL Route 78	Five (5) culverts between JoDaviess County line to Carroll Creek in Mt. Carroll / Culvert replacement; culvert repair	\$950,000*
IL Route 78	Five (5) culverts between JoDaviess County line to Carroll Creek in Mt. Carroll / Land acquisition	\$120,000*
IL Route 84	Drainage ditch 2 miles north of Savanna / Bridge beam replacement; new bridge deck	\$265,000*
IL Route 84	0.2 mile north of Doty Road to Whiteside County line / Resurfacing (10.4 miles)	\$2,985,000
IL Route 84	0.2 mile north of Doty Road to Whiteside County line / Railroad crossing improvement	\$150,000
Argo Fay Route	Stream 1.5 miles southwest of Argo Fay (isolated structure that will be negotiated for transfer with future roadway improvement) / Culvert replacement	\$420,000*

Route Street Name	Location / Improvement	Estimated Cost
Argo Fay Route	Stream 1.5 miles southwest of Argo Fay (isolated structure that will be negotiated for transfer with future roadway improvement) / Land acquisition	\$30,000*
Ideal Road (County Highway 8 / FAS 1084)	Over BNSF Railroad 2 miles west of Milledgeville (local major bridge project; contingent upon joint funding agreement between IDOT, ICC, BSNF Railroad and Carroll County) / Bridge replacement	\$480,000
Ideal Road (County Highway 8 / FAS 1084)	Over BNSF Railroad 2 miles west of Milledgeville (local major bridge project; contingent upon joint funding agreement between IDOT, ICC, BSNF Railroad and Carroll County) / Construction engineering	\$20,000

\*IDOT FY 2008 Project

Source: Illinois Department of Transportation District 2, FY 2008-2013 Highway Improvement Program

## 2. Collectors

The following roads/highways (or portions thereof) are considered collectors within the County: Argo Fay Route, Benson Road, Big Cut Road, Brookville Road, Chamber's Grove Road, Clay Street (Mt. Carroll), Coleta Road, Corbett Road, Dame Road, E. First Street (Milledgeville), E. Lincoln Street (Mt. Carroll), E. Market Street (Mt. Carroll), Milledgeville Road, Eagle Point Road, Elizabeth Road, Fairhaven Road, Georgetown Road, Ideal Road, Loran Road, Main Street (Chadwick), Morrison Road, N. 4<sup>th</sup> Street and N. 5<sup>th</sup> Street (Savanna), N. Galena Street (Mt. Carroll), N. Lowden Road (Mt. Carroll), N. Shannon Road (Shannon), N. Washington Avenue (Mt. Carroll), Ogle Road, Oil Valley School Road, Otter Creek Road, Shannon Route, Scenic Bluff Road, Scenic Ridge Road, Seven Hill Road, Shannon Route, Thomson Road, Timber Lake Road, W. First Street (Milledgeville), W. Market Street (Mt. Carroll), W. Spring Avenue (Mt. Carroll), Wacker Road, Webster Street (Savanna), Willow Road, and Zion Road. Refer to Appendix II, Map 3.1 Functional Transportation Classification. As previously mentioned, portions of these "collector roads/highways" may lie within municipalities. Also, the entire length of a named road may not necessarily be classified as a collector.

## 3. Local Roads and Streets

The remaining roads are classified as local streets. Their primary function is land access.

### B. Pedestrian & Bicycle Facilities

The Carroll County Economic Development Corporation has facilitated the development of a Greenways and Trails Plan for Carroll County. The *Carroll County Greenways and Trails Plan* was produced with funding from the Illinois Department of Natural Resources. Input and assistance was provided from many organizations including townships, municipalities, business partners and volunteers.

A "greenway" is a corridor of open land that is managed 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, but overall, a greenway will provide recreational benefits, protect natural areas, enhance natural beauty and quality of life in neighborhoods and communities, or 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 land uses and facilities.

The *Carroll County Greenways and Trails Plan* provides information about the County; an inventory of natural and cultural resources; an inventory of existing parks, greenways and trails; and identifies opportunities for future greenways and trails.

The *Carroll County Greenways and Trails Plan* is hereby incorporated in the this Comprehensive Plan by reference.

### C. Rail

Carroll County is served by two rail lines: The Burlington Northern Santa Fe (BNSF) Railroad and the Iowa, Chicago & Eastern (IC&E) Railroad.

The Burlington Northern Santa Fe Railroad (BNSF) runs along the western boundary of the County from the north to Savanna where it diverges into a line that runs to the south and a line that runs to the east. The south line runs through Thomson on its way toward Galesburg, Illinois. The east line runs through Chadwick and Milledgeville on its way toward Chicago, Illinois. The BNSF is one of the largest railroad networks in North America, with track mileage totaling about 33,000 miles covering 28 states and two Canadian provinces across the western two-thirds of the United States, stretching from major Pacific Northwest and Southern California ports to the Midwest, Southeast and Southwest, and from the Gulf of Mexico to Canada.

The Iowa, Chicago & Eastern (IC&E) Railroad runs generally east-west through the County, running just south of Shannon, through Lanark, Mt. Carroll and Savanna before crossing the Mississippi River on its way to points north and west. The IC&E, formerly the I&M Rail Link (IMRL), operates 1,393 miles of track from Minneapolis to Chicago and Kansas City. Operations also include a line across northern Iowa and southern Minnesota. The IC&E serves intermodal facilities located in Chicago, Kansas City, Minneapolis and the Quad Cities.

While passenger service was provided in the past, the existing lines currently accommodate freight transport only. Additionally, these routes are, in general, not providing a significant amount of service to local industrial producers because of decreased reliance on rail transportation. While the decreases in the use of the rail lines coincide with national trends, the existing rail lines do provide an in-place infrastructure available to certain industrial users.

### D. Water and Truck Transportation

Semi-truck shipments in Carroll County are most prevalent along the arterial (U.S. and State) highways. The cities and villages in the County have designated truck routes to guide truck traffic from the major highways into industrial parks and business areas. Map 3.2 (Appendix III Maps) details the average daily truck traffic on the County’s U.S. and State highways.

Consolidated Grain & Barge Company owns and operates a commercial grain terminal on the Mississippi River in Savanna that provides grain shipment by barge.

### E. Air Transportation Facilities

The only local public general aviation airport in Carroll County is the Tri-Township Airport in Savanna. Tri-Township Airport has one runway. Runway 13/31 is 4,001' long by 60' wide, with a surface consisting of asphalt in good condition. There are 3 single-engine aircraft based at Tri-Township Airport. Aircraft operations average 77 per week (50% local general aviation, 50% transient general aviation).

Other nearby airports include Clinton (Iowa) Municipal Airport (16 nm SW), Albertus Airport (26 nm NE), Whiteside County Airport-Jos H Bittorf Field (26 nm SE), Maquoketa (Iowa) Municipal Airport (28 nm W), and Dixon Municipal Airport-Charles R. Walgreen Field (32 nm SE). The closest regional airports are Dubuque (Iowa) Regional Airport (34 nm NW) and Chicago/Rockford International Airport (46 nm W/NW).

The Dubuque Regional Airport (DBQ) is located approximately 7 miles southwest of Dubuque and consists of more than 1,100 acres. The airport is attended 24 hours daily by the Operations Department. DBQ's Air Traffic Control Tower operates from 0600 local to 2000 local. DBQ is certified under Federal Aviation Regulations (FAR) Part 139 and has two commuter airlines that operate daily. They are American Eagle, with flights to and from Chicago's O'Hare International Airport and Mesaba's Northwest Airlink, with flights to and from Minneapolis/St. Paul's International Airport. In 2001, the Dubuque Regional Airport achieved eleven straight years perfect Part 139 safety rating from the Federal Aviation Administration. This record is unequalled in an annual review of approximately 600 certified U.S. airports.

DBQ has two runways: runway 13/31 is 6,502' long by 100' wide with a surface consisting of grooved concrete in good condition; runway 18/36 is 6,327' long by 150' wide with a surface consisting of grooved concrete in excellent condition.

There are 76 aircraft based at DBQ, (65 being single-engine aircraft, 9 multi-engine aircraft, and 2 jet aircraft). Aircraft operations average 150 per day (47% transient general aviation, 44% local general aviation, 8% commercial and less than 1% military).

Chicago/Rockford International Airport (RFD) currently encompasses 3,000 acres of land in Winnebago County and is located on the southwestern edge of the City of Rockford. The airport is generally bound by IL Route 251 to the east, the Kishwaukee River to the south, the Rock River to the west and U.S. 20 Bypass to the north.

RFD is home to 30 industrial tenants and the largest regional parcel-sorting facility in the UPS system - the only facility of its type that handles coast-to-coast cargo. The airport has progressively evolved from a general aviation facility to a dynamic commercial service airport.

RFD is presently ranked as the 22nd largest cargo airport in the nation and the 220th largest passenger airport. Currently, Allegiant Air offers non-stop flights to Orlando, Las Vegas, and Clearwater/St. Pete (Tampa Bay Area) with flights to Fort Lauderdale and Phoenix/Mesa scheduled to start in November and December; United Airlines flies non-stop to Denver and to over 100 connecting destinations and Apple Vacations offers seasonal service to Cancun. RFD averages between 21-25 flights a week.

RFD is an international airport capable of landing aircraft in Category III conditions. These state-of-the-art facilities, when coupled with runway lengths of 10,000 ft. and 8,200 feet, allow RFD to land any jet aircraft operating in the world today - even under the most adverse conditions.

RFD is a United States Customs Port of Entry, home to 30 industrial tenants and the Authority is grantee for Foreign Trade Zone #176. The diverse activities at RFD cause it to have a greater economic impact on the region it serves than any other commercial service airport in the State of Illinois, excluding the city of Chicago's system of airports.

Over the past few years more than \$183 million has been invested in infrastructure improvements and facilities at RFD. A majority of dollars spent on these projects were funded through local, state, and federal grants. The completion of these projects has allowed RFD to be in the position to accommodate the tremendous growth in passenger and cargo services.

The airport has two general purpose runways and a variety of terminal facilities, including a passenger terminal, corporate and general aviation hangars, fixed base operator offices and facilities, an Air Traffic

Control Tower (attended continuously), airport maintenance facilities, air freight and air cargo facilities, and a UPS cargo sortation facility. Although classified as an air carrier airport, RFD also serves as an important general aviation facility for the Rockford and surrounding area.

RFD Runway 1/19, oriented north/south, is 8,199 feet long and 150 feet wide with a dual-double tandem pavement strength of 850,000 pounds. Runway 1/19 is served with a Category I Instrument Landing System. Runway 7/25, oriented to the northeast/southwest, is 10,000 feet long and 150 feet wide with a dual-double tandem pavement strength of 850,000 pounds. Runway 7/25 is served with a Category III Instrument Landing System.

Runway 7/25, the primary runway on the airfield, is principally used for departures in west flow and arrivals in east flow during the night-time hours, winds permitting. This is done in an effort to keep traffic away from a majority of Rockford's population located north of the airport. Runway 1/19 is principally used by light general aviation and commuter aircraft during calm wind patterns. The flight patterns for aircraft touch-and-go training (including that of the military) occurs either to the south of the airport (on Runway 7/25) or to the west of the airport (on Runway 1/19). Military aircraft use both runways for training purposes.

There are 87 aircraft based at RFD (58 single-engine aircraft, 17 multi-engine aircraft, 11 jet aircraft, and 1 helicopter). Aircraft operation average 212 per day (52% transient general aviation, 21% local general aviation, 18% commercial, 6% air taxi and 3% military).

### **Section 3.2 Transportation Issues Identified by the Planning Commission**

- Roads need upgrades and maintenance.
- Trail system needs to be completed.
- Expansion of rail and water transportation is needed.
- Public transportation system needed.

### **Section 3.3 Goals, Objectives, Policies**

#### **A. Goal**

Develop an area-wide transportation planning and funding approach that maximizes efficiency and minimizes conflicts between modes of transportation.

#### **B. Objectives**

1. Provide a viable public transportation network for all County residents.
2. Provide for safe and efficient movement of all modes of transportation (vehicles, pedestrians and bicycle traffic, etc.).
3. Plan for the timely and efficient maintenance of County transportation facilities.

#### **C. Policies**

1. Consider recommendations within the Carroll County Greenways and Trails Plan when making decisions regarding the pedestrian and bicycle network.
2. Promote the use of the existing rail lines in the County.
3. Promote/encourage the development of commuter/passenger rail service in the region.
4. Develop, implement, and periodically update a Capital Improvements Program outlining transportation facilities improvements.
5. Promote/encourage the development of a light rail system between the municipalities in the County.



6. **Promote/encourage the development of a transit system which would include buses, vans and taxis on designated routes and door-to-door between and within municipalities.**

**CHAPTER 4**  
**Utilities and Community Facilities**

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**Section 4.1 Public Utilities Inventory**

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

**A. Water Supply**

Carroll County has nine (9) "community" water supplies and thirty (30) "non-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. "Non-community" water supplies may be one of two types: "Non-Transient Non-Community water supplies" serve at least the same 25 non-residential individuals during 6 months of the year; "Transient Non-Community water supplies" regularly serves at least 25 non-residential individuals (transient) during 60 or more days per year.

The community water supplies in the County are: Carroll Heights Utility Company, Century Pines Apartments, Village of Chadwick, City of Lanark, Village of Milledgeville, City of Mount Carroll, City of Savanna, Village of Shannon, and Village of Thomson. Residents in the County that are not served by a "community water supply" or a "non-community" water supply obtain their water supply from private wells. Chapter 5: Agricultural, Natural, and Cultural Resources provides more detailed information on the quantity and quality of Carroll County's groundwater supply.

**B. Sanitary Sewer Service / Private On-site Wastewater Disposal Systems (POWDS)**

The Village of Chadwick, City of Lanark, Village of Milledgeville, City of Mount Carroll, City of Savanna, Village of Shannon, and Village of Thomson 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 management has gained more attention statewide in recent years as an environmental concern due to flooding, property damage, and surface water quality issues. Many communities are adopting stormwater management rules to control run-off, such as establishing maximum impervious surface ratios, requiring that the amount of run-off occurring after development is the same as before development, and setting minimum water quality standards. Controlling run-off during site grading and construction has been viewed as particularly important. Under a recent change to State law, construction site erosion control plans are required for all sites over 1 acre in area.

**B. Solid Waste Disposal**

Carroll County has no active landfills. Two transfer stations located in Lanark and Savanna accept 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 April 2007, there is significant regional landfill capacity until 2035. In addition, the amount of waste generated by Carroll alone is not sufficient to support the economic development of a local landfill.

Nearly all the residences in Carroll 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.

### C. Public Utilities

1. Natural gas - Natural gas is provided by Alliant Energy, NiCor Gas, Northern Illinois Gas, and JoCarroll Energy, depending on location.
2. Electric Power - Electricity is provided by ComEd/Exelon Corporation and JoCarroll Energy, depending on location.
3. Telephone Service - Local telephone service is provided by CenturyTel (formerly Gallatin River Communications), Frontier Communications, Verizon, and U.S. Cellular. Long distance, cellular and other specialized phone services are available from a number of private firms.
  - a. CenturyTel, Frontier Communications, and Verizon share a fiber transport route through most of the cities and villages that comprise Carroll County. This fiber route is not redundant at this time; planning for route redundancy is ongoing with several fiber transport companies that would enable many of the communities within Carroll County to obtain a protected transport route to their proximity.
  - b. In 2007, a fiber transport route for economic development purposes was built from the City of Savanna north to the location of the former Savanna Army Depot in the northern portion of Carroll County.
4. Cable television service is provided by Insight Communications.
5. Satellite television service is available from a number of private firms.
6. Internet service is available to County residents through a variety of sources.

### **Section 4.2 Public Utilities Needs/Issues**

To maintain the public health, economy and natural resource base of the County, public utilities and services must be adequate for existing and planned development. Carroll County's public utilities and services were analyzed and the following recommendations were developed to ensure that the County has the continuing capacity to serve existing and new development and that public utilities are provided in areas where they can be most efficiently and economically extended:

#### A. Water Supply

- Existing public water systems need to be maintained, improved and extended based on need.
- The watersheds and aquifers in the County need to be protected.

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

- Existing public sewer systems need to be maintained, improved and extended based on need.
- There are many older, out-dated septic systems in the County that need to be identified and updated/replaced if necessary.

#### C. Solid Waste Disposal

- It can be difficult to obtain solid waste collection service in the rural areas of the County. Cooperation between the solid waste disposal contractors should be encouraged in order to provide adequate, reliable service to all residents of the County.

- The possibility and/or feasibility of a landfill within the County should be investigated.

#### D. Utilities

- The County should keep the lines of communication open with public utility providers, and request to be informed of future projects (e.g. line upgrades or new facilities) that may impact the County.
- Phone lines in the County are in need of upgrades.
- Internet and wireless communications in the County need to be expanded and improved, including redundancy.
- Electric transmission lines in the County are in need of upgrade, expansion and looping.
- All utility companies in the County need to establish and/or improve economic development incentives, cooperation and service responsiveness.

### **Section 4.3 Community Facilities Inventory**

#### A. County Facilities

Carroll County's government offices operate out of several buildings in Mt. Carroll. The Carroll County Courthouse, located at 301 N. Main St. in Mt. Carroll, houses the County Clerk/Recorder, County Board, Supervisor of Assessments, Treasurer, Probation Department, Public Defender, Circuit Clerk, Court Reporter, State's Attorney, GIS Department, Zoning Department, Emergency Management Agency, Veterans Assistance Commission, Sheriff's Department and Jail, and the Judiciary. The County Courthouse is listed on the National Register of Historic Places. Other County facilities include the Highway Department, Animal Control Department and Health Department. The County Highway Department garage / Animal Control office is located at 10735 Mill Road in Mt. Carroll; the Carroll County Health Department is located at 820 South Mill St. in Mt. Carroll.

The County Fairgrounds occupies a 44.5-acre site east of Milledgeville at 28374 Milledgeville Road. Facilities include a horse racing track, a grandstand, restrooms, and several livestock and exposition buildings. The County Fair is held annually in August.

#### B. Parks and Recreation Facilities

The Carroll County Greenways and Trails Plan, incorporated herein by reference (see Chapter 3 Transportation), contains a county-wide inventory of existing parks, outdoor recreation areas, and other open spaces.

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

The Carroll County Sheriff's Department serves as the primary law enforcement agency for County residents located outside of a city or village. The Department has nine (9) full-time officers that include the Sheriff, one Chief Deputy, one detective and six (6) patrol deputies. The Department also employs six (6) correctional officers and eight (8) dispatchers.

The Department operates out of the courthouse building in the Mt. Carroll. The County Jail is also located in this building. The jail has 26 beds, and the average number of inmates in the County's jail facility on a weekly basis is approximately 15 people. Chadwick, Lanark, Milledgeville, Mt. Carroll, Savanna, Shannon and Thomson also operate their own municipal police departments.

There are nine fire protection/ambulance districts in Carroll County: Chadwick, Lanark, Milledgeville, Mt. Carroll, Savanna, Shannon, Thomson, Polo and Hanover.

In terms of availability of health care services, there are no hospitals located in the County, with the nearest hospitals located in Morrison, Clinton (Iowa), Sterling, Freeport and Rockford. There are four medical clinics located in the County: Savanna Health Center (Savanna), FHN Family Healthcare Center (Lanark), FHN Family Healthcare Center (Savanna) and FHN Family Healthcare Center (Mt. Carroll).

There are three dental clinics in the County: Dental Design Services (Lanark), David Purlee, DDS (Mt. Carroll) and Riverside Dental, PC (Savanna).

There are two eye care facilities in the County - Optometric Center, PC located in Savanna; and, Northwest Eye Care, located in Lanark.

There are two nursing care facilities in the County: Big Meadows is located in Savanna; Carroll County Good Samaritan Center is located in Mt. Carroll.

#### D. Schools

The residents of Carroll County are served by three community unit school districts: Chadwick-Milledgeville C.U.S.D. No. 399, Eastland C.U.S.D. No. 308 and West Carroll C.U.S.D. No. 314. The following information for each school district is from the 2007 Illinois School District Report Card (Illinois State Board of Education):

1. Chadwick-Milledgeville C.U.S.D. No. 399

Chadwick-Milledgeville has a student enrollment of 548. The district consists of the Chadwick Elementary School in Chadwick (grades 4-5), Milledgeville Elementary School in Milledgeville (grades pk-3), Chadwick Junior High School in Chadwick (grades 6-8) and Milledgeville High School in Milledgeville (grades 9-12).

In 2005-06, 51.9% of the district revenue was derived from local property taxes, compared to the state average of 58.8%.

The district average teaching experience is 16.0 years, which is above the state average of 12.9 years. The average teacher salary in the district is \$44,873, which is below the state average of \$58,275. The average administrator salary in the district is \$85,794, which is below the state average of \$102,310.

The district 2005-06 instructional expenditure per pupil was \$5,291 (state average: \$5,567). The district 2005-06 operating expenditure per pupil was \$8,887 (state average: \$9,488).

Overall student performance on all state tests in 2005-06 and 2006-07 exceed that of the state as a whole.

2. Eastland has a student enrollment of 721. The district consists of the Eastland Elementary School in Lanark (grades pk-3), Eastland Middle School in Shannon (grades 4-8) and Eastland High School in Lanark (grades 9-12).

In 2005-06, 77.5% of the district revenue was derived from local property taxes, compared to the state average of 58.8%.

The district average teaching experience is 17.8 years, which is above the state average of 12.9 years. The average teacher salary in the district is \$54,908, which is below the state average of \$58,275. The average administrator salary in the district is \$93,332, which is below the state average of \$102,310.

The district 2005-06 instructional expenditure per pupil was \$5,961 (state average: \$5,567). The district 2005-06 operating expenditure per pupil was \$9,705 (state average: \$9,488).

Overall student performance on all state tests in 2005-06 and 2006-07 exceeded that of the state as a whole.

3. West Carroll has a student enrollment of 1,505. The district consists of the West Carroll Primary School in Savanna (grades pk-3), West Carroll Intermediate School in Thomson (grades 4-5), West Carroll Middle School in Mt. Carroll (grades 6-8) and West Carroll High School in Savanna (grades 9-12).

In 2005-06, 40.4% of the district revenue was derived from local property taxes, compared to the state average of 58.8%.

The district average teaching experience is 16.4 years, which is above the state average of 12.9 years. The average teacher salary in the district is \$51,580, which is below the state average of \$58,275. The average administrator salary in the district is \$104,073, which is above the state average of \$102,310.

The district 2005-06 instructional expenditure per pupil was \$5,642 (state average: \$5,567). The district 2005-06 operating expenditure per pupil was \$9,594 (state average: \$9,488).

Overall student performance on all state tests in 2005-06 and 2006-07 was below that of the state as a whole.

#### E. Libraries

There are six libraries in the County, located in the Village of Chadwick (Chadwick Public Library), the City of Lanark (Lanark Public Library), the Village of Milledgeville (Wysox Township Library), the City of Mt. Carroll (Mt. Carroll Township Public Library), the City of Savanna (Savanna Public Library), and the Village of Thomson (York Township Public Library). All public libraries in the County are members of the Prairie Area Library System. The Chadwick, Lanark, Wysox Township, Mt. Carroll Township and York Township libraries are operated as components of municipal government. The Savanna Public Library is operated by a public library district.

#### F. Junior College Facilities

Residents of the Carroll County are served by Sauk Valley Community College, located in Dixon, IL and Highland Community College, located in Freeport, IL.

1. Sauk Valley Community College: As a community college, the mission of Sauk Valley Community College is to be an institution of higher education that provides quality learning opportunities to meet the diverse needs of its students and community, with its vision to be recognized as a benchmark institution of higher education that provides exceptional learning opportunities in response to the diverse needs of its students and community. Sauk Valley Community College is a two-year community college offering associate degrees in 34 disciplines for transfer to four-year colleges; career-oriented associate degrees in 19 areas, and one liberal studies degree.

2. **Highland Community College:** 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.

#### G. Cemeteries

There are many public and private cemeteries located throughout Carroll County. The locations of most of these sites are available from County plat books, as well as from the Carroll County Genealogical Society located in Savanna. The Internet also provides information on County cemeteries and genealogical records.

#### H. Other Community Facilities and Services

1. **Carroll County Soil & Water Conservation District:**

The Carroll County Soil & Water Conservation District is located at 807C S. Clay Street in Mt. Carroll. The purpose of the Soil & Water Conservation District is to protect and maintain the natural resources of Carroll County and to provide educational opportunities for schools and the public at large.

2. **Carroll County Senior Services Organization, Inc. (CCSSO):**

The Carroll County CCSSO is located at 306 N. Main Street in Mt. Carroll and provides the following services:

- Information about senior issues, health issues, legal issues, medicare, social security, housing, long-term care, meals, etc.
- Assistance in filling out forms (income tax, tax freeze, Circuit Breaker, Liheap, etc.)
- Instruction in physical fitness, computer operations (including internet skills), genealogy, rules of the road and defensive driving courses.
- Opportunities to travel, play pool, and make new friends.
- Volunteer opportunities as a crafter, a clerical aide, working with recyclable materials, etc.
- Support for Alzheimer's Disease, grandparents raising grandchildren, and arthritis.
- Transportation to medical appointments, shopping, meal sites, etc.

The organization is funded by Carroll County Senior Taxes, Northwestern Illinois Area Agency on Aging Community Fund, and contributions from municipalities, churches, clubs, organizations, corporations, and the general public.

3. **Carroll County Historical Society:**

The mission of the Carroll County Historical Society is to collect, preserve and share historical artifacts and information relating to the County and its people.

The Carroll County Historical Society owns and operates two facilities - the Owen P. Miles Museum and the Oakville Complex.

The Owen P. Miles Museum, located at 107 W. Broadway Street in Mt. Carroll, is an 1873 Italianate home that depicts life in the 1800's and displays artifacts related to the County.

The Oakville Complex, located between IL Route 78 and IL Route 40 near Timberlake Playhouse and 1/4 mile north of Oakville Golf Course, is an interpretive center that consists of an 1888 schoolhouse, two log cabins, a blacksmith shop and a granary.

4. **Choices Domestic Violence Program**

Choices provides free and confidential services to victims/survivors of domestic violence.

5. **Lee/Carroll County Court Appointed Special Advocate Program (CASA)**

Lee/Carroll County CASA is located at 10735 Mill Road in Mt. Carroll. CASA is a non-profit organization that recruits, trains and monitors citizen volunteers to work with abused and neglected children.

6. **Jo-Carroll Depot Local Redevelopment Authority (LRA)**

The LRA office is located at 18935 B Street in Savanna. See Chapter 6: Economic Development for detailed description.

7. **Sinissippi Centers, Inc.**

Sinissippi Centers, Inc. is located at 1122 Healthcare Drive in Mt. Carroll. The mission of Sinissippi Centers, Inc. is to provide quality, coordinated and responsive behavioral healthcare services to individuals, families and communities.

8. **Rolling Hills Progress Center**

Rolling Hills Progress Center is located at 201 Hwy. 52 in Lanark. The purpose of Rolling Hills Progress Center is to provide a comprehensive program of services to adults with disabilities residing in Carroll County. Since its inception, Rolling Hills has served persons who are disabled by preparing them to function in today's labor market as well as in the mainstream of their community's social sphere.

9. **Carroll County Veterans Assistance Commission (VAC)**

The Carroll County VAC is located in the Carroll County Courthouse (301 N. Main Street in Mt. Carroll). The purpose of the VAC is to provide assistance to military veterans and their dependents who qualify for assistance based upon the financial assistance guidelines as established by the Veteran's Assistance Commission.

10. **Carroll County Economic Development Corporation (EDC)**

The Carroll County EDC is located at 9317 IL Route 84, Suite B in Savanna. See Chapter 6: Economic Development for detailed description.

**4.4 Community Facilities Needs/Issues**

The County should strive to provide a high level of services and facilities. The following recommendations are offered to strengthen the County's existing facilities and services and ensure that future improvement and building programs are economical and efficient.

**A. County Facilities and Services Needs/Issues:**

- The County needs to upgrade the Courthouse/Jail.
- The County should establish a capital improvements plan/program.



**B. Parks and Recreation:**

- The bike trail system in the County needs to be completed.
- New and/or expanded trail options should be explored.
- Public water-based recreation should be encouraged.

**C. Police, Fire, Emergency and Health Care Services:**

- The possibility of a County-based hospital should be explored.
- The possibility of additional County-based heliports should be explored.
- Additional training opportunities for Emergency Medical Technicians and other emergency personnel is needed.

**D. Schools:**

- The possibility of one County-wide high school district should be explored.

**E. Libraries:**

No recommendations.

**F. Junior College/Higher Education Facilities:**

- Higher education opportunities in the County should be created and/or expanded.
- Vocational education opportunities in the County should be created and/or expanded.

**G. Cemeteries:**

No recommendations.

**H. Other Community Facilities and Services:**

- There is a County-wide need for robust high-speed/broadband capabilities.

**Section 4.5 Utilities And Community Facilities Goals, Objectives, Policies**

**A. Goal:**

Promote an effective and efficient supply of utilities, facilities and services that meet the expectations of County residents.

**B. Objectives:**

1. Coordinate community facilities and utility systems planning with land use, transportation, and natural resource planning.
2. Direct intensive development to areas where a full array of utilities, community facilities, and public services are available.
3. Provide the appropriate level of community services and administrative facilities and practices, while striving for a low tax levy.
4. Protect public and environmental health through proper waste disposal.
5. Protect the lives, property, and rights of all residents through law enforcement and fire services.
6. Support high quality educational opportunities for all residents.

C. Policies:

1. Encourage compact and well-planned urban and rural development areas, so that community facilities and services (e.g., school bus routes, snow removal, police patrol) can be provided in a cost-effective manner.
2. Promote long-range sanitary sewer system planning with cities and villages to accommodate projected countywide growth and development.
3. Properly site and monitor private on-site wastewater treatment systems to assure public health and groundwater quality.
4. Work with local communities to assure a high-quality and abundant supply of water.
5. Encourage efforts to retain and improve small community schools and educational services directed to educating the County's youth and providing continuing education and training to adults.
6. Help coordinate and support local emergency services and facilities (e.g., police, fire, rescue/EMS) through adequate funding, training, facilities, and equipment.
7. Coordinate rural addressing, road naming, and driveway construction to ensure safe and adequate emergency response services.
8. Study long-term space needs for County administrative and departmental functions (e.g., jail, EMS, human services), and address facilities needs based on further discussions.
9. Support strategies for enhancing telecommunication capabilities.
10. Support local communities in efforts to improve and/or expand on facilities for solid waste disposal and recycling.
11. Require construction site erosion control and stormwater management for subdivision development and other larger projects including commercial and industrial development. Stormwater management techniques include natural drainage swales and retention and detention basins.
12. Encourage the provision of new and improved services and facilities geared to the elderly.
13. Strive to be informed on local access to cemeteries, health care, child care, libraries and other government facilities. Where gaps in availability exist, the County should attempt to work cooperatively with local communities to serve residents to the best level possible.
14. Establish a timetable to expand or rehabilitate existing or create new community facilities.
15. Promote energy efficiency and the use of renewable energy sources.
16. Maintain and expand rural recycling even if one or more of the solid waste transfer stations within the County are closed.

## CHAPTER 5 Agriculture, Natural and Cultural Resources

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### Section 5.1 Climate

Carroll 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. The amount of annual rainfall usually is adequate for corn, soybeans, and small grain.

In winter, the average temperature is about 22 degrees F and the average daily minimum temperature is about 12 degrees. The lowest temperature on record, which occurred at Mt. Carroll on January 7, 1910, is 31 degrees. In summer, the average temperature is about 69.5 degrees and the average daily maximum temperature is about 82.5 degrees. The highest recorded temperature, which occurred at Mt. Carroll on July 12, 1936, is 108 degrees.

Total annual precipitation is 37.48 inches. Of this total, 24.33 inches, or about 65 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 13.1 inches. The heaviest 1-day rainfall on record, 5 inches, occurred at Mt. Carroll on September 14, 1961. Thunderstorms occur on about 50 days each year, and most occur in summer. The average seasonal snowfall is 33.4 inches. On average, 58 days of the year have at least 1 inch of snow on the ground. The number of such days, however, varies greatly from year to year. Tornadoes and severe thunderstorms strike occasionally. They are of local extent and of short duration and cause only sparse damage in narrow belts. Hailstorms sometimes occur during the warmer periods. The hail falls in scattered small areas.

### Section 5.2 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 commonly recognized high-level classes of use. Chapter 8 Land Use analyzes the County's land use.

The predominant land cover in Carroll County is crop land. Over 47% of the County is in row crop production. The following Table 5.1 details the land cover characteristics of the County. The County's land cover is graphically depicted in the map titled "Land Cover of Carroll County, Illinois" in Appendix III Geologic Maps.

**Table 5.1 Land Cover of Carroll County, Illinois**

Land Cover Category	Area (square miles)	Area (acres)	% of Area
Row crops	217.28	139,059.20	47.0
Rural grasslands	132.67	84,908.80	28.7
Deciduous forest, closed canopy	47.91	30,662.40	10.4
Small grains	23.56	15,078.40	5.1
Open water	22.20	14,208.00	4.8
Forested wetlands	7.12	4,556.80	1.5
Urban grasslands	2.78	1,779.20	0.6
Deciduous forest, open canopy	2.54	1,625.60	0.6
Low density built-up land	1.88	1,203.20	0.4
Shallow marsh/wet meadow	1.30	832.00	0.3
Swamp	0.90	576.00	0.2
Medium density built-up land	0.62	396.80	0.1
High density built-up land	0.45	288.00	0.1
Shallow water wetlands	0.46	294.40	0.1
Coniferous forest	0.41	262.40	0.1
Barren land	0.15	96.00	0.0
<b>Total</b>	<b>462.23</b>	<b>295,827.20</b>	<b>100.0</b>

Source: Illinois Natural History Survey and Illinois State Geological Survey

### Section 5.3 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.

Over 90% of the County's land area is in agricultural or agriculturally-related use. Grain farming, hay farming and livestock production are the predominant agricultural activities in Carroll County. Agriculture has always been the major industry in Carroll County. The county has a high percentage of productive soils, good transportation facilities, nearby markets, and a favorable climate.

Although cash grain farming has increased, most of Carroll County is well adapted to combination grain and livestock farming because of its sloping topography, and a high percentage of farm income is derived from livestock and livestock products. In 2002, the county had 656 farms that made up 247,536 acres; the average farm size was 377 acres (2002 Census of Agriculture).

Corn, soybeans, and hay are the major crops. In 2006, about 137,000 acres was used for corn, about 55,000 acres was used for soybeans, and about 9,800 acres was used for hay (Illinois Agricultural Statistics Service, 2006). Hogs, beef and dairy cattle, sheep, and chickens are important animal industries. In 2006, the number of hogs and pigs in the county was 42,100 and there were about 46,800 cattle and calves (Illinois Agricultural Statistics Service, 2006).

Carroll County is one of the top agricultural producing counties in the State. Following are listed several of the more noteworthy state ranking for Carroll County from 2006 according to the Illinois Department of Agriculture:

- 5<sup>th</sup> in the State for livestock receipts.
- 40<sup>th</sup> in the State for crop cash receipts.
- 3<sup>rd</sup> in the State for both number and value of cattle and calves.
- 37<sup>th</sup> in the State for both number and value of hogs and pigs.
- 2<sup>nd</sup> in the State for corn yield (185 bu./acre) and 26<sup>th</sup> in the State for corn production with 24,975,000 bushels.
- 1<sup>st</sup> in the State for soybean yield (58 bu/acre) and 73<sup>rd</sup> in the State for soybean production with 3,172,600 bushels.
- 9<sup>th</sup> in the State for hay production with 49,260 tons.

Other Carroll County agricultural items and trends of note (Source: 1997 and 2002 U.S. Census of Agriculture):

- The number of farms decreased 3.1% between 1997 and 2002 from 677 farms to 656 farms.
- The amount of land in farms decreased 2.4% between 1997 and 2002 from 253,632 acres to 247,536 acres.
- The average farm size increased 0.5% between 1997 and 2002 from 375 acres to 377 acres.
- The amount of total cropland decreased by 2.6% between 1997 and 2002 from 221,168 acres to 215,482 acres.
- The market value of agricultural products sold decreased 13.2% between 1997 and 2002 to \$110,970,000.
- The market value of agricultural products sold (based on average per farm) decreased 10.4% between 1997 and 2002 from \$188,849 to \$169,162.
- Government payments increase slightly between 1997 and 2002, from \$5,272,000 to \$5,282,000.
- Government payments based on average per farm receiving payments increased by 3.6% from \$11,265 in 1997 to \$11,687 in 2002.

#### **Section 5.4 Natural Resources**

This section will describe the existing conditions of natural resources in Carroll 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.

## A. Topography and Physiography

Most of Carroll County is in the Rock River Hill Country of the Till Plains Section of the Central Lowland Province. The northwestern one-fourth of the county, generally north of the unincorporated village of Wacker and west of Illinois State Route 78, is included in the Wisconsin Driftless Section of the Central Lowland Province (Leighton and others, 1948). See Appendix III Geological Maps for map titled *Physiographic Divisions of Illinois*.

The Wisconsin Driftless Section, which was unglaciated, is maturely to submaturely dissected by numerous dendritic drainage systems tributary to the Mississippi River. The Mississippi Valley has precipitous walls breaking into broad terraces and bottom land. Thick loess mantles the bluffs, except on bluff faces. The loess is thinner toward the east.

The glaciated part of the county, part of the Rock River Hill Country, has more subdued rolling hills in the stage of late youth to early maturity. The Illinoian drift thins in the area, and the uplands and valleys are determined primarily by the bedrock surface. In the southwestern part of the county, in the uplands, deposits of loess and fine sand occur on ridges and as low dunes on the eroded Illinoian till plain.

The highest point in the county, about 2 miles southeast of Shannon, has an elevation of approximately 1,070 feet. Some lowlands and islands in the Mississippi Valley are at an elevation of less than 590 feet. The normal pool level of the Mississippi River near the southwest corner of Carroll County is 583 feet.

For reference purposes, additional graphic information regarding the County's topography and physiography is provided in Appendix III - Geological Maps (Maps titled: *Shaded Relief*, *Surface Slopes*, and *Surface Topography*).

## B. Geology and Mineral Resources

### 1. Geology:

As previously mentioned, Carroll County is part of two physiographic divisions: The Wisconsin Driftless Section and the Rock River Hill Country. The Wisconsin Driftless Section, which includes the northwest quarter of the County, is a low plateau bordering the outwash-filled valley of the upper Mississippi River. The plateau is dissected by a number of dendritic drainage systems tributary to the Mississippi River. The Rock River Hill Country is characterized by subdued rolling hills whose shape is controlled primarily by the bedrock surface. A thin cover of Illinoian episode drift overlies the bedrock surface.

Glacial drift deposits, loess, and alluvium materials form the present day land surface in Carroll County and vary greatly in thickness. Glacial outwash and alluvium consisting mostly of extensive, permeable deposits of sand and gravel 50 to 200 ft thick are associated with the Mississippi River valley along the western edge of the county. Glacial ice did not advance to the northwestern part of Carroll County but in the rest of the county the uplands are covered by less than 50 ft of glacial drift. Loess covers the entire upland to a depth of 25 ft at the bluff and thins to 10 ft along the eastern side of the county.

Beneath the glacial deposits, the upper bedrock formations consist principally of beds of dolomite (a limestone-like rock) and shale. The bedrock formations in Carroll County range in geologic age from Silurian to Precambrian. The bedrock stratigraphy is complicated by the presence of the Plum River Fault Zone which extends from Leaf River (Ogle County), westward through Savanna, into Jackson County, Iowa. The Plum River Fault Zone geologically divides the County into two parts (northern and southern). The bedrock geology in the northern part is characterized by well-dissected topography, with Galena-Platteville carbonates exposed in the lowlands, Maquoketa

shales forming valley slopes, and Silurian dolomites forming the caprocks of the highlands. In the southern part, the topography is gently rolling and has few large valleys; Silurian dolomite forms hills that rise above the lowlands, where Galena-Platteville and Maquoketa Groups subcrop.

Silurian dolomite underlies the glacial drift in most of the northern tier of townships and in the south-central area of the county. Where the Silurian has been removed by erosion, the underlying Maquoketa Group is exposed.

The Maquoketa Group (Ordovician age) underlies the glacial drift in a portion of the southeastern and southwestern areas and is present beneath the glacial drift and alluvial deposits in the bottoms of deeply eroded stream valleys in the northern tier of townships north of the Plum River Fault Zone. The Maquoketa rocks are absent in a large part of central and eastern Carroll County where they have been eroded away exposing the underlying Galena and Platteville Dolomite Groups, but are about 150 ft thick at Shannon and as much as 200 ft thick at Mississippi Palisades State Park.

Below the Maquoketa Group there is a thick sequence of hydrologically connected rocks that is referred to as the Cambrian-Ordovician aquifer system. This aquifer system consists in downward order of the Galena and Platteville Dolomite Groups, Glenwood-St. Peter Sandstone, Prairie du Chien Group, Eminence-Potosi Dolomite, Franconia Formation, and Ironton-Galesville Sandstone.

The Galena-Platteville (Ordovician age) directly underlies the drift in part of the central and eastern portions of Carroll County. The top of this dolomite lies at depths from less than 50 ft in the central and southeast areas of the county to about 250 ft in the northeast and northwest areas. It usually varies in thickness from about 200 ft in the southwest to about 350 ft in the northern and eastern areas.

The Glenwood-St. Peter Sandstone (Anzell Group of Ordovician age) lies below the Galena-Platteville. This sandstone unit is encountered at depths from about 300 ft in the southeast to about 600 ft beneath the bluffs in the western part of the county, and ranges in thickness from about 90 to 150 ft. The Glenwood-St. Peter overlies various units in different parts of the county that include the Prairie du Chien Group, the Eminence-Potosi Dolomite, and the Franconia Formation that consists of interbedded sandstones, shales, and dolomites. The Prairie du Chien Group (Ordovician age) is present only along the western and southern edges of the county. It contains three formations; the Shakopee Dolomite, the New Richmond Sandstone, and the Oneota Dolomite. These units have a combined thickness up to 330 ft, but thin rapidly to zero toward the north. In most of Carroll County the Glenwood-St. Peter overlies the Eminence-Potosi Dolomite (Cambrian age) and the Franconia Formation (Cambrian age). These units are encountered at depths from about 800 ft in the southwest on the Mississippi River flood plain to about 1100 ft on the topographic high a few miles to the east and occur within this range in most of the county. They have total thicknesses varying from about 130 ft at Mt. Carroll to about 550 ft at Savanna and Milledgeville.

The Ironton-Galesville Sandstone (Cambrian age) lies at depths from 1000 ft south of Shannon to as much as 1400 ft beneath the bluffs in the western part of the county and varies in thickness from about 100 to 150 ft.

The Eau Claire Formation lies below the Ironton-Galesville Sandstone. The upper and middle parts of the Eau Claire contain many nonwater-bearing shales that separate the Cambrian-Ordovician aquifer from deeper water-bearing units. The Elmhurst Sandstone Member at the base of the Eau Claire Formation and the underlying Mt. Simon Sandstone are hydrologically connected and form the Elmhurst-Mt. Simon aquifer, the deepest fresh water aquifer in northern Illinois. In Carroll County this aquifer lies at depths of about 1500 to 1700 ft, and ranges in thickness from about 1150 ft in the northwest corner to about 1500 ft in the southeast part of the county.

Refer to Appendix III Geological Maps for graphic depictions of the County’s geology, including maps titled *Bedrock Geology of Carroll County, Illinois* and *Quaternary Deposits of Carroll County, Illinois*.

According to the Illinois Natural History Survey records, six natural areas within Carroll County contain features of geologic interest. These natural areas and features of interest are listed in Table 5.2 below.

**Table 5.2: Natural Areas with Geologic Features of Interest**

Name	Feature
Mississippi River Palisades Geological Area	Outstanding exposure of the Silurian System
Ayers Sand Prairie	Sand blowout
Mississippi River Palisades State Park	Dolomite cliffs
Savanna Geological Area	Outstanding exposure of Maquoketa trilobite fauna
Wacker Geological Area	Outstanding exposure of Maquoketa bryozoan fauna
Mt. Carroll North Geological Area	Outstanding exposure of Niagaran pentamerid fauna

Source: Illinois Department of Natural Resources, Illinois Natural History Survey

**2. Mineral Resources:**

The active mineral industry operation in Carroll County include approximately eleven (11) limestone and dolomite quarries distributed throughout the County. Stone and sand/gravel products are low-value commodities. Since these are bulk commodities with low unit values and high transportation costs, the pits and quarries tend to be located close to the major areas of demand.

Potential mineral resources in Carroll County include sand/gravel, limestone and dolomite. Future development, however, depends on the underlying economic factors, the costs and returns. Refer to Appendix III Geological Maps (maps titled *Dolomite Resources of Carroll County, Illinois* and *Quaternary Deposits of Carroll County, Illinois*).

There is good potential for dredging sand and gravel from the Mississippi River channel, flood plain, and terraces. Deposits of sand and gravel also occur along the side channel areas of the Galena and Plum Rivers; 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).

Good potential for quarrying limestone and dolomite exists in the County. The limestone and dolomitic Galena Group (see Appendix III Geological Maps, *Bedrock Geology of Carroll County, Illinois*) seems the most important source of construction material. Accessibility to railroads and roads for transportation are important considerations in the development of quarries.



### C. Soils

Soil is a natural body comprised of solids (minerals and organic matter), liquid, and gases that occurs on the land surface, occupies space, and is characterized by one or both of the following: horizons, or layers, that are distinguishable from the initial material as a result of additions, losses, transfers, and transformations of energy and matter or the ability to support rooted plants in a natural environment. The upper limit of soil is the boundary between soil and air, shallow water, live plants, or plant materials that have not begun to decompose. Areas are not considered to have soil if the surface is permanently covered by water too deep (typically more than 2.5 meters) for the growth of rooted plants. The lower boundary that separates soil from the non-soil underneath is most difficult to define. Soil consists of horizons near the earth's surface that, in contrast to the underlying parent material, have been altered by the interactions of climate, relief, and living organisms over time. Commonly, soil grades at its lower boundary to hard rock or to earthy materials virtually devoid of animals, roots, or other marks of biological activity. For purposes of classification, the lower boundary of soil is arbitrarily set at 200 cm (From *Soil Taxonomy*, second edition).

35.5% of the soil types identified in Carroll County (approximately 106,103 acres) are classified as being "prime farmland", 26.5% (approximately 79,229 acres) are classified as "farmland of statewide importance". The remaining soils 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. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland. See Appendix II Maps for map titled *Map 5.1 Prime Farmland, Carroll County, Illinois*.

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 general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be "farmland of statewide importance" for the production of 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 soils 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), has prepared a soil survey for Carroll County. 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.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations. These and many other soil properties that affect land use are described in the Carroll County Soil Survey. The location of each soil is shown on the detailed soil maps found in the Carroll County Soil Survey. Each soil in the survey area is described, and information on specific uses is given. The published soil survey consists of a manuscript and a set of soil maps.

#### D. 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. Illinois groundwater quality monitoring programs consist of fixed station networks and intensive or facility-related surveys of specific pumping centers.

The Illinois EPA (IEPA) operates an Ambient Network of Community Water Supply Wells (CWS Network) consisting of 356 fixed locations throughout the State. This Network is designed to:

- Provide an overview of the groundwater conditions in the CWS Wells in Illinois;
- Provide an overview of the groundwater conditions in the major aquifers in Illinois;
- Establish baselines of water quality within the major aquifers in Illinois;
- Identify trends in groundwater quality in the major aquifers in Illinois; and
- Evaluate the long-term effectiveness of the Clean Water, and Safe Drinking Water Acts program activities in protecting groundwater in Illinois.

Network stations were sampled annually from 1993 through 1995, and have been sampled within a fixed three-week time frame biennially since 1996. Monitoring at all stations is conducted by using Hydrolab samplers to insure that in situ sampling conditions are reached prior to sampling. Water quality parameters include: field temperature, field specific conductance, field pH, field pumping rate, inorganic chemical (IOC) analysis, synthetic organic chemical (SOC) analysis, and volatile organic chemical analysis (VOC). All laboratory analytical procedures are documented in the Illinois EPA Laboratories Manual (revised 1987). Data specific to groundwater monitoring are verified and stored via a multi-step process that includes transitions from heterogeneous database environments beginning with the Illinois EPA LIMS (Laboratory Information Management System) database continuing to a mainframe database, SAFE (Sample Analysis Facility Evaluation). Finally, results are formatted for use within a client server application on the Illinois EPA local area network via routine downloads of text files.

Two of the IEPA Ambient Network Wells are located in Carroll County - one in the northeast part of the County, and the other in the west-central part of the County. The well located in the northeast part of the County is in a deep (greater than 500') bedrock aquifer; the well located in the west-central part of the County is in a sand and gravel aquifer. Both wells indicate full groundwater use support.

Groundwater is generally plentiful in Carroll County and the surrounding area. According to the Illinois Environmental Protection Agency's "Source Water Assessment Program" Carroll County has nine (9) "community water supplies" and thirty (30) "non-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. "Non-community water supplies" may be one of two types: "Non-Transient Non-Community water supplies" serve at least the same 25 non-residential individuals during 6 months of the year; "Transient Non-Community water supplies" regularly serves at least 25 non-residential individuals (transient) during 60 or more days per year.

The community water supplies in the County are: Carroll Heights Utility Company, Century Pines Apartments, Village of Chadwick, City of Lanark, Village of Milledgeville, City of Mount Carroll, City of Savanna, Village of Shannon, and Village of Thomson. All of the County's community water supplies are served by multiple wells. According to the IEPA Source Water Assessment Summary for the Village of Thomson, one well within the Village of Thomson's community water supply system (Well #4) is susceptible to contamination. All other wells within all of the other community water supplies in Carroll County are not susceptible to contamination. However, all of the County's community water supplies have identified potential sources of contamination.

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 43% of the population of Carroll 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 the 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.

### E. Surface Water

The county is drained by several major streams. The Apple River, the Plum River, Rush Creek, Johnson Creek, Camp Creek, and Carroll Creek drain into the Mississippi River. In the southeastern part of the county, Elkhorn Creek, Eagle Creek, Middle Creeks, Rock Creek, and Otter Creek drain southwestward into Whiteside County and the Rock River.

The extreme northeastern part of the county is drained by Lost Creek and the Leaf River. Lost Creek flows north through Stephenson County into Yellow Creek and eventually empties into the Pecatonica River - this water eventually reaches the Mississippi River in a circuitous route by way of the Pecatonica and Rock Rivers. The Leaf River flows east through Ogle County and eventually empties into the Rock River between Byron and Oregon.

The Illinois Department of Natural Resources has recognized several stream segments in Carroll County as "Biologically Significant Streams" because they support threatened or endangered species or have high mussel and fish diversity. These segments include Apple River, Plum River from East Plum River to Carroll Creek, Carroll Creek, and the Mississippi River.

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 Rock 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. Carroll County is drained by the Mississippi and Rock River basins, and the Mississippi River North, Rock River and Pecatonica River sub-basins. The drainage sub-basins that drain Carroll County are depicted on Figure 5.1 The local watersheds that drain Carroll County are depicted on Figure 5.2.

Figure 5.1: Carroll County Watershed Sub-Basins

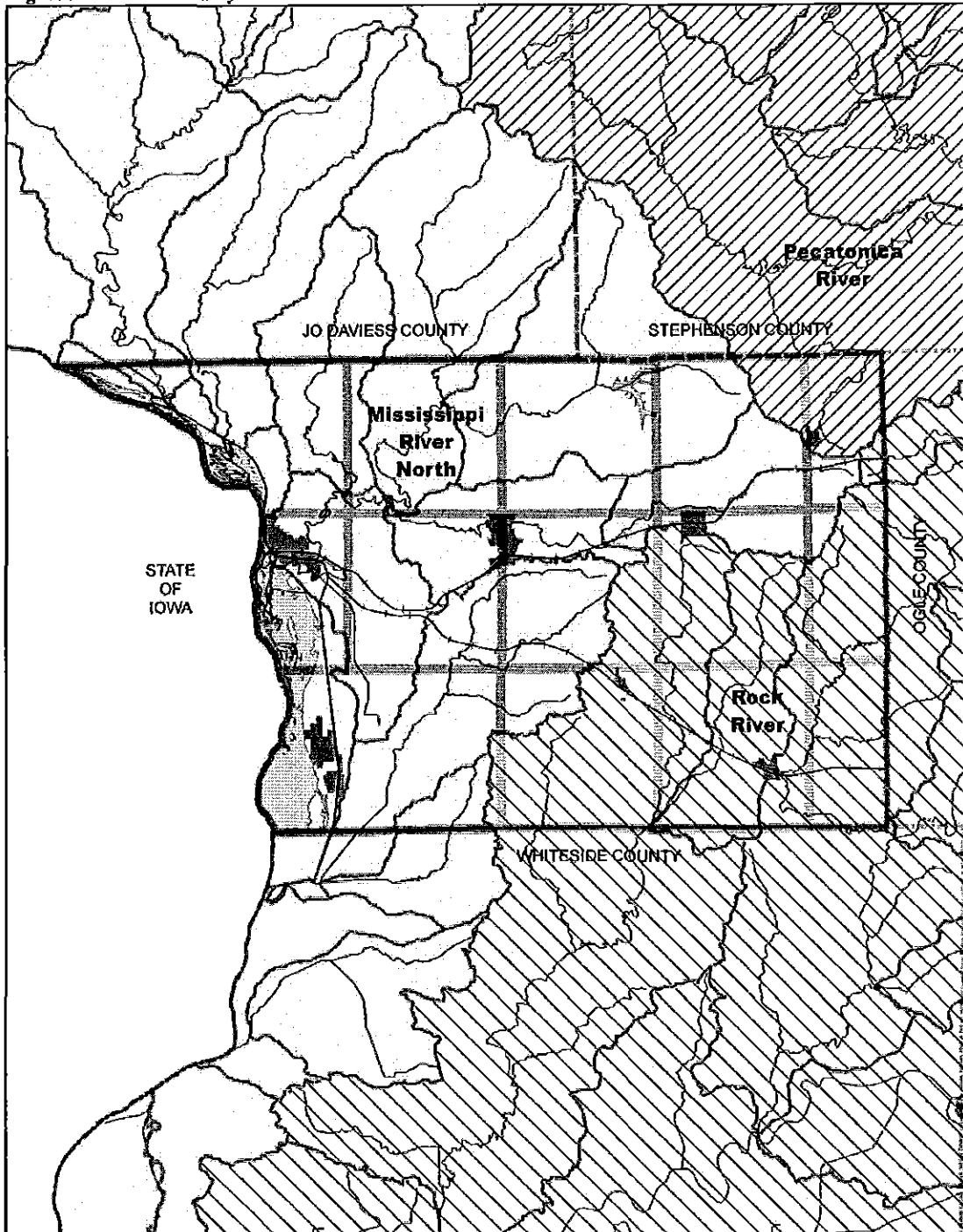
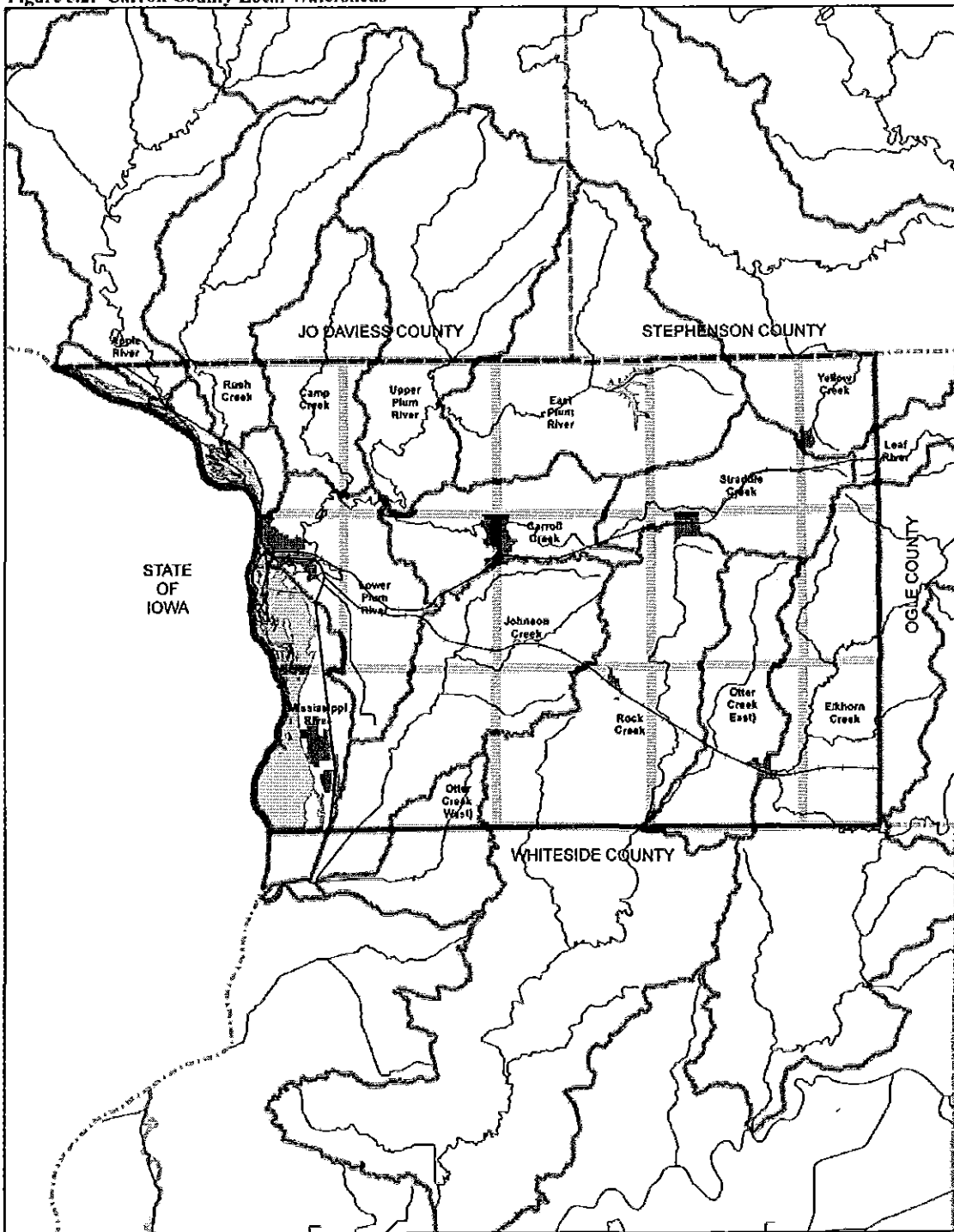


Figure 5.2: Carroll County Local Watersheds



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 the Section 305(b) process is to provide for an assessment of the overall water quality conditions of Illinois waters. The IEPA provides the following assessment of several streams in Carroll County (not all streams are assessed), and also for Lake Carroll (620-acre man-made impoundment):

**Table 5.3**  
**Stream Quality Data**  
**IEPA Assessed Streams Within Carroll County**

Stream Segment Name	Assessment Unit ID	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
Apple River	MN 03	Fully supportive of overall use for aquatic life and fish consumption. Non-supportive of use for swimming.	Total fecal coliform bacteria.	Unknown.
Elkhorn Creek	PH 16	Fully supportive of overall use for aquatic life and fish consumption. Non-supportive of use for swimming.	Total fecal coliform bacteria.	Unknown.
Elkhorn Creek	PH 17	Fully supportive of overall use for fish consumption. Partially supportive of aquatic life.	Unspecified nutrients; nitrogen, nitrate; total suspended solids.	Agriculture; Non-irrigated crop production; Pasture grazing - riparian and/or upland.
Lost Creek	PWNB	Partially supportive of aquatic life.	Unspecified nutrients; nitrogen, nitrate.	Agriculture; Non-irrigated crop production; Pasture grazing - riparian and/or upland.
Mississippi River	M12	Fully supportive of overall use for fish consumption and swimming. Partially supportive of fish consumption.	Polychlorinated biphenyls (PCBs).	Unknown
Otter Creek	PEE 01	Partially supportive of aquatic life.	Unspecified nutrients; nitrogen, nitrate.	Agriculture; Non-irrigated crop production; Pasture grazing - riparian and/or upland.

Stream Segment Name	Assessment Unit ID	Designate Uses	Potential Causes of Impairment	Potential Sources of Impairment
Plum River	MJ 01	Partially supportive of aquatic life. Non-supportive of swimming.	Physical-habitat alterations; Total fecal coliform bacteria; Total suspended solids.	Agriculture; Crop-related sources; Irrigated crop production; Hydromodification; Channelization; Unknown sources.
Plum River	TM 24	Partially supportive of aquatic life.	Sedimentation / siltation; Physical-habitat alterations; Total suspended solids.	Agriculture; Crop-related sources; Irrigated crop production; Hydromodification; channelization.
Plum River	TM 25	Fully supportive of overall use for aquatic life.		
Plum River	TM 26	Fully supportive of overall use for aquatic life.		
Rock Creek	PE 02	Fully supportive of overall use for aquatic life.		
Straddle Creek	MJBA 01	Partially supportive of aquatic life.	Unspecified nutrients; Total nitrogen as N; Physical-habitat alterations; Total phosphorus.	Agriculture; Non-irrigated crop production; Pasture grazing - riparian and/or upland; Hydromodification; channelization.
Lake Carroll	RMQ	Fully supportive of overall use, aquatic life and swimming. Partially supportive of recreational use.	Habitat assessment; Excess algal growth.	Unknown.

Source: Illinois Water Quality Report 2004 (IL Environmental Protection Agency)

Note: Some streams/stream segments are not entirely within Carroll County.

#### F. 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 Carroll County are classified by the U.S. Fish & Wildlife Service as both "Lacustrine" and "Palustrine" 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 National Wetlands Inventory (U.S. Fish & Wildlife Service) indicates the presence of approximately 20,477 acres of wetlands within Carroll County. The types of wetlands is indicate in the following Table 5.4.

**Table 5.4  
Wetland Type and Acreage  
Carroll County, IL**

Wetland Type	Area (Ac.)
Freshwater Emergent	1,488.5
Freshwater Forest/ Shrub	4,004.6
Pond	352.6
Lake (includes the Mississippi River and adjacent deepwater habitats)	19,042.3
Riverine (does not include the Mississippi River)	40.0
<b>TOTAL</b>	<b>24,928.0</b>

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

### G. Floodplains

Flood plain lands and adjacent waters combine to form a complex, dynamic physical and biological system found nowhere else. When portions of floodplains are preserved in (or restored to) their natural state, they provide many benefits to both human and natural systems. These benefits range from providing aesthetic pleasure to reducing the number and severity of floods, helping handle stormwater runoff and minimizing non-point water pollution. For example, by allowing floodwater to slow down, sediments settle out, thus maintaining water quality. The natural vegetation filters out impurities and uses excess nutrients. Such natural processes cost far less money than it would take to build facilities to correct flood, stormwater, water quality and other community problems. Natural resources of floodplains fall into three categories: water resources, living resources and societal resources. The following sections describe each category's natural and beneficial functions.

#### **Natural flood and erosion control**

Over the centuries, floodplains develop their own ways to handle flooding and erosion with natural features that provide floodwater storage and conveyance, reduce flood velocities and flood peaks,

and curb sedimentation. Natural controls on flooding and erosion help to maintain water quality by filtering nutrients and impurities from runoff, processing organic wastes and moderating temperature fluctuations. These natural controls also contribute to recharging groundwater by promoting infiltration and refreshing aquifers, and by reducing the frequency and duration of low surface flows.

#### **Biologic resources and functions**

Floodplains enhance biological productivity by supporting a high rate of plant growth. This helps to maintain biodiversity and the integrity of ecosystems. Floodplains provide excellent habitats for fish and wildlife by serving as breeding and feeding grounds. They also create and enhance waterfowl habitats, and help to protect habitats for rare and endangered species.

#### **Societal resources and functions**

People benefit from floodplains through the food they provide, the recreational opportunities they afford and the scientific knowledge gained in studying them. Wild and cultivated products are harvested in floodplains, which are enhanced agricultural land made rich by sediment deposits. They provide open space, which may be used to restore and enhance forest lands, or for recreational opportunities or simple enjoyment of their aesthetic beauty. Floodplains provide areas for scientific study and outdoor education. They contain cultural resources such as historic or archaeological sites, and thus provide opportunities for environmental and other kinds of studies. Floodplains can increase a community's overall quality of life, a role that often has been undervalued. By transforming floodplains from problem areas into value-added assets, the community can improve its quality of life. In Illinois, Chicago's lakefront, Peoria's riverfront, Naperville's Riverwalk, and Lockport's historic canal district are well-known examples. Parks, bike paths, open spaces, wildlife conservation areas and aesthetic features are important to citizens. Assets like these make the community more appealing to potential employers, investors, residents, property owners and tourists.

The Federal Emergency Management Agency (FEMA) has designated and mapped floodplains, or "Special Flood Hazard Areas" within Carroll County (for specific information, the Carroll County Flood Insurance Rate Maps and Flood Insurance Study should be reviewed [available from the Carroll 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 are 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).

The term “100-year flood” has caused much confusion for people not familiar with statistics. Another way of looking at it is to think of the odds that a base flood will happen sometime during the life of a 30-year mortgage (26% chance).

**Table 5.5  
Chance of Flooding Over a Period of Years**

Time Period	Flood Size			
	10-Year	25-Year	50-Year	100-Year
1 Year	10%	4%	2%	1%
10 Years	65%	34%	18%	10%
20 Years	88%	56%	33%	18%
30 Years	96%	71%	45%	26%
50 Years	99%	87%	64%	39%

Even these numbers do not convey the true flood risk because they focus on the larger, less frequent, floods. If a house is low enough, it may be subject to the 10- or 25-year flood. During the proverbial 30-year mortgage, it may have a 26% chance of being hit by the 100-year flood, but the odds are 96% (nearly guaranteed) that it will be hit by a 10-year flood. Compare those odds to the only 5% chance that the house will catch fire during the same 30-year mortgage. (Source: CFM Study Guide, IL Assoc. of Flood plain and Stormwater Managers).

#### H. Natural Areas and Open Spaces

Natural areas and open space provide Carroll County with recreational opportunities, resource protection and aesthetic beauty, and are an important part of the County’s identity.

As stated earlier in this chapter, nearly over 90% of the County’s land area is in agricultural or agriculturally-related use, which is open space. Much of this open space is natural area, particularly within riparian corridors and wooded areas within the County’s unglaciated terrain (the “driftless area”).

##### 1. Nature Preserves:

There are three Illinois Nature Preserves in Carroll County: Ayers Sand Prairie, Brookville Lutheran Cemetery Prairie, and The Sentinel.

*Ayers Sand Prairie* is a relatively large preserve containing dry sand prairie, sand dune and blowout communities typical of the Mississippi River Section of the Illinois and Mississippi River Sand Areas Natural Division. An inventory of the plants revealed 39 species of grasses and sedges,

16 species of woody plants and 96 forbs. The dominant herbaceous species are little bluestem, June grass and hairy gramma grass. Carolina anemone, sandcress, puccoon and sand primrose are typical sand prairie species. Black oak and cottonwood occur in the blowouts along with scattered clones of aromatic sumac. Resident mammals include deer, skunk, rabbit, mole, shrew and western harvest mice. Summer resident birds occurring here include upland sandpiper, loggerhead shrike, western meadowlark, grasshopper sparrow and dickcissel. A number of the characteristic reptiles found in sand prairies occur at Ayers Sand Prairie.

*Brookville Lutheran Cemetery Prairie* is a small remnant of black soil prairie. It is one of only 2 small areas remaining that represent the mesic prairie vegetation of the Freeport Section of the Rock River Hill Country Natural Division. The prairie lies on Ogle Till which was deposited during the Illinoian Stage of the Pleistocene glaciation. The till is covered by rich soils that formed under grasses and scattered forest vegetation. The dominant native plants in the cemetery are Indian grass, little bluestem, big bluestem, and sedge species. Some associated forbs include prairie violet, New Jersey tea, flowering spurge, and rosinweed.

*Sentinel Nature Preserve* is named after a large limestone promontory known as the Sentinel. Many rare plants are present within the preserve, including Canada violet and jewel shooting star. However, much of the preserve is upland forest which consists of red, white, and black oaks, plus sugar maple and basswood. A small loess hill prairie, containing side-oats grama, little bluestem and leadplant, is also present. The park itself contains other large rocks of a similar nature, causing the area to be known as the "Palisades of the Mississippi."

## 2. State Parks and State Natural Areas:

Carroll County is home to the Mississippi Palisades State Park and French Bluff State Natural Area.

*Mississippi Palisades State Park:* Palisades is the word used to describe a line of lofty, steep cliffs usually seen along a river, and Mississippi Palisades, 3 miles north of Savanna in Carroll County, handsomely lives up to its name. Caves are evident as are dangerous sink holes (limestone caves that go straight down). Erosion has carved intriguing rock formations, including Indian Head, with its aquiline characteristics, and Twin Sisters, a pair of humanoid figures on the bluff tops. The U.S. Interior Department recognized the remarkable nature of this area when in 1973 it designated acreage here as a national landmark.

Wooded ravines, whose brilliant hues splash the cliffs with color each autumn, dissect the unglaciated terrain. Ferns dot the deep ravines, while in the park's northern region, leaves of the white birch ripple in the wind. Each spring and summer the valleys and slopes are dappled with the blooms of trillium, bluebell, lobelia, shooting star and yellow ladies' slipper.

Animal life, within the park and the river areas immediately adjoining it, is varied. Waterfowl and shorebirds are numerous, as are wild turkeys. Striking pileated woodpeckers make their home in the park, and depending on ice conditions, eagles feed at the river in January and February. Because so many birds migrate along the river, their lyrical songs can be heard at the Mississippi Palisades each spring and fall. White-tailed deer, gray squirrel, skunk, muskrat and weasel can be viewed in the park, as can mink, gray and red fox, woodchuck and, even occasionally, badger.

*French Bluff State Natural Area* is a 344 acre site, of which 342 acres are open to public hunting. The area is Mississippi River Bluff topography characterized by steep hillsides, ridge tops and terrace benches. The area is almost entirely forested with Black Walnut, Black Oak, Red Oak, White Oak, Hackberry, Black Cherry and Mixed Elm the dominate tree species. There are several

cedar thickets on the west and south sides of the site. The site is bordered on all four sides by private lands with mixed grain farming, and privately managed woodlands the dominate land uses. Johnson Creek drains close to but does not bisect the site.

3. Upper Mississippi Wildlife and Fish Refuge:

The Upper Mississippi River National Wildlife and Fish Refuge (Refuge) forms the western boundary of Carroll 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 is unique in that it is overlaid on a nationally important commercial navigation system and a nationally important recreation area, the Mississippi River. In addition, it interfaces with 70 communities. It is the most visited national wildlife refuge in the U.S. and is a national scenic treasure.

The Refuge completed a Comprehensive Conservation Plan (CCP) in August 2006 and began implementation of the 15-year plan in 2007. Proposed actions include revised regulations for public recreation and commercial activities (such as commercial fishing, guiding services, and fishing tournaments). The CCP document, along with related materials and the actions being implemented, are identified on the Refuge website at the following web address: <http://www.fws.gov/midwest/UpperMississippiRiver/>.

National wildlife refuges are managed primarily for the conservation of fish and wildlife and operate under a set of national guidelines that allow compatible uses. A compatible use is la use that will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System or the purposes of the Refuge. Commercial development of the Refuge, such as harbors, marinas, and barge terminals are incompatible uses.

Since 1995, Refuge staff have been working on the re-development of the closed Savanna Army Depot, now called the Lost Mound Unit of the Upper Mississippi Refuge. Although most of the 10,000 acres of Lost Mound are in Jo Daviess County, there are about 1,000 acres in Carroll County. The newly formed Lost Mound Action Team is a citizen action committee formed with the goal of bringing together a diverse group of partners to identify and implement actions for expanding the programs at Lost Mound.

I. Wildlife

Much of Carroll County is suitable habitat for a variety of species of wildlife including birds, mammals, amphibians, reptiles and fish. Even in the intensive agricultural areas, scattered woodlands and fence rows exist which provide habitat for various wildlife species. The Illinois Natural Heritage Database lists fifteen species of threatened or endangered wildlife that have been observed in Carroll County as of September 10, 2007, as follows:

<u>Scientific Name</u>	<u>Common Name</u>	<u>State Status</u>
<i>Ammocrypta clarum</i>	Western Sand Darter	Endangered
<i>Crotalus horridus</i>	Timber Rattlesnake	Threatened
<i>Dendroica cerulea</i>	Cerulean Warbler	Threatened
<i>Emydoidea blandingii</i>	Blanding's Turtle	Threatened
<i>Gallinula chloropus</i>	Common Moorhen	Threatened
<i>Grus canadensis</i>	Sandhill Crane	Threatened

<i>Haliaeetus leucocephalus</i>	Bald Eagle	Threatened
<i>Heterodon nasicus</i>	Western Hognose Snake	Threatened
<i>Hybopsis amnis</i>	Pallid Shiner	Endangered
<i>Lanius ludovicianus</i>	Loggerhead Shrike	Threatened
<i>Ligumia recta</i>	Black Sandshell	Threatened
<i>Stygobromus iowae</i>	Iowa Amphipod	Endangered
<i>Tropidoclonion lineatum</i>	Lined Snake	Threatened
<i>Tyto alba</i>	Barn Owl	Endangered
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird	Endangered

#### J. Flora.

The open spaces, natural areas, Natural Areas, State Parks 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 nineteen species of threatened or endangered plant species that have been observed in Carroll County as of September 10, 2007, as follows:

<u>Scientific Name</u>	<u>Common Name</u>	<u>State Status</u>
<i>Aster furcatus</i>	Forked Aster	Threatened
<i>Besseyia bullii</i>	Kittentails	Threatened
<i>Ceanothus herbaceus</i>	Redroot	Endangered
<i>Cimicifuga americana</i>	American Bugbane	Endangered
<i>Cyperus grayioides</i>	Umbrella Sedge	Threatened
<i>Equisetum pratense</i>	Meadow Horsetail	Threatened
<i>Equisetum scirpoides</i>	Dwarf Scouring Rush	Endangered
<i>Gymnocarpium robertianum</i>	Scented Oak Fern	Endangered
<i>Hackelia deflexa var. americana</i>	Stickseed	Endangered
<i>Hudsonia tomentosa</i>	False Heather	Endangered
<i>Lechea intermedia</i>	Pinweed	Threatened
<i>Lycopodium dendroideum</i>	Ground Pine	Endangered
<i>Orobanche ludoviciana</i>	Broomrape	Threatened
<i>Polanisia jamesii</i>	James' Clammyweed	Endangered
<i>Solidago sciaphila</i>	Cliff Goldenrod	Threatened
<i>Speyeria idalia</i>	Regal Fritillary	Threatened
<i>Sullivantia sullivantii</i>	Sullivantia	Threatened
<i>Trillium erectum</i>	Ill-scented Trillium	Endangered
<i>Viola canadensis</i>	Canada Violet	Endangered

#### **Section 5.5 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.

Many of Carroll County's historic structures have been lost to time, accidental fires, and the demolition crew, although there are some fine examples of late-nineteenth century residential architecture, and the commercial downtown areas of the cities and villages have both historical and cultural value. The County cemeteries are an important cultural and genealogical resources, serving as records of past inhabitants of the area.

Early trails were important to the settlement and development of Carroll 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 timber groves in the area are also important cultural and historic resources. The groves served as important resting places for travelers and sources of raw materials and the necessities of life in the early settlement days, as they provided sources of shelter, lumber, fire wood, water, and game for food. The groves later became recreational areas for community, church and family festivals and picnics.

Table 5.6 below details the sites in Carroll County that are listed on the National Register of Historic Places:

**Table 5.6**  
**Sites Listed on the National Register of Historic Places**  
**Carroll County, Illinois**

Site	Location	Historic Significance (Period)	Architectural Style	Historic Function	Current Function
Carroll County Courthouse (added 1973)	Courthouse Square, Mt. Carroll	Architecture / Engineering (1850-1874)	Italianate	Government	Government (County courthouse)
Chisholm House (added 1973) a/k/a John Sprogle House	326 E. Locust St., Lanark			Dwelling	Dwelling
Charles Franks House (added 1998)	34431 U.S. 52, Lanark	Architecture / Engineering (1850-1874)	Mid-19th Century Revival	Agriculture / Subsistence, Dwelling	Dwelling
Nathaniel Halderman House (added 1980)	728 E. Washington St., Mt. Carroll	Person, Architecture / Engineering (1850-1874)	Italianate	Dwelling	Dwelling
Caroline Mark House (added 1983)	222 E. Lincoln St., Mt. Carroll	Person, Architecture / Engineering (1900-1924)	Bungalow / Craftsman	Dwelling	Dwelling
Mount Carroll Historic District (added 1980)	Downtown Mount Carroll	Architecture / Engineering (1850-1874, 1875-1899, 1900-1924)	Italianate, Queen Anne, Colonial Revival	Commercial / Trade, Domestic	Commercial / Trade, Domestic
Spring Lake Cross Dike Island Archeological Site (added 1975)	Restricted	N/A	N/A	N/A	N/A

Joseph Steffens House (added 1985) a/k/a Rammed Earth House	Off of Elkhorn Rd., Milledgeville	Architecture / Engineering (1825-1849)	Other	Dwelling	Vacant / Not in use
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Source: National Register of Historic Places

Other cultural resources in the County include the following:

- Thomson Depot Museum (914 Main St., Thomson) - Railroad depot and community museum.
- 321 Art Gallery (321 Main St., Savanna) - A Not For Profit art organization sponsored by Artists Cooperative of Savanna, dedicated to serving community through the arts.
- Raven's Grin (411 N. Carroll St., Mt. Carroll) - Haunted house built in 1870 offering tours.
- Savanna Train Car Museum (25 Main St., Savanna) - Hiawatha train car transformed into a museum housing a large collection of railroad memorabilia.
- Army Depot Museum (Bldg 252 Savanna Depot Park, Savanna, IL) - Museum houses large topographic map of the entire property plus artifacts and memorabilia from this large installation which operated from 1917 through 1990.
- Rock Island Technical Society and Museum (Bldg 252, 18933 A St., Savanna Depot Park, Savanna, IL) - Railroad museum that offers souvenir railroad items and memorabilia; also contains historical Rock Island Railroad documents, maps and other items of interest.
- Campbell Center for Historic Preservation Studies (203 E. Seminary St., Mt. Carroll).
- Old Galena Trail - The Old Galena Trail and Coach Road is one of the oldest known pathways in the Midwest, with a documented history of over 10,000 years of use. Today, the Galena Trail & Coach Road exists on local and state roadways from Peoria, Illinois to Prairie du Chien, Wisconsin and Iowa and bisects Jo Daviess, Stephenson, Carroll, Ogle, Lee, Whiteside, Bureau, Marshall and Peoria counties in Illinois.

#### Section 5.6 Issues Identified by the Planning Commission

- A. Historical and cultural sites in the County need to be identified, preserved and maintained.
- B. Prime farmland needs to be protected and preserved.

#### Section 5.7 Agricultural Resources Goals, Objectives, Policies

##### A. Goal

Protect economically productive farmland areas.

##### B. Objectives

1. Work to preserve farming as a viable occupation and way of life within the County.
2. Limit the number of non-farm uses in agricultural areas.
3. Protect farm operations from incompatible land uses and activities that may adversely affect the capital investment in agricultural land, improvements, and equipment.

##### C. Policies

1. Minimize non-agricultural development in farming areas.
2. Promote the continuation of the "family" farm by supporting the introduction and operation of agriculture-support businesses, and providing families with opportunities for small non-farm businesses to supplement farm income.



## **Section 5.8 Natural Resources Goals, Objectives, Policies**

### **A. Goal**

Protect the County's natural features, including wetlands, lakes, woodlands, wildlife habitats, open spaces groundwater and mineral resources.

### **B. Objectives**

1. Identify and protect the County's natural resources, such as rivers, lakes, floodplains, wetlands, mineral resources, steep slopes, ridgetops, woodlands and productive soils.
2. Protect and enhance surface water, ground water, and shoreline quality.
3. Encourage the use of soil conservation practices and the management of woodlands.
4. Direct development away from environmentally sensitive areas.
5. Pursue opportunities that support both natural resource protection and rural economic development.

### **C. Policies**

1. Map and protect "environmental corridors" as a composite of the County's most sensitive natural areas by:
  - a. Protecting areas classified as wetlands from development to preserve the significant natural functions that wetlands provide.
  - b. Protecting areas within the 100-year flood plain to avoid damage to private and public property and the health, safety and welfare of the County.
  - c. Discouraging building or driveway development on slopes in excess of 20 percent.
2. Protect surface water quality (e.g., waterways, drainage channels, lakes, ponds, impoundments, and wetlands) by supporting streambank management, natural shoreline restoration, erosion control, proper agricultural practices, stormwater management, and buffer areas as appropriate practices to protect the County's water quality, depending in part on the quality and sensitivity of the associated water and the relative presence or absence of development.
3. Protect groundwater quality through proper placement of new on-site wastewater systems, appropriate maintenance and replacement of older systems.
4. Work to protect rare species and wildlife habitat areas.
5. Build on the County's natural resources to promote tourism and local economic development.
6. Acknowledge the uniqueness of our night sky, among the darkest in the state, and work to maintain our dark sky through education about good lighting practices.
7. Work to develop a plan which demonstrates the benefits of a forest preserve district in a county with little public land.

## **Section 5.9 Cultural Resource Goals, Objectives, Policies**

Preserve the County's cultural, historic and archeological sites and scenic character.

### **A. Objectives**

1. Identify and promote the preservation of the County's cultural, historic, and archeological resources that celebrate the County's pre-settlement and early settlement periods.
2. Preserve large blocks of woodlands, hunting land, wetlands, and open space that contribute to Carroll County's rural character and way of life.
3. Protect the narrow, winding, lightly-traveled roadways that contribute to the County's scenic quality and, for some, outdoor recreation opportunities.

## **B. Policies**

1. Encourage private landowners to protect and rehabilitate known historic and archeological sites.
2. Preserve and celebrate the scenic landscape and byways in the County.
3. Promote “heritage tourism” (e.g., local festivals, fairs, farm tours, and markets) that celebrates the County’s heritage and rural setting.

## CHAPTER 6 Economic Development

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### Section 6.1 Introduction

This section of the Comprehensive Plan summarizes Carroll 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. This element concludes with goals, objectives, and policies to promote the stabilization, retention, or expansion of the economic base. State economic development information is included to help the County identify potential opportunities that could be used to pursue appropriate economic development activities.

### Section 6.2 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 Carroll 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 2000 Census, 5,106 (75.4%) of 6,776 Carroll County households sampled were classified as households with earnings; 2,369 (35.0%) were households with social security income; 227 (3.4%) were households with supplemental security income; 1,227 (18.8%) were households that received retirement income; and, 167 (2.5%) households received public assistance. In order to better understand the existing wage-earning realities within Carroll County, "earnings" data was considered to be 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 6.1 compares income for households and individuals for Carroll County with the State of Illinois as a whole. Carroll County has increased both median household income and per capita income at a slower rate than the State of Illinois overall. This data is also presented in a slightly different format in Figures 16W and 16X of Appendix I (Northern Illinois Market Facts).

**Table 6.1  
Comparison of Household and Per Capita Income  
Carroll County and State of Illinois**

	Median Income Per Household				Per Capita Income			
	1990	2000	2006 (est.)	Annual-ized % Change 2000-2006	1990	2000	2006 (est.)	Annual-ized % Change 2000-2006
Carroll County	\$25,758	\$37,148	\$39,350	1.0%	\$16,096	\$24,829	\$28,144	2.1%
State of Illinois	\$32,252	\$46,590	\$52,006	1.9%	\$20,824	\$32,185	\$37,252	2.5%

Source: U.S. Bureau of the Census

Table 1.8 of the Issues and Opportunities Chapter details changes in household income over the last 16 years.

Figure 16N of Appendix I (Northern Illinois Market Facts) details Carroll County business patterns in 2004 using the North American Industrial Classifications, based on number of establishments of each type of industrial classification, number of employees and average annual payroll per employee. There are 447 business establishments employing 3,702 persons. The average annual pay for all business establishments is \$22,955.

### 3. Percent in Labor Force and Unemployment

Table 6.2 below shows the number of residents 16 years and above living in Carroll County and the State of Illinois. Age sixteen is considered to be the lower threshold for being eligible for employment. Carroll County has a lower percentage of residents in the labor force (63.0%) compared to the State of Illinois (65.1%). According to the 2000 Census information, the County had an unemployment rate of 4.3%, which was significantly lower than the State of Illinois unemployment rate (6.0%).

**Table 6.2**  
**Employment Status of Population 16 Years and Above (2000 Census)**  
**Carroll County and State of Illinois**

	Carroll County	State of Illinois
<b>Population 16 yrs. and over</b>	13,162	9,530,946
<b>In Civilian Labor Force</b>	8,293	6,208,597
<i>% in Civilian Labor Force</i>	63.0	65.1
<b>Employed</b>	7,724	5,833,185
<i>% Employed</i>	58.7	94.0
<b>Unemployed</b>	569	375,412
<i>% Unemployed</i>	4.3	6.0
<b>Not in Labor Force</b>	4,869	3,300,329
<i>% Not in Labor Force</i>	37.0	34.6

Source: U.S. Bureau of the Census

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. According to the Illinois Department of Employment Security data for 2006 indicates that Carroll County had 7,786 persons in the labor force, 7,144 persons employed and 642 persons unemployed. The 2006 unemployment rate was 8.2% compared to the unemployment rate for the State of Illinois of 6.2%. Figure 16M of Appendix I (Northern Illinois Market Facts) details monthly unemployment rates by month (percent) for Carroll County as compared to the Northern Illinois region. A sidebar also details the State annual average unemployment rates (percent).

#### 4. Labor Force Participation Characteristics

Based on the data presented in the following Table 6.3 below, the County labor force has declined between 2000 and 2006. The percentage of labor force that is 65 and over has also declined between 2000 and 2006. The percentage of white collar workers in the labor force has increased between 1990 and 2000, and again between 2000 and 2006.

**Table 6.3**  
**Labor Force Participation Characteristics 1990, 2000 and 2006**  
**Carroll County, IL**

	1990	2000	2006
<b>Total in Civilian Labor Force</b>	8,136	8,293	7,991
<b>% of persons 16 and over</b>	62.1	63.0	62.5
<b>% of persons 65 and over</b>	15.3	17.1	7.6
<b>% of women in labor force</b>	52.9	56.7	56.8
<b>% of labor force that is female</b>	44.6	46.1	46.1
<b>% self-employed</b>	17.4	11.6	11.1
<b>% white collar</b>	38.8	46.5	47.1

Source: U.S. Bureau of the Census; Easy Analytic Software, Inc., 2006, Longitudinal Employer - Household Dynamics, 2006 (via 2007 Northern Illinois Market Facts)

5. Type of Employment for County Residents

Table 6.4 below provides information regarding the type of occupation that Carroll County residents are employed in. Table 1.11 of the Issues and Opportunities Chapter summarizes resident employment by industry for the last two Census years. 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.

**Table 6.4**  
**Carroll County Resident Employment by Occupation**

	Number	Percentage
<b>Occupation</b> Employed civilian population >16 yrs.	7,724	100.0%*
Management, professional, and related occupations	1,991	25.8%
Service occupations	1,132	14.7%
Sales and office occupations	1,450	18.8%
Farming, fishing and forestry occupations	132	1.7%
Construction, extraction, and maintenance occupations	862	11.2%
Production, transportation, and material moving occupations	2,157	27.9%

Source: U.S. Bureau of the Census  
\*May not total 100% due to rounding.

Table 6.5 below indicates distribution of County employment by industry (measured by “place of work”).

**Table 6.5**  
**Estimated Distribution of County Employment by Industry (Percent)**  
**Carroll County, Illinois**

	1990	2000	2006
Farming	12.9%	12.1%	11.7%
Ag Services/Forest & Fishing	2.0	2.5	2.4
Mining	0.3	0.2	0.2
Construction	4.7	5.5	5.3
Manufacturing	9.0	14.4	11.8
Transportation/Utilities	4.6	7.5	7.3
Wholesale Trade	3.9	4.0	4.4
Retail Trade	13.6	15.3	15.2
Finance, Insurance, Real Estate and Rental/Leasing	5.6	7.5	8.0
Services	23.3	19.3	21.5
Government	20.0	11.7	12.3
<b>Total No. of Jobs</b>	<b>7,635</b>	<b>8,426</b>	<b>7,885</b>

Source: Woods & Poole, 2005 (via 2007 Northern Illinois Market Facts)

NOTE: Employment measured by “place of work”

Figure 16I of Appendix I (Northern Illinois Market Facts) details the concentration of County employment by industry sectors in 2006. Note that farming has the highest concentration at 10.40, followed by mining at 2.28

Figure 16K of Appendix I (Northern Illinois Market Facts) details the historic distribution of employment by industry sectors (percent).

Figure 16L of Appendix I (Northern Illinois Market Facts) details the top manufacturing industries in the County in 2004, as well as changes in top manufacturing industry employment between 1998 and 2004.

## 6. Commuting

The mean travel time to work for Carroll County residents is lower than the mean travel time for the State of Illinois as a whole; however, it is the highest among the six northwest Illinois counties of Carroll, Jo Daviess, Lee, Ogle, Stephenson and Whiteside. The average mean travel time to work for the aforementioned six northwest Illinois counties is 21.2 minutes.

Figure 16H of Appendix I (Northern Illinois Market Facts) presents data received from Easy Analytic Software that indicates, generally, that more people in Carroll County are, and will be in the future, commuting longer distances to work.

**Table 6.6  
Mean Travel Time to Work in 2000**

Carroll County	23.1 minutes
Jo Daviess County	21.0 minutes
Lee County	21.8 minutes
Ogle County	22.8 minutes
Stephenson County	19.9 minutes
Whiteside County	18.5 minutes
State of Illinois	28.0 minutes

Source: U.S. Bureau of the Census

**B. Economic Base Analysis**

Carroll County's major employers are indicated in Table 6.7 below:

**Table 6.7  
Major Employers in Carroll County, Illinois**

Employer	Product/Service	No. of Employees
Maclean Fogg Company (Savanna)	Forgings, fasteners	275
Elkay Mfg. (Savanna)	Water fountains and coolers	250
Swiss Colony, Inc. (Savanna)	Distribution and assembly of gift packages	200
Medallion Cabinetry (Lanark)	Production of kitchen and bath cabinetry.	125
West Carroll CUSD #314 (Savanna)	Education	91
Danisco (Thomson)	Specialty sweeteners	80
Sewer Equipment Company of America (Chadwick)	Sewer cleaning equipment	80
Thomson Correctional Center (Thomson)	State prison	76
Good Samaritan Nursing Home (Mt. Carroll)	Nursing care facility	75
Carroll County Government (Mt. Carroll)	Local government	75
Sullivan's Grocery Stores (Savanna)	Grocery	60
Eastland CUSD #308 (Lanark)	Education	58



Lake Carroll Property Owner's Assoc. (Lanark)	Private property owner's association	55
West Carroll CUSD #314 (Mt. Carroll)	Education	53
J.S.P. Mold, LLC (Milledgeville)	Injection molds	51
Rolling Hills Progress Center (Lanark)	Light assembly/packaging	45
Prime Time Popcorn (Shannon)	Microwave popcorn products	38
Carroll Industrial Molds (Milledgeville)	Injection molds	31
West Carroll CUSD #314 (Thomson)	Education	30
Buck's Barn/Lynwood Lynks (Thomson)	Hotel/dining/golf	30

Source: Illinois Department of Commerce and Economic Opportunity (Community Profiles - Chadwick, Lanark, Mt. Carroll, Milledgeville, Savanna, Shannon and Thomson) and Thomson Correctional Center

### Section 6.3 Additional Economic and Demographic Data

*Northern Illinois Market Facts*, published annually by Northern Illinois University, Center for Governmental Studies, is an annual compilation of economic and demographic data for a fourteen-county area (Boone, Bureau, Carroll, DeKalb, Grundy, Jo Daviess, Kendall, LaSalle, Lee, Ogle, Putnam, Stephenson, Whiteside and Winnebago counties) in northern Illinois. A regional overview and maps are included. In order to provide timely data without the need to update the text of this Comprehensive Plan document, *Northern Illinois Market Facts* is hereby incorporated in this document as Appendix I. The most recent version of *Northern Illinois Market Facts* should be included in said Appendix I, and previous versions may be retained or discarded.

### Section 6.4 Community Assessment: Strengths and Weaknesses Analysis

Part of the process of economic development planning should be for the community to assess categories or particular types of new businesses and industries that are desired by the County, and to assess its strengths and weaknesses for attracting and/or retaining business and industry. The Carroll County Comprehensive Plan Committee hosted public planning meetings on April 10, 2008; April 16, 2008; April 22, 2008; and, April 28, 2008. The input received during these meetings, along with input from the Committee, is reflected in the following:

#### A. Categories or types of new businesses and/or industries that are desired by the community:

- Light industry
- Services
- Agri-business and agriculturally-related business/industry
- Retail business
- Knowledge- and technology-based business/industry
- Agricultural-support business/industry

**B. Community strengths for attracting/retaining businesses and industry:**

- Ample housing supply
- Clean environment
- Strong work ethic
- Good rail and water/barge facilities
- Available land
- Low sales tax rate
- Available commercial/service space
- High quality of life
- Low crime rate

**C. Community weaknesses for attracting/retaining businesses and industry:**

- Roads
- Lack of medical facilities
- Lack of consistent infrastructure and infrastructure capacity.
- Distance from interstate highways
- Lack of public transportation
- Lack of population

**Section 6.5 Economic Development Programs**

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

**A. Carroll County**

**1. Carroll County Economic Development Corporation**

The Carroll County Economic Development Corporation provides confidential development services to businesses considering expansion or a location in Carroll County. The Economic Development Corporation provides a variety of services including but not limited to: site selection, labor market analysis, financial packaging services, liaison between governments and businesses and researching federal and state programs to leverage private dollars on economic development projects.

**2. Jo-Carroll Local Redevelopment Authority**

The Jo-Carroll Local Redevelopment Authority (LRA) represents the people affected by the closure of the Savanna Army Depot Activity in March 2000. The LRA is responsible for the re-use and re-development of approximately 3,000 acres known as the Savanna Depot Business, Industry and Technology Park ("Savanna Depot Park"). The LRA's mission is to provide economic growth, help create quality employment and improve property values in consideration of the surrounding environment of Carroll and Jo Daviess Counties. Its duty is to implement the re-use plan.

The LRA provides economic growth by purchasing goods and services in the counties and encouraging visitors to the tourist attractions at the Savanna Depot Park, the adjoining Lost Mound Unit of the Upper Mississippi River National Wildlife and Fish Refuge and elsewhere in Carroll and Jo Daviess Counties. The LRA helps to create quality employment primarily by leasing and selling property in the Savanna Depot Park to businesses and industries that create jobs

and by supporting the business and marketing efforts of the Savanna Depot Park tenants. The LRA seeks to improve property values by managing and improving the depot buildings, infrastructure and grounds.

The LRA seeks to privatize the Savanna Depot Park properties by selling them to private owners that will create jobs and add to the tax bases of Jo Daviess and Carroll Counties.

### B. Regional

#### 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.

### C. State

#### 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:

##### *Illinois Enterprise Zone Program*

Certain specifically-designated portions of Carroll County are located within an Illinois Enterprise Zone (Carroll/Whiteside County Enterprise Zone and Jo-Carroll 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 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. Carroll County's Enterprise Zone Administrator is Betty Steinert (Phone 815-772-5175; Fax 815-772-5249; e-mail: bsteinert@whiteside.org)

*Participation Loan Program*

The program works through banks and other conventional lenders to generally provide subordinated financial assistance to small businesses that will employ Illinois workers. The state will participate in loans up to 25 percent of the total amount of a project, but not less than \$10,000 nor more than \$750,000.

*Minority, Women and Disabled Participation Loan Program*

This program is similar to the Participation Loan Program, except that participation may not exceed 50 percent of the project, subject to a maximum of \$50,000.

*Enterprise Zone Financing Program*

Similar to the Participation Loan Program, except that DCEO will generally provide favorable interest rates to businesses either locating in or expanding in one of the 93 certified enterprise zones located throughout the state.

*Development Corporation Participation Loan Program*

This program provides financial assistance through a Development Corporation to small businesses that provide jobs to workers in the region served by the Development Corporation. The state will participate in loans up to 25 percent of the total amount of a project, but not less than \$10,000 nor more than \$750,000.

*Capital Access Program (CAP)*

The Capital Access Program is designed to encourage financial institutions to make loans to new and small businesses that do not qualify for conventional financing. A reserve fund is established at the lending bank and is available to draw upon should any of the bank's CAP loans default. There is a maximum loan amount of \$100,000.

*The Technology Venture Investment Program (TVIP)*

The Technology Venture Investment Program was created to provide seed and early stage capital, in the form of a qualified security investment, to Illinois entrepreneurs that are developing an advanced technological device or process commercially exploitable by Illinois businesses. DCEO may invest up to \$500,000, but no more than 50 percent of the equity financing of the project. A qualified co-investor(s) with expertise in the related field of technology must assume at least 50 percent of the additional equity contribution.

*Surety Bond Guaranty Program*

The program is designed to assist Illinois' small, minority and women contractors with technical assistance; help them receive experience in the industry; and assist in obtaining bid, performance and payment funds for government, public utility and private contracts.

*Business Development Public Infrastructure Program*

The Business Development Public Infrastructure Program provides low-interest financing to units of local government for public improvements on behalf of businesses undertaking expansion or relocation projects that meet the program criteria and demonstrate great potential for creating and retaining jobs. The infrastructure improvements must be made on public property and must directly result in the creation or retention of private-sector jobs. The local government must demonstrate clear need for the financial assistance to undertake the improvements.

*Affordable Financing of Public Infrastructure Program*

This program provides financial assistance to, or on behalf of local governments, public entities, medical facilities and public health clinics for the purpose of making affordable the financing of public infrastructure improvements needed to insure health, safety and economic development in a community.

*Community Development Assistance Program (CDAP)*

CDAP is a federally funded program that assists smaller Illinois local governments in financing public facilities, housing rehabilitation projects or economic development needs. Grants are made to units of local government and may be loaned to businesses for projects that will create or retain jobs in the community. Grant funds may also be used by the local government for improvements to public infrastructure that directly support economic development. The program is limited to communities with populations under 50,000 that are not located within one of the eight large urban counties that receive funds directly from the federal government. Funds are targeted toward projects that primarily benefit low- and moderate-income people.

*Community Services Block Grant Loan Program (CSBG)*

This program provides long-term, fixed-rate financing to new or expanding businesses that create jobs and employment opportunities for low-income individuals. The program links federal, state and private financing by using CSBG funds at low interest rates in combination with bank funds and equity.

*Large Business Development Program*

The Illinois Large Business Development Program (LBDP) provides incentive financing to encourage large out-of-state companies to locate in Illinois or existing large companies to undertake substantial job expansion or retention projects. Funds available through the program can be used by large businesses (500 or more employees) for typical business activities, including financing the purchase of land and buildings, construction or renovation of fixed assets, site preparation and purchase of machinery and equipment. LBDP funds are targeted to extraordinary economic development opportunities; that is, projects that will result in substantial private investment and the creation and/or retention of 300 or more jobs.

*Employer Training Investment Program (ETIP)*

This state-funded program assists Illinois companies in training new workers or upgrading the skills of their existing workers. ETIP grants may be awarded to individual companies, multi-company efforts and intermediary organizations offering multi-company training.

*Technology Challenge Grant Program*

The Technology Challenge Grant Program provides grants to fund science and technology projects, partnerships between universities and industry, high-tech commercialization projects, transfer projects and infrastructure improvements.

*Illinois Technology Enterprise Center (ITEC) Program*

The ITEC program provides operational support for regional centers that serve technology entrepreneurs, innovators and small businesses and provide investments to or on behalf of young or growing companies in cooperation with private sector investments. Centers assist entrepreneurs to locate critical pre-seed and early stage financing, help entrepreneurs in high growth, high technology fields to further their technical and/or managerial skills, and assist with new product development and marketing in support of new venture formation within Illinois.

*Illinois Technology Enterprise Development and Investment Program*

Provides investment, loans or qualified security investments to or on behalf of young or growing businesses in cooperation with private investment companies, private investors or conventional lending institutions. Investors assume a portion of the investment loan or financing for a business project. New or emerging businesses also are eligible through financial intermediaries as they commercialize advanced technology projects.

*Recycling Industry Modernization (RIM) Program*

The Recycling Industry Modernization Program provides grants to manufacturers to encourage them to modernize their operations and divert materials from the solid waste stream. RIM projects require the use of recycled materials and/or solid waste reduction activities. Grants of \$30,000 are available for modernization assessments, with grants up to \$150,000 available for modernization implementation projects. Grants require an applicant investment.

*Recycling Market Development Program*

Provides grants to encourage private-sector investment in the manufacture, marketing and procurement/demonstration of products containing recycled commodities. These funds may be used for capital equipment, certain marketing expenses, and to offset costs to procure and demonstrate the use of recycled-content products. The Recycling Market Development Program provides grants up to \$250,000. Grants require an applicant investment.

D. Federal

*HUBZone Program*

Carroll County is a federally-designated HUBZone. The HUBZone Program, managed by the U.S. Small Business Administration (SBA), stimulates economic development and creates jobs in urban and rural communities by providing Federal contracting preferences to small businesses. These preferences go to small businesses that obtain HUBZone (Historically Underutilized Business Zone) certification in part by employing staff who live in a HUBZone. The company must also maintain a "principal office" in one of these specially designated areas. The program resulted from provisions contained in the Small Business Reauthorization Act of 1997.

The U.S. Small Business Administration (SBA) was created in 1953 as an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation. The SBA helps Americans start, build and grow businesses. Through an extensive network of field offices and partnerships with public and private organizations, SBA delivers its services to people throughout the United States, Puerto Rico, the U. S. Virgin Islands and Guam.

*Foreign Trade Zone*

The Savanna Depot Park is located within a Foreign Trade Zone. 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 reexported, 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.

#### **Section 6.6 Economic Development Issues/Conclusions**

- The County's economic development incentive program should be more competitive.

#### **Section 6.7 Economic Development Goals, Objectives, Policies**

##### A. Goal:

Promote the expansion and stabilization of the economic base in a way that takes advantage of the County's unique assets, opportunities and strengths.

##### B. Objectives:

1. Retain and help grow existing Carroll County businesses and job opportunities.
2. Direct a coordinated economic development program that capitalizes on the County's natural resource base, recreational opportunities, transportation assets, and proximity to other population and recreation/tourism centers.
3. Direct large-scale economic development projects to the municipalities—where utilities, services, roads and other infrastructure are available.
4. Discourage unplanned, continuous strip commercial development, and an overabundance of commercial signs and billboards, along major roadways.
5. Where consistent with local plans, promote neighborhood-serving retail development near planned residential areas, allow small, low-impact non-farm businesses on farming properties and support and allow home-based businesses where there will be no impact on surrounding properties.
6. Encourage the redevelopment and reuse of the downtown districts and aging or contaminated business locations in the County's city and villages.

##### C. Policies:

1. Plan for an adequate supply of developable land for commercial and industrial uses in logical areas consistent with local government wishes.
2. Accommodate high quality employment opportunities in areas planned for commercial and industrial uses.
3. Focus on a sustainable economic development approach, anchored in business retention and expansion, rural entrepreneurship, tourism- and resource-based development, and home-based business development. Local communities should be encouraged to specialize in an economic approach that takes advantage of their respective attributes.
4. Continue to support the Economic Development Corporation's mission to foster economic development programs and partnerships, with support from regional agencies, municipal governments and private landowners, educational institutions, and business groups to prepare, refine, and implement an economic development strategy to attract long-term, quality businesses to the County.
5. Work with the cities and villages in the County on efforts to advance downtown revitalization and redevelopment efforts.
6. The County should develop a competitive economic development incentive program.
7. Work to diversify economic opportunities throughout the County.
8. Work to diversify economic development strategies in the county.
9. Leverage the County's location and proximity to urban areas to its economic advantage.

**CHAPTER 7**  
**Intergovernmental Cooperation**

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**Intergovernmental Cooperation**

The intergovernmental cooperation chapter identifies opportunities for establishing or maintaining cooperation between local units of government. Cooperation improves lines of communication between different units of government; aids in the recognition and possible resolution of conflicts between jurisdictions; and, allows for the identification of mutual service needs and improvements. The intent of this chapter is to identify, inventory and analyze existing and potential cooperative relationships.

**Section 7.1 Inventory of Intergovernmental Agreements**

Inventory and examination of existing relations allows for the understanding of how units of local government currently work together and how these relationships can be enhanced. As Carroll County develops and redevelops in the future it is important for the County to continue to work with surrounding units of local government. Carroll County has several standing agreements with other units of local government.

- A. Cherry Grove-Shannon Township, Elkhorn Township, Freedom Township, Rock Creek-Lima Township, Washington Township, Woodland Township and Wysox Township: Carroll County maintains an intergovernmental agreement with the aforementioned townships for the purpose of real estate data collection and valuation for tax assessment purposes.
- B. Jo Daviess County: Carroll County maintains an intergovernmental agreement with Jo Daviess County for the purpose of managing the closure and redevelopment of the former Savanna Army Depot.
- C. Jo Daviess County: Carroll County maintains an intergovernmental agreement with Jo Daviess County for the implementation of the solid waste management plans mandated by the Solid Waste Planning and Recycling Act (415 ILCS 15).
- D. Whiteside County: Carroll County maintains an intergovernmental agreement with Whiteside County for the purpose of administering two Enterprise Zones within Carroll County (the Whiteside/Carroll County Enterprise Zone and Jo-Carroll Enterprise Zone), setting policies, boundary changes, and the sharing of administrative costs of the Enterprise Zones.

**Section 7.2 Issues/Conclusions Regarding Intergovernmental Relations**

- Carroll County should continue its intergovernmental agreements with Cherry Grove-Shannon Township, Elkhorn Township, Freedom Township, Rock Creek-Lima Township, Washington Township, Woodland Township and Wysox Township in order to provide fair, efficient and effective property tax assessments for the residents of the aforementioned townships.
- Carroll County should continue its intergovernmental agreement with Jo Daviess County regarding the closure and redevelopment of the former Savanna Army Depot to provide economic growth, help create quality employment and improve property values in consideration of the surrounding environment of Carroll and Jo Daviess Counties.
- Carroll County should continue its intergovernmental agreement with Jo Daviess County for the implementation of the solid waste management plans to ensure compliance with State law.



- Carroll County should continue its intergovernmental agreement and partnership in the Whiteside/Carroll County Enterprise Zone and Jo Carroll Enterprise Zone to ensure that the Enterprise Zone benefits the residents of the County.
- Carroll County should maintain communications with the municipalities in the County to ensure that County and municipal land use plans and land use decisions are consistent.

### **Section 7.3 Additional Opportunities for Intergovernmental Cooperation and Beneficial Agreements**

*There were no additional opportunities for intergovernmental cooperation and beneficial agreements identified.*

### **Section 7.4 Goals/Objectives/Policies**

#### **A. Goals**

1. Encourage cooperation between Carroll County and other units of government, where appropriate, to ensure availability of services and facilities.
2. All intergovernmental agreements shall be entered into with the best interests of the residents of the Carroll County getting foremost consideration.

#### **B. Objectives**

1. Share services across county or municipal borders whenever deemed appropriate by the County.
2. Periodically review intergovernmental agreements to re-affirm that they are still in the best interests of the residents of Carroll County.

#### **C. Policies**

1. Establish and maintain communication with municipalities, townships and other units of local government for discussion on land use and other related issues.
2. Maintain existing intergovernmental relations and cooperation so long as they are in the best interests of the residents of Carroll County.
3. Explore additional opportunities for intergovernmental cooperation and beneficial agreements.
4. Coordinate economic development incentives across jurisdictional boundaries.

## CHAPTER 8 Land Use

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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 Carroll County

An accurate depiction of Carroll County's existing land use pattern is the first step in planning for a desired *future* land use pattern. The Carroll County Zoning Department conducted an inventory of existing land uses in 2007 using the County's digital orthophotography, spot field checks and knowledge of the County. 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 Carroll County is categorized as follows:

**Agriculture & Rural Lands:** Land used primarily for farming, farmsteads, nurseries, and farm support activities, and limited single-family residential development, generally with densities at or below 1 dwelling unit per 40 acres. This category also includes grasslands, shrubland, and sandy or barren land.

**Governmental:** Publicly-owned land designated as state parks and natural areas; publicly-owned land designated for re-development; and, federally-owned land.

**Residential:** Isolated non-farm residential uses or groupings of predominantly single family residential development.

**Recreation/Open Space:** Publicly or privately-owned lands designated as recreation areas, such as fairgrounds, camps, campgrounds, historical sites; and, private natural areas.

**Commercial:** Business uses including golf courses, commercial, office, telecommunication facilities, and occasional outdoor display land uses at varying densities.

**Industrial:** Industrial land uses and occasionally outdoor storage areas at varying densities, generally with moderate landscaping and signage. Also included in this category is extractive uses (quarries and gravel pits).

**Church/Cemetery:** Churches and cemeteries.

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

#### B. Existing Land Use Pattern:

Carroll 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; and, other rural open space land uses. A significant portion of the County is in "Governmental" land use - primarily the Savanna Army Depot, the Upper Mississippi River National Wildlife and Fish Refuge, and the Mississippi Palisades State Park. The County's population and most intensive development is concentrated in municipalities. The rural population is in historic rural settlements, and a residential community development (Lake Carroll). Isolated rural residential, 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 1.9% of the land area of the County, but contain 57.3% 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 Carroll County as of 2008. These acreage totals do not include lands within the municipalities. Map 8.1 General Development Plan, Carroll County, Illinois found in Appendix II - Maps graphically details existing land uses.

**Table 8.1  
Existing Land Use Within Carroll County**

<b>Land Use</b>	<b>Area (Acres)</b>	<b>% of County</b>
Agriculture and Rural Lands	255,021.4	90.2
Public/Governmental	9,402.1	3.3
Residential	7,764.3	2.7
Incorporated Cities/Villages	5,275.2	1.9
Recreation/Open Space	2,331.3	0.8
Commercial	1,450.6	0.5
Industrial	1,315.4	0.5
Church/Cemetery	133.8	0.0
<b>Total</b>	<b>282,694.1</b>	<b>100.0</b>

Source: Michael Reibel, County EDC Planning Consultant and Carroll County Zoning Office

## Section 8.2 Land Development and Market Trends

According to the Carroll County Zoning Department, there were 648 zoning permits issued for new dwelling construction between 1997 and 2007, for an average of nearly 65 dwelling starts per year over the past ten years. The majority of dwelling starts were in Lake Carroll (64.4% of total), York Township (9.4% of total), and Savanna Township 4.5% of total).

Table 8.2 below shows the comparison of equalized assessed valuations (EAV) by class of property in 1995 and 2005 in Carroll County. Residential, commercial and industrial EAVs have risen over the past three assessment years, with industrial EAVs registering the greatest percentage increase at 32.7%; however, farm EAVs have declined. The total County EAV increased by 5.3% between 2004 and 2005. Residential EAVs comprise the largest portion of the County EAV, accounting for 65.8% of the total County EAV in 2003, 67.4% in 2004 and 68.6% in 2005.

**Table 8.2**  
**Comparison of Equalized Assessed Valuations by Class of Property (Thousands of Dollars)**  
**in Assessment Years 2003, 2004 and 2005**  
**Carroll County, Illinois**

	Assessment Year 2003	Assessment Year 2004	Assessment Year 2005	% Change 04-05	2005 Average Tax Rate
<b>Residential</b>	\$180,920,000	\$191,719,000	\$205,773,000	7.3	\$6.86
<b>Farm</b>	\$66,773,000	\$64,151,000	\$63,653,000	-0.8	\$7.28
<b>Commercial</b>	\$24,097,000	\$25,049,000	\$25,623,000	2.3	\$8.72
<b>Industrial</b>	\$3,228,000	\$3,620,000	\$4,802,000	32.7	\$8.87
<b>Total</b>	\$275,018,000	\$284,539,000	\$299,851,000	5.3	---

Source: 2007 Northern Illinois Market Facts

## Section 8.3 Land Use Conflicts

### A. Existing and Potential Land Use Conflicts:

As growth occurs in Carroll 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 Carroll 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 Supply and Demand

Projected residential land use demands are typically based on year-round population, household size, housing unit forecasts, and an assumption of an average size of a future residential home site. Since Carroll County has experienced a decrease in population, and is projected to decrease in population into the future (see Chapter 1, Issues and Opportunities for Planning), it is not necessary to calculate projected residential land use demands. However, a reasonable amount of land should be designated for future residential development based on stated planning policies, goals and objectives.

Commercial land use demand projections assume that the ratio of the current number of jobs in the County's "commercial" employment sectors (retail trade, Finance, insurance and real estate, and services) to the current commercial acreage will remain constant over a twenty year planning period. In 2006 there were 3,525 jobs in the County's "commercial" employment sector and 1,450.6 acres of commercial land use. Assuming that job growth will increase, on average, 0.51% per year over the next twenty-four years to 2030 (based on the average rate of growth over the past 16 years [1990 - 2006]), *approximately 190 additional acres of commercial land will be needed to support a projected 3,983 commercial employment jobs - resulting in about 40 acres every 5 years over a 24-year planning period.*

Projected demand for the County's industrial land use base is similarly tied to projected growth in the sectors of mining and construction, manufacturing, transportation, utilities and communication, and wholesale trade. Based on 2006 ratios and employment, and assuming that the industrial job growth will increase, on average, 1.6% per year over the next twenty-four years to 2030 (based on the average rate of growth over the past 16 years [1990 - 2006]), *approximately 579 additional acres of industrial land will be needed to accommodate the projected 3,347 manufacturing employment sector jobs, or about 116 acres every 5 years over the over a 24-year planning period.*

### Section 8.5 Goals, Objectives, and Policies

#### A. Goal:

Work cooperatively with township, village and city governments to promote an economically efficient, environmentally sustainable, and compatible development pattern that also respects private property rights.

#### B. Objectives:

1. Promote new development consistent with this *Comprehensive Plan* and other local comprehensive plans.
2. Working with the County's townships and municipalities, continue to plan for a compatible land use pattern throughout the County.
3. Guide the location, mix, and quality of private development to meet private and public land use objectives.
4. Promote a development pace that does not exceed capacity of utilities, roads, and community facilities.
5. Provide a balance of land uses to serve existing and future residents of the County, as well as non-residents, that minimizes conflicts between adjacent land uses.

#### C. Policies:

1. Incorporate the recommendations of city, village and township land use plans as the County's land use plan, except in very rare instances where County interests may not be served by such a policy.
2. Plan for a sufficient supply of developable land for a range of different uses, in areas, types, and densities consistent with local community wishes and service requirements.
3. Guide intensive new development requiring higher levels of municipal utilities and services to the County's municipalities.
4. When making land use decisions such as map amendments (re-zonings), special use permit requests, and subdivision plats, follow the land use recommendations mapped in the General Development Plan map and described in this *Plan*.
5. Encourage the use of conservation neighborhood design for rural residential development in appropriate areas and where consistent with local community wishes. Support other innovative approaches to land development to increase flexibility and achieve the goals of this *Plan*.
6. Work with local governments and landowners to assure incompatible land uses are not located close to one another or are buffered through screening.

7. When changes in zoning are proposed that would permit non-residential development on a parcel of land, require the submittal of a specific development proposal (comprised of a detailed site plan) before approving the re-zoning. Approval of the development proposal should be based on the degree to which the project fulfills the goals, objectives, and policies of this *Plan*.
8. Encourage safe and attractive development; ensure that the development site is physically suited to the proposed use; apply sound design and landscape principles in the planning, layout and construction of new development.
9. Ensure that proposed uses are compatible with surrounding uses; give consideration to the opinions of neighboring landowners and interests of the County in general.
10. Encourage environmentally sensitive, energy efficient, well-planned sustainable development.

### **Section 8.6 Future Land Use Recommendations**

Map 8.2 General Development Plan Map found in Appendix II - Maps illustrates the Future Land Use recommendations of the Carroll County Comprehensive Plan, and 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. Land Use recommendations include both immediate and long range planning recommendations to be implemented. 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.

#### **A. Residential Land Use**

Residential development may be 1-2 family residential or residential planned development.

1. 1-2 Family Residential includes one-unit residential structures as well as two-unit residential structures.
2. Residential Planned Development – mixed-residential projects consisting of single family, duplex, and multi-family structures, including condominium-type development, subject to site plan approval by the Carroll County Regional Planning Commission, Zoning Board of Appeals and County Board. Maximum allowable unit density will be established during the site plan review process.
3. Multi-Family includes structures that contain 3 or more units.
4. The following development guidelines should be considered when reviewing residential development proposals:
  - a. Balconies, porches, stoops, garden walls, varied building and facade setbacks, varied roof designs, bay windows and similar design features should be strongly encouraged. Long, monotonous building facades and boring, box-like buildings that detract from the visual quality of the community should be avoided.
  - b. The architectural design should be compatible with and fit the context of the surrounding neighborhood and character. This includes proper selection of building and facade materials, building height, building bulk, setbacks, window and door styles and placements, rood designs and colors.
  - c. In general, multi-family dwelling units should be designed to appear as a grouping of smaller residences. Parking lots and garages serving multi-family uses should abide by the following guidelines: (a) garage doors and parking lots should be located so that they are not the dominant visual element; (b) all outdoor parking areas should be partially screened from public view by peripheral hedges and ornamental trees; (c) large parking lots should be broken up with landscaped islands and similar features; (d) parking lots should be directly linked to building entrances by pedestrian walkways that are physically separated from vehicular movement areas; and (e) large, unarticulated parking garages

are undesirable and should be avoided wherever possible. When such structures are necessary to meet parking requirements, the facades of the structures should be broken up with foundation landscaping, varied facade setbacks or projections, and recessed garage doors.

- d. For multi-family uses, landscaping should be provided (a) along all public and private street frontages; (b) along the perimeter of all paved areas (parking lots, driveways); (c) along all building foundations; (d) along yards separating land uses which differ in intensity, density or character; (e) around all outdoor storage areas such as trash receptacles and recycling bins; (f) around all utility structures or mechanical structures that are visible from public right-of-ways or less intensive land uses; and (g) within open areas of the site.
- e. On-site open space areas and age-appropriate recreational equipment should be provided to serve the needs of the development's residents.
- f. Travel by pedestrians and bicyclists should be encouraged within and between neighborhoods through a comprehensive network of sidewalks, pedestrian paths, and bike routes.
- g. Residential developments should be connected to other neighborhoods by a network of streets that discourage high travel speeds but still allow access to emergency and maintenance vehicles.

#### B. Traditional Neighborhood Development

Traditional Neighborhood Development (TND). The concept of TND encourages a planned mix of residential and non-residential uses, while maintaining the predominance of single-family residential uses based on the following guidelines:

1. Include a mixture of uses including single-family residential (minimum of 65% of dwelling units), two-family residential (maximum of 15% of dwelling units), multi-family residential (maximum of 20% of dwelling units), institutional, parks and open space, neighborhood office, and neighborhood commercial.
2. TND developments should be connected to other neighborhoods by a network of streets that discourage high travel speeds but still allow access to emergency and maintenance vehicles.
3. Travel by pedestrians and bicyclists should be encouraged within and between neighborhoods through a comprehensive network of sidewalks, pedestrian paths, and bike routes.
4. Urban design strategies should include the preservation and enhancement of vistas, neighborhood gathering places, and visual focal points.
5. Design elements commonly found in TND developments, and that should be encouraged, include:
  - Reduced building setbacks that create a distinct sense of place and charming human scale by bringing buildings close to the sidewalk and street.
  - Use of picket fences, wrought iron fences, masonry walls, or hedgerows to define the outdoor space between the home and the street and to create human-scale spaces.
  - Use of front porches and stoops to encourage social interaction between neighborhoods residents and to create visual interest in building facades.
  - Garages located behind the front facade of the home as much as possible or placing the garage in the rear yard of the home with access from an alley, lane or parking court.
  - Use of public plazas, greens, and squares to provide focal points for the neighborhood, create visual interest, and generate highly prominent building sites.

Figure 8.1 Conventional Subdivision vs. Open Space / Cluster Development

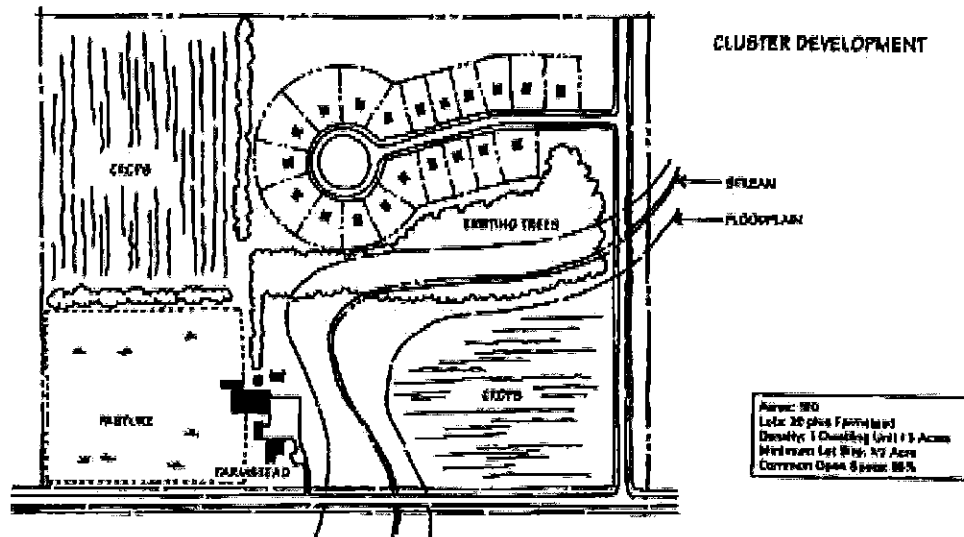
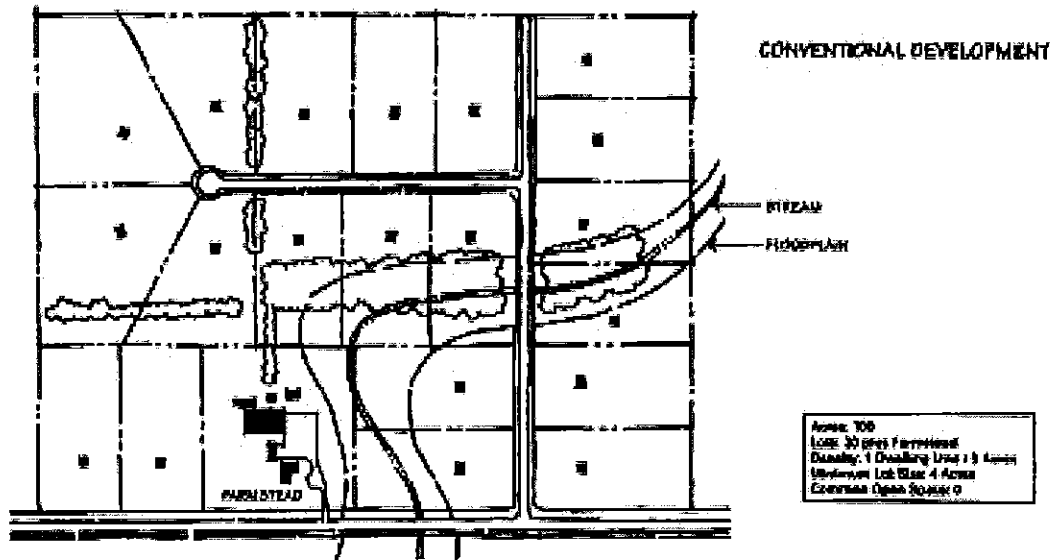
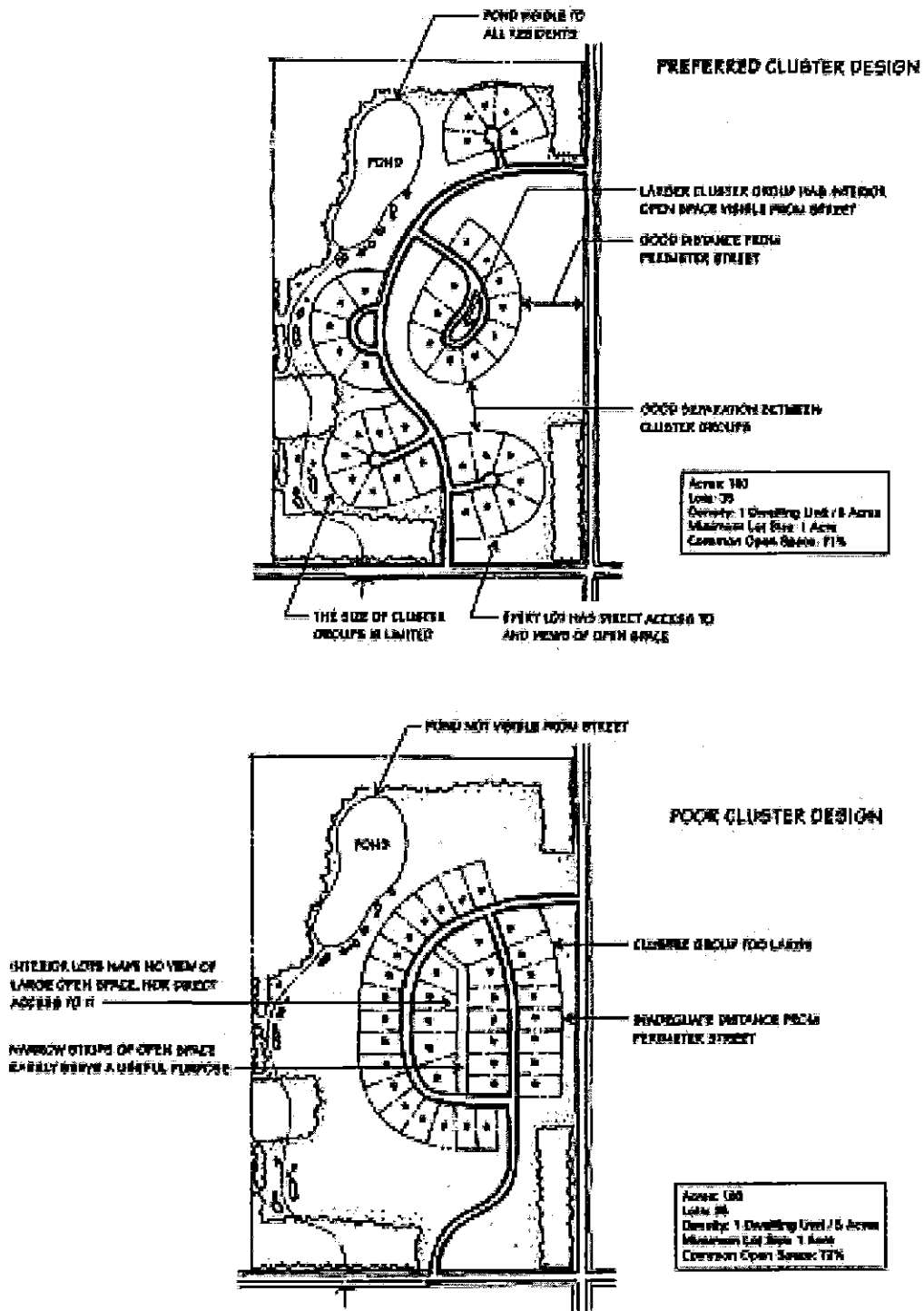




Figure 8.2 Good vs. Poor Cluster Development Design



## B. Commercial

Commercial land use includes small and large-scale retail and service establishments (i.e. stand-alone buildings and strip centers, etc.). Office land use includes doctors, lawyers, financial services, government agencies, etc.

1. The following design standards should be required in all new or expanded commercial uses through the County's zoning ordinance:
  - New driveways with adequate throat depths to allow for proper vehicle stacking.
  - Limited number of access drives along arterial and collector streets.
  - Common driveways serving more than one commercial use, wherever possible.
  - High quality landscaping treatment of buffer yards, street frontages, paved areas and building foundations.
  - Street shade trees along all public street frontages.
  - Parking lots heavily landscaped with perimeter landscaping and/or landscaped islands.
  - Screening (hedges, berms, trees, and decorative walls) to block the view of parking lots from public streets and adjacent residential uses.
  - Signage that is high quality and not excessive in height or total square footage.
  - Complete screening of loading docks, dumpsters, mechanical equipment, and outdoor storage areas through use of landscaping, walls, and architectural elements.
  - Location of loading docks, dumpsters, mechanical equipment, and outdoor storage areas behind buildings.
  - Provisions for safe, convenient, and separated pedestrian and bicycle access to the site, and from the parking areas to the buildings.
  - Site design features that allow pedestrians to walk parallel to moving cars.
  - Illumination from lighting confined on site, preferably through use of cut-off luminaries.
  
2. The following design features should be encouraged in all new or expanded commercial developments (through site plan review):
  - High quality building materials, such as brick, wood, stone, and tinted masonry.
  - Low reflectant, solid earth tone, and neutral building colors.
  - Canopies, awnings, trellises, bays and windows to add visual interest to facades.
  - Variations in building height and roof lines, including parapets, multi-planed, and pitched roofs.
  - Staggered building facades (variations in wall depth and/or direction).
  - Prominent entryways.
  - All building facades of similar quality as the front building facade.
  - Animating features on the building facade.
  - Repeated elements of architectural detail and color on the building.
  - Use of landscaping and architectural detailing along building foundations to soften the visual impact of large buildings.
  - Appropriate pedestrian connections to adjacent neighborhoods.
  - Central features which contribute to community character, such as patios, benches, and pedestrian areas.
  - Parking to the sides and rear of buildings, rather than having all parking in the front.
  - In multi-building commercial developments and adjacent commercial developments, link all buildings with safe pedestrian walkways that are separated from vehicular traffic areas.

3. The following design features should be avoided in new commercial developments (through site plan review):

- Large, blank, unarticulated walls on visible building facades.
- Unpainted concrete block walls.
- Metal siding.
- Large, bulky, monotonous “box-like” structures.
- Inappropriate mixtures of unrelated styles and materials.
- Extra-deep building setbacks.
- Excessive signage (e.g. height, square footage, color).
- Unscreened outdoor storage, loading and equipment areas.
- Poorly designed, unscreened parking lots.
- An excessive number of driveway access points along arterial and collector streets.
- Creation of inadequately designed driveways and entryways.

### C. Industrial

Industrial land use includes processing and manufacturing operations as well as wholesale sales and establishments with large amounts of outside storage of materials. Industrial land uses may also include bio-tech/research facilities, research & development/technology-related facilities, and renewable resource technology-related facilities.

1. The following design standards should be required in all new or expanded industrial uses through the County’s zoning ordinance:

- New driveways with adequate throat depths to allow for proper vehicle stacking.
- Limited number of access drives along arterial and collector streets.
- High quality landscaping treatment of buffer yards, street frontages, paved areas and building foundations.
- Screening where industrial uses abut non-industrial uses, in the form of hedges, evergreen trees, berms, decorative fences or a combination.
- Screening of parking lots from public rights-of-way and non-industrial uses.
- Complete screening of all loading areas, outdoor storage areas, mechanical equipment, and dumpsters using berms, hedges, or decorative walls or fences.
- Street trees along all public road frontages.
- Location of loading areas at the rear of buildings.
- Separation of pedestrian walkways from vehicular traffic and loading areas.
- Design of parking and circulation areas so that vehicles servicing the site are able to move from one areas of the site to another without re-entering a public street.
- Variable building setbacks and vegetation in strategic locations along foundations to break up building facades.

2. The following design features should be avoided in new industrial developments (through site plan review):

- Long, monotonous industrial building facades.
- Large, blank unarticulated wall surfaces.
- Non-architectural facade materials such as untreated exterior cement block walls and metal siding with exposed fasteners.
- “Pole barn” type metal or wood buildings.
- Large parking lots between the building and the public rights-of-way. Smaller parking lots (i.e. visitor parking lots) may be located in front of the building if well-screened.
- Use of public streets for truck parking, loading , or staging activities.
- Unscreened chain-link fences and barbed wire fencing.

#### D. Conservation/Open Space

Lands placed within this category include wetlands, lands that are designated by the Federal Emergency Management Agency as being subject to the Base Flood, or 100-year flood, for National Flood Insurance regulatory purposes, and non-designated flood plain, riparian corridors, natural area, groves, as well as other lands which are intended to remain in a natural state in order to provide a buffer between adjacent land uses with different intensities of use (industrial / residential, etc.).

#### F. Continued Agricultural Use

Land that is currently in agricultural or agriculturally-related use and should remain in agriculture or agriculturally-related use until precluded by the natural, orderly and logical expansion of a municipality or, in some cases, an existing developed area.

### **Section 8.7 Relationship Between Planned Land Use Designations and Future Zoning**

The General Development Plan map (GDP) is not a zoning map. However, the planned land use designations shown on the GDP generally advise appropriate future zoning. 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 GDP 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.

## **CHAPTER 9**

### **Implementation**

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#### **Section 9.1 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 Carroll County's actions meet the desires of the comprehensive plan.

The Comprehensive Plan, as set forth on the preceding pages, 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 Carroll 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 9.2 Comprehensive Plan Adoption Procedures**

The Carroll 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 Carroll 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. The Carroll County Zoning Department shall be the official repository for the comprehensive plan and all accompanying maps and data.

#### **Section 9.3 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 9.4 Integration, Amendment, and Update of Comprehensive Plan Elements**

The goals, objectives, and policies contained within the preceding eight elements (chapters) of this Comprehensive Plan, along with the accompanying inventory and analysis, have been thoroughly reviewed and approved by the Carroll 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 9.5 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 Carroll County Regional Planning Commission must periodically review and amend the Plan to ensure that it remains relevant and reflects current County attitudes. In order to achieve this, the Regional Planning Commission 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 Regional Planning Commission would recommend either no change to the Plan, or one or more specific changes that should be addressed.