

# **Hartford/Beaver Dam Comprehensive Plan**

**Prepared for:**

**City of Beaver Dam  
City of Hartford  
Hartford/Beaver Dam Joint Planning Commission**

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## TABLE OF CONTENTS

### Chapter I – Introduction

Legal Framework .....	5
The Planning Process.....	6

### Chapter II – Base Study

Population Analysis .....	9
Labor Force and Employment Characteristics .....	13
Existing Land Use .....	23

### Chapter III – Issues Analysis

Introduction .....	40
Participation .....	40
Summary of Issues and Analysis .....	44

### Chapter IV – Goals and Objectives

General Land Development .....	46
Residential Land Use .....	47
Economic Development.....	48
Community Facilities.....	51
Transportation.....	54
Natural Resource Conservation .....	55
Historic Preservation.....	56
Local Government Operation .....	56

### Chapter V – Land Use Plan

Development Areas.....	58
Location Principles for Proposed Land Uses.....	72
Application of Maps and Principles.....	75

### Chapter VI – Transportation Plan

County Road Network .....	77
Rural Traffic in Ohio County.....	79
Traffic in Beaver Dam and Hartford.....	80
Truck Transportation .....	82
Rail Transportation .....	83
Water Transportation .....	83
Air Transportation.....	83
Parking .....	84
Traffic Studies.....	84

## Chapter VII – Community Facilities Plan

Importance of Community Facilities .....	85
Electricity.....	85
Natural Gas .....	86
Water .....	86
Telecommunications.....	87
Recreation .....	88
Safety and Health.....	89
Solid Waste .....	90
Education .....	91
Library.....	92
Media .....	92

## Chapter VIII – Implementation

General .....	93
Adoption of New Local Land Use Regulations.....	93
Future Zoning Map Amendments.....	94



## LIST OF EXHIBITS

Exhibit 1-1	The Planning Process.....	7
Exhibit 2-1	Population of Ohio County and Surrounding Counties, 1950-2010.....	9
Exhibit 2-2	Population of Ohio County Cities, 1970-2010 .....	10
Exhibit 2-3	Ohio County Age Composition Changes.....	10
Exhibit 2-4	Rural and Urban Population of Ohio County and Surrounding Counties, 2000 .....	11
Exhibit 2-5	Percentage of Ohio County Population in Incorporated Areas.....	11
Exhibit 2-6	Components of Population Change in Ohio County, 1960-2006 .....	12
Exhibit 2-7	Projections for Ohio County and Surrounding Counties .....	13
Exhibit 2-8	Labor Force Characteristics, Residents of Ohio County, 1990-2010 .....	14
Exhibit 2-9	Employment Characteristics, Ohio County Labor Market .....	15
Exhibit 2-10	Commuting Patterns for Ohio County and Surrounding Counties, 2000 .....	15
Exhibit 2-11	Average Travel Time for Workers in Ohio County and Surrounding Counties, 2000 .....	16
Exhibit 2-12	Diversification of Employment, Ohio County Residents and Kentuckians .....	17
Exhibit 2-13	Employment by Industry Category in Ohio County and Selected Counties, 2000 ..	17
Exhibit 2-14	Ohio County's New and Expanding Industries, 2011-2012 .....	18
Exhibit 2-15	Total Manufacturing Employment Growth, Ohio County Labor Market, 1987-2010 .....	19
Exhibit 2-16	Ohio County Manufacturing Firms, 2010.....	20
Exhibit 2-17	Retail Trade Trends, Ohio County, 1982-2002 .....	22
Exhibit 2-18	Total Retail Sales, Ohio County Labor Market Area, 1987-2007 .....	22
Exhibit 2-19	Average Weekly Wages, 1990-2010 .....	22
Exhibit 2-20	Per Capita Personal Income in the Ohio County Labor Market Area, 1981-2010 ...	23
Exhibit 2-21	Median Household Income, Ohio County Labor Market Area, 2000-2010.....	23
Exhibit 6-1	Ohio County Rural Road Traffic Counts.....	79
Exhibit 6-2	Beaver Dam and Hartford Road Traffic Counts.....	80
Exhibit 6-3	Six-Year Highway Plan for Ohio County, 2012-2018 .....	80
Exhibit 7-1	Water Utilities in Ohio County.....	86
Exhibit 7-2	Projected Water Demand for Ohio County.....	87
Exhibit 7-3	Ohio County Service Providers .....	88
Exhibit 8-1	Steps in the Map Amendment Process .....	97

## LIST OF MAPS

Map 2-1	Ohio County, Kentucky Location Map .....	25
Map 2-2	Hartford Existing Land Use .....	27
Map 2-3	Beaver Dam Existing Land Use .....	28
Map 2-4	Ohio County Soils Map .....	33
Map 2-5	Flood Zones of Hartford .....	38
Map 2-6	Flood Zones of Beaver Dam .....	39
Map 5-1	Future Land Use Map for Hartford .....	61
Map 5-2	Future Land Use Map for Beaver Dam .....	62
Map 5-3	Extraterritorial Jurisdiction Boundary .....	71

## CHAPTER I – INTRODUCTION

A Comprehensive Plan is a document prepared to help guide the future growth and development of a community. Basically such a plan should be:

Comprehensive – A plan should cover all geographic parts of a community and all activities that affect physical development.

General – A plan is not supposed to be a straight jacket; it simply summarizes policies and proposals and is intended to provide flexibility.

Long range – The plan strives to present a vision of the future of the community. While addressing short-term issues and problems, its main function is to look beyond current conditions to those desired 20 years from now.

This plan is designed as a tool to be used by all decision makers, both public and private. In so doing, this plan reflects the expressed desires of the community, serves as a guide to decision making (i.e. zone change and development plan), and outlines governmental strategies that can be employed to accomplish the various components of this plan.

In order to be effective, a Comprehensive Plan must be evaluated at least every five years to ensure that it still guides the community in the most appropriate direction. This plan is the result of the efforts of the Hartford/Beaver Dam Planning Commission to legally participate in the planning and zoning process. Once adopted it will be imperative to continue to periodically review, revise, and update to ensure its continued relevance to the community.

### A. LEGAL FRAMEWORK

The Kentucky Revised Statute, Chapter 100 provides the enabling legislation for planning and plan implementation (zoning ordinances, subdivision regulations, official maps, and capital improvement programming) to local governments. Several parts of Chapter 100 are related to the preparation and use of the Comprehensive Plan. Following is a brief synopsis of those sections of Chapter 100.

**100.183 Comprehensive Plan Required.** This section requires each Planning Commission to prepare a plan “which shall serve as a guide for public and private actions and decisions to assure the development of public and private property in the most appropriate relationships.”

**100.187 Contents of Comprehensive Plan.** This section outlines the basic components of the plan. They include: A statement of Goals and Objectives, a land use element, a transportation plan element, a community facilities element, and other elements that will further serve the purposes of the plan.

**100.191 Research Requirements for Comprehensive Plan.** Section 191 sets forth the basic research, which must be done during the preparation of the plan.

There are three categories of research needed: population (past and future trends); economic survey and analysis; and analysis to “the nature, extent, adequacy, and the needs of the community for the existing land and building use, transportation, and community facilities in terms of their general location, character, and extent.”

**100.193 Statement of Objectives.** This section states that the Planning Commission must prepare and adopt the statement of objectives (the Goals and Objectives required in 100.187) to act as a guide for preparing the rest of the plan. In addition, this section also directs the Commission to present this statement for consideration, amendment and adoption by the legislative body within its area of jurisdiction.

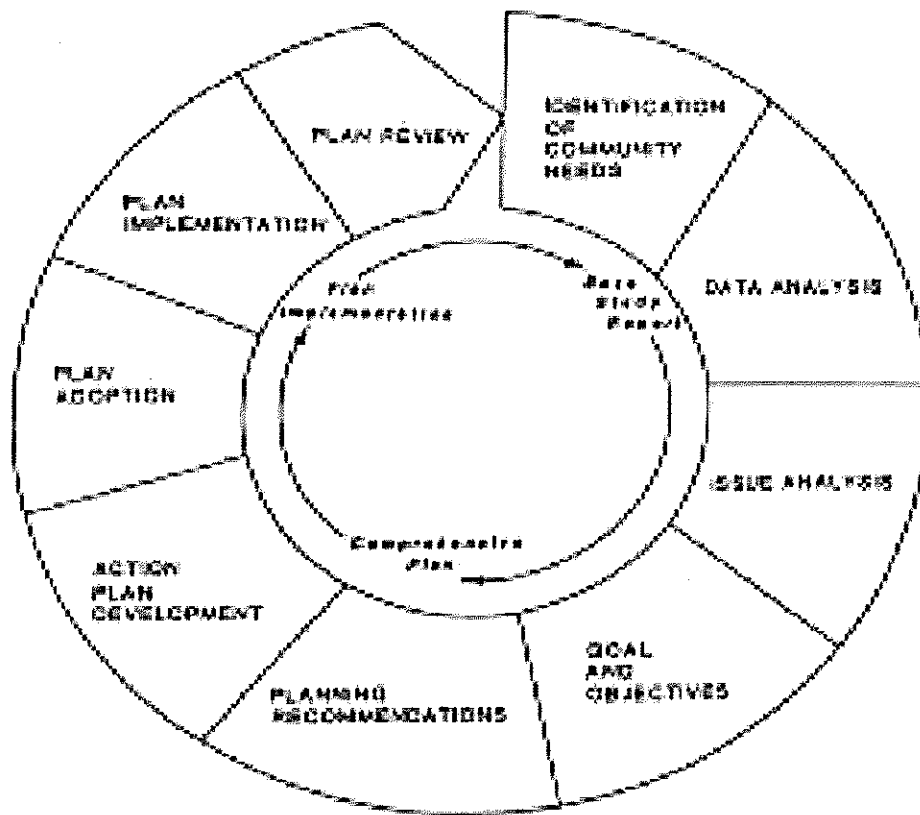
**100.197 Adoption and Amendment; Comprehensive Plan.** This section outlines the processes for adoption and amendment of the plan. It specifically states that the plan elements must be reviewed and amended, if necessary, at least once every five years.

These provisions of Chapter 100 have been followed in preparation of this update. How the plan develops into this final document is best understood through a description of the planning process.

## B. THE PLANNING PROCESS

The general planning process occurs in three stages. These stages include base studies analysis, plan development, and plan implementation (Exhibit 1-1). Contained in each stage are a number of steps that facilitate a city and county’s evolution over time. Since change and development occur regardless of the planning process, implementation of these steps can only be viewed as a vehicle to improve and guide a city and county’s growth.

Exhibit 1-1: The Planning Process



The first step in the development of a plan for a community that has not actually participated in the planning process for a number of years is the identification of community needs. Even though a great deal may already be known regarding the direction the community should take, planning has historically been based on democratic principles. Provisions for citizen input are maximized through a formalized public participation process to explore community issues and needs. Other studies, which have been conducted for the community, are also examined at this time and the issues they identify are incorporated into this process.

Following identification of community needs, a look at existing data serves to confirm the issues identified and may also reveal unforeseen problem areas.

Issue analysis is the next step in the process of integrating community needs and perceptions with the facts and figures from the data. Goals and objectives naturally develop once the issues have been fully developed. From these, the planning

recommendations and action plans are conceptualized. Following plan adoption, implementation of the plan returns the process full circle. With each revolution of the cycle, the community ideally becomes more sophisticated in its evolution, attaining higher standards of urban and rural living.

The first two steps in the process, identification of community needs and the data analysis are detailed in Chapter II of this plan. The remaining chapters cover components three through six of the planning process. Chapter III summarizes the major issues confronting Hartford and Beaver Dam at this time in the cities' growth and Chapter IV presents the goals and objectives as recommended by the Hartford/Beaver Dam Planning Commission and adopted by both city councils.

In Chapters V, VI and VII, the planning recommendations are presented for land use, transportation, and community facilities. These recommendations take the form of both text and maps. A major component of this plan contained in Chapter V is the series of guidelines from which city and county officials may assess development proposals. Inclusive in this chapter is a detailed description of how the guidelines and maps are used in conjunction with each other. The final chapter presents governmental strategies for further implementing development components. These strategies include zoning and subdivision regulation amendments; further planning studies and coordination of activities.

## CHAPTER II – BASE STUDY

### I. GENERAL DEMOGRAPHIC DATA

#### A. Population

The total population of Ohio County grew by 14 percent from 1950 to 2010. From 1950 to 1960, the population decreased by nearly 15 percent and then resumed growing. A small decrease of about three percent occurred from 1980 to 1990, though the population has increased steadily ever since. Exhibit 2-1 showcases the various population trends of Ohio County and the surrounding counties that constitute the Ohio County Labor Market Area.

- Within the Ohio County Labor Market Area, Ohio, Breckinridge, McLean, and Muhlenberg Counties all experienced losses in population between 1980 and 1990. Others grew only slightly. Daviess County has shown steady growth since the 1950s, increasing in population by nearly 70 percent.
- Population levels varied greatly for Ohio County between 1980 and 1990 and began growing steadily thereafter.

**Exhibit 2-1: Population of Ohio County and Surrounding Counties, 1950-2010**

	1950	1960	1970	1980	1990	2000	2010
Ohio	20,840	17,725	18,790	21,765	21,105	22,916	23,842
Breckinridge	---	---	14,789	16,861	16,312	18,648	20,059
Butler	11,309	9,586	9,723	11,064	11,245	13,010	12,690
Daviess	57,241	70,588	79,486	85,949	87,189	91,545	96,656
Grayson	17,063	15,834	16,445	20,854	21,050	24,053	25,746
Hancock	6,009	5,330	7,080	7,742	7,864	8,392	8,565
McLean	10,021	9,335	9,062	10,090	9,628	9,938	9,531
Muhlenberg	32,501	27,791	27,537	32,238	31,318	31,839	31,449

- Ohio County contains six incorporated cities, the largest of which is Beaver Dam. Exhibit 2-2 displays the population trends of these cities from 1970 to 2010. During this period, the population of Beaver Dam grew by 30 percent. After 1980, all incorporated areas of Ohio County, aside from Hartford, experienced a population decline with Beaver Dam, Centertown, and Fordsville recovering after 1990. The populations of McHenry and Rockport are still in decline, falling by 7.6 percent, respectively, since 1970.
- Hartford, the county seat, had a population of 2,672 in 2010.

**Exhibit 2-2: Population of Ohio County Cities, 1970-2010**

	1970	1980	1990	1996	2000	2010
Beaver Dam	2,622	3,185	2,904	2,865	3,033	3,409
Centertown	323	462	383	391	416	423
Fordsville	489	561	522	539	531	524
Hartford	1,868	2,512	2,532	2,516	2,571	2,672
McHenry	420	582	414	433	417	388
Rockport	377	511	385	405	334	266

Source: U.S. Census Bureau: *Census of Population, 1950-2010*; *Kentucky Desk Book of Economic Statistics, 1998*.

**B. Age**

- The age composition of Ohio County's population has undergone slight changes over the last few decades, as shown in Exhibit 2-3. Ohio County fairly accurately mirrored United States trends through 2010. Across the U.S., citizens aged 20-39 are having fewer children. The U.S. population is also aging which is generally reflected in an increasing percentage of the population over 60. In Ohio County, the percentage of persons over 60 years of age has continued to increase slightly from 1990 to 2010 with the 40-59 age group experiencing the largest change between 1990 and 2010 (an increase of 4.8 percent).
- Past data indicates that Ohio County residents were having fewer children while the aging population increased steadily. Between 2000 and 2010, the number of children under five years of age has increased only slightly while the percentage of elderly residents has remained generally stable, growing 1.4 percent after a decline of one percent from 1990-2000.

**Exhibit 2-3: Ohio County Age Composition Changes**

	1990 % total	2000 % total	% Change 1990-2000	2010 % total	% Change 1990-2010
<5 years	6.8%	6.3%	-0.5%	7.1%	+0.3%
5-19 years	23.1%	21.2%	-1.9%	20.3%	-2.8%
20-39 years	27.5%	18.9%	-8.6%	23.8%	-3.7%
40-59 years	22.4%	34.4%	+12%	27.2%	+4.8%
60+ years	20.2%	19.2%	-1%	21.6%	+1.4%

Source: American Fact Finder Census Data, 2010 (factfinder2.census.gov).



### C. Population Distribution

- Recent figures indicate that Ohio County remains a largely rural county. The same is true for most surrounding counties with the exception of Daviess County, due to the growth of the City of Owensboro and surrounding areas.
- In 2000, approximately a quarter of Ohio County's population resided in urban areas, mainly Beaver Dam and Hartford. These two cities, located side-by-side along US Highway 231, have a combined population of nearly 6,000 people.

**Exhibit 2-4: Rural and Urban Population of Ohio County and Surrounding Counties 2000**

	Total	Urban	Rural	% Urban	% Rural
Ohio	22,916	5,749	17,167	25.09	74.91
Breckinridge	18,648	0	18,648	0	100
Butler	13,010	0	13,010	0	100
Daviess	91,545	67,557	23,988	73.80	26.20
Grayson	24,053	5,419	18,634	22.53	77.47
Hancock	8,392	919	7,473	10.95	89.05
McLean	9,938	0	9,938	0	100
Muhlenberg	31,839	10,201	21,638	32.04	67.96

Source: *Kentucky Desk Book of Economic Statistics*, 2009.

- The population of Ohio County in incorporated areas is rising, as indicated in Exhibit 2-5. However, over 65 percent of the county resided in rural areas in 2010.
- Though population is increasing in incorporated areas, levels have not yet returned to those of the 1980s, when mining brought significant income to the county and its cities.

**Exhibit 2-5: Percentage of Ohio County Population in Incorporated Areas**

	Total in Incorporated Areas	Ohio County Population	Percent Total in Incorporated Areas
1960	4,959	17,725	28.0%
1970	6,099	18,790	32.5%
1980	7,813	21,765	35.9%
1990	5,436	21,105	25.8%
2000	7,302	22,916	31.9%
2010	7,682	23,842	32.2%

Source: U.S. Census Bureau: *Census of Population*, 1960-2010; Kentucky Department of Commerce; *Kentucky Desk Book of Economic Statistics*, 1999.

#### D. Population Change and Projections

**Exhibit 2-6: Components of Population Change in Ohio County, 1960-2006**

	Natural Increase	Net Migration
1960-1969	+319	+749
1970-1979	+729	+2,246
1980-1989	+500	-1,900
1990-1999	+63	+837
2000-2006	+431	N/A

Source: Kentucky State Data Center, University of Louisville, 2010.

- The University of Louisville's Urban Studies Center Population research Unit provided the population forecasts for Ohio County and the surrounding counties shown in Exhibit 2-7. These projections were made in 2010.
- It is expected that the Ohio County Labor Market Area will grow at a smaller rate than the nation and the state, while Butler, McLean, and Muhlenberg Counties will decrease in population by 2040.
- Immigration rates (legal and illegal) are hard to measure, though various estimates suggest that immigrants, mostly those of Hispanic origin, make up about 14 percent of the state population, according to the Kentucky Long-Term Policy Research Center. However, the overall immigrant population grows steadily each year. Roughly three percent of employees at Perdue Farms in Cromwell were migrant workers in the late 1990s, according to rural migration estimates offered by the University of California-Davis, though this number has likely increased due to the growth of the migrant population in western Kentucky. The Pew Hispanic Center estimates that Hispanics make up about four percent of the total population of Ohio County.
- The recent economic downturn has kept immigrant figures low in Ohio County and surrounding areas. Fewer jobs are available to draw potential employees to the area, and immigrants already residing in the Ohio County Labor Market are likely having fewer children because of the unpredictable economic climate.

**Exhibit 2-7: Projections for Ohio County and Surrounding Counties**

	2000	2010	2020	2040
Ohio	22,916	23,842	24,781	25,611
Breckinridge	18,468	20,059	21,489	22,820
Butler	13,010	12,690	12,544	11,305
Daviess	91,545	96,656	102,214	108,317
Grayson	24,053	25,746	27,048	27,827
Hancock	8,392	8,565	8,843	8,980
McLean	9,938	9,531	9,271	8,332
Muhlenberg	31,839	31,499	31,466	29,742
State of KY	4,041,769	4,339,367	4,672,754	5,162,292

Source: Kentucky State Data Center, University of Louisville, 2010.

## II. LABOR FORCE AND EMPLOYMENT CHARACTERISTICS

The examination and analysis of the local economy is critical in the preparation of a comprehensive plan. Local economic activity supports a given population, which in turn influences the kind and amount of land brought into development. The general health of the economy can be determined by examining two components: stability and balance. Stability is an indication of the ability of the local economy to withstand fluctuations in the regional and national economies. Balance refers to the diversification of the economy. The more diversified the local economic and employment base, the more difficult it is to disrupt the local economy. Diversification also makes it easier to expand the economy because more skills and resources are available on which to draw (F. Stuart Chapin, Urban Land Use Planning, 1965).

Hartford and Beaver Dam are part of a larger economic system including all of Ohio County and adjacent counties. Examining the key economic factors within and outside Ohio County is necessary to gain the full picture of the area's economy. Surrounding counties provide many job opportunities for Ohio County residents. Economic data for individual cities is largely unavailable, and will therefore be presented for Ohio County as a whole.

The following exhibits provide a quantitative look at Ohio County's economy in three ways: as a whole, in comparison with the state and other counties in the region, and broken into component parts. The exhibits displays data regarding the labor force and employment trends of Ohio County residents, including local commuting patterns; data regarding the diversity of Ohio County's economy, including statistics about agriculture, manufacturing, and retailing; and data regarding family and per capita income trends.

## A. General Employment Data

- Exhibits 2-8 and 2-9 display the basic employment characteristics of Ohio County residents. Ohio County's unemployment rate has historically fluctuated with the changes in the state and national economies; however, in the late 1980s, the county's unemployment rate grew considerably reflecting changes in the market for western Kentucky's coal.
- By August 1990, Ohio County's unemployment rate had dropped significantly to 8.3 percent compared with the statewide drop to 5.9 percent.
- According to data released by Workforce Kentucky and the Bureau of Labor Statistics, the May 2012 unemployment rate for Ohio County fell to a promising 6.7 percent, compared to 8.2 percent for both Kentucky and the United States. Hancock and Daviess Counties also had promising unemployment rates of 5.5 and 6.5 percent, respectively, while Muhlenberg and Grayson Counties suffered unhealthy rates of 9.0 and 9.6 percent.

**Exhibit 2-8: Labor Force Characteristics, Residents of Ohio County, 1990-2010**

	1990	1995	2000	2008	2011	2012 (Sept.)
Civilian Labor Force	8,761	9,200	9,711	12,634	12,772	12,763
Employed	8,033	8,192	9,090	11,823	11,756	11,926
Agricultural	367	N/A	286	288	N/A	N/A
Non-Agricultural	4,775	5,171	6,038	7,542	N/A	N/A
Unemployed	728	1,008	621	811	1,016	837
Rate of Unemployment	8.3%	11.0%	6.4%	6.4%	8.0%	6.6%
KY Unemployment	5.9%	5.4%	5.0%	6.1%	9.5%	8.4%
U.S. Unemployment	5.6%	5.6%	4.0%	5.1%	8.9%	7.8%

Source: Kentucky cabinet for Economic Development, *Kentucky Desk Book of Economic Statistics*, 1992, 1999, 2000, and 2009; Workforce Kentucky ([www.workforcekentucky.ky.gov](http://www.workforcekentucky.ky.gov)); Bureau of Labor Statistics *Labor Force Statistics from the Current Population Survey*.

- The percentage of residents employed in agricultural activities has also fluctuated with the national economy. In Ohio County, agricultural employment varied between 1987 and 2000 with a brief increase from 1987 to 1990. Agricultural employment began to decline again in 1995 (Exhibit 2-9). This can be attributed to the booming state and national economies beginning in the 1990s.
- Ohio County's labor force was hurt by the recent national economic downturn, though Exhibit 2-8 showcases that the rate of unemployment for Ohio County in 2011 was below

that of the state and the nation. This is likely due to several new and expanding manufacturing jobs in the area.

**Exhibit 2-9: Employment Characteristics, Ohio County Labor Market**

	Percent Agricultural				Percent Non-Agricultural			
	1987	1990	2000	2008	1987	1990	2000	2008
Ohio	5.4	4.2	2.9	2.3	94.6	85.7	62.2	59.7
Breckinridge	13.3	12.1	6.4	4.1	86.7	80.7	38.0	33.0
Butler	6.8	3.6	4.6	4.8	93.2	89.7	68.9	47.3
Daviess	3.1	2.7	1.5	1.4	96.9	91.8	83.3	91.2
Grayson	9.0	8.0	3.0	3.1	91.0	83.3	66.3	66.0
Hancock	5.1	4.6	2.0	2.0	94.9	85.9	120.0	94.6
McLean	11.8	10.0	5.5	5.4	88.2	80.8	40.4	35.9
Muhlenberg	3.8	3.3	1.9	1.6	96.2	87.8	70.1	64.3
State of KY	4.2	3.6	2.0	1.9	95.8	90.6	86.7	86.1

Source: Kentucky Desk Book of Economic Statistics, 1989, 1999, 2001, and 2009.

## B. Commuting Patterns

- The amount of workers traveling to and from Ohio County is a significant indicator of its economic well-being. While a large portion of Ohio County residents commuted out of the county in 1990, particularly into Daviess and Muhlenburg Counties, and equally large number of people commuted into Ohio County from surrounding areas. However, the coal industry has declined in recent years, and in 2000, more people commuted out of the county for work than came in. The growth of manufacturing in the county may reverse this trend in the future.

**Exhibit 2-10: Commuting Patterns for Ohio County and Surrounding Counties, 2000**

	Commuting Out Of	Commuting Into	Work and Reside In
Ohio	3,940	1,303	5,350
Breckinridge	3,942	552	3,856
Butler	2,297	1,147	3,499
Daviess	5,822	6,946	36,476
Grayson	2,598	1,846	7,320
Hancock	1,552	3,007	2,153
McLean	2,586	546	1,620
Muhlenberg	3,202	1,680	8,595

Source: Kentucky Cabinet for Economic Development, 2000 ([www.thinkkentucky.com](http://www.thinkkentucky.com)).

- Exhibit 2-11 shows the average travel times for workers in the Ohio County Labor Market area in 2000. Rural communities naturally feature longer commute times than those with substantial urban centers, though new and improved roads and higher rates of urbanization maintained in the past decade may decrease travel time in the future.

**Exhibit 2-11: Average Travel Time for Workers in Ohio County and Surrounding Counties  
2000**

County	Time in Minutes
Ohio	28.6
Breckinridge	32.7
Butler	27.7
Daviess	19.5
Grayson	27.3
Hancock	22.8
McLean	30.1
Muhlenberg	24.3

Source: Kentucky Desk Book of Economic Statistics, 2009

### C. Diversification

- A healthy economy must be diverse and must not be dominated by unpredictable industries. In 1980, mining was the largest job provider in Ohio County, employing nearly one-quarter of the population. The county became overly dependent on this relatively unstable industry and its economy suffered when national demand for the area's coal decreased in the 1980s.
- Manufacturing dropped to less than 20 percent of county employment in 1980. A similar decrease in manufacturing employment occurred in the state's economy, but the impact was much less significant.
- The county's economy became more diversified in the 1990s. Still, new businesses and industries are needed in Ohio County to provide more stability rather than one medium-sized or large industrial employer. Development of the Bluegrass Crossing Business Centre, a regional industrial park, has worked to further diversify the local economy.
- The manufacturing sector, which is on the decline across the nation, employed one in three Ohio County workers in 2008 (Exhibit 2-12). This is a notable increase since 2000, when one in five workers was employed in manufacturing jobs. Manufacturing has become more dominant in Ohio County than mining was in the 1980s.
- The services industry is also on the rise in Ohio County, which mirrors current national trends. Nearly 40 percent of Kentucky workers were employed in the services industry in 2008.
- Armstrong Coal opened a large operation in Equality (The Equality Boot Mine) in 2008, substantially affecting Ohio County's economy. This mine sold 2.1 million tons of coal in 2011 according to the Armstrong Coal website. The direct effects of increased coal production are yet to be recorded, though it is likely that Armstrong's operations have had a positive effect on the county's unemployment rate, which in September 2012 fell to 6.6 percent.

**Exhibit 2-12: Diversification of Employment – Ohio County Residents and Kentuckians**

	2000		2008	
	Ohio County	Kentucky	Ohio County	Kentucky
Agriculture*	2.9%	2.0%	3.8%	1.9%
Mining	0.3 %	1.0%	---	1.2%
Construction	2.0%	4.6%	2.0%	4.1%
Manufacturing	19.8%	16.9%	36.3%	12.0%
Transportation and Trade**	16.4%	28.0%	14.1%	14.1%
Finance***	7.2%	3.9%	2.4%	4.5%
Services	8.4%	22.1%	23.1%	39.4%
Government	15.2%	12.9%	18.2%	15.8%

Source: Kentucky Desk Book of Economic Statistics, 2000 and 2009

\*Agriculture includes Forestry and Fisheries

\*\*Transportation includes Communication and Public Utilities; Trade includes both Wholesale and Retail

\*\*\*Finance includes Insurance and Real Estate

**D. Industry**

- In 2000, based on the percentage of people employed in manufacturing, trade, and government positions, Ohio County proved to be one of the better-balanced counties in the area.
- Manufacturing employment for both Butler and Grayson Counties decreased significantly over the last decade, reflecting national trends.
- Over 50 percent of employment in Daviess County is in trade and services. Owensboro, the largest city in the labor market area, is the county seat of Daviess County and serves as the regional shopping center for the labor market area.
- Muhlenberg County, located on the Wendell Ford Parkway west of Ohio County, also has a significant portion of its employment in trade, services, and government.

**Exhibit 2-13: 2010 Employment by Industry Category in Ohio County and Selected Counties**

	<i>Ohio</i>	<i>Butler</i>	<i>Daviess</i>	<i>Grayson</i>	<i>Muhlenberg</i>
<i>All Industries</i>	7,476	2,537	42,647	7,285	9,175
<i>Agriculture</i>	N/A	N/A	125	N/A	177
<i>Mining</i>	N/A	N/A	136	N/A	839
<i>Construction</i>	151	171	1,875	375	354
<i>Manufacturing</i>	2,451	526	5,407	1,483	746
<i>Trade</i>	910	344	9,371	1,477	2,011
<i>Information</i>	50	13	466	44	104
<i>Financial Activities</i>	171	123	2,518	340	252

<i>Services</i>	1,014	195	14,979	1,649	1,163
<i>Public Administration</i>	244	148	1,147	377	734
<i>Other</i>	-	-	6	1	-

Source: Kentucky Cabinet for Economic Development ([www.thinkkentucky.com](http://www.thinkkentucky.com)).

**Exhibit 2-14: Ohio County's New and Expanding Industries, 2011-2012**

<u><i>Facility</i></u>	<u><i>New/Expanding</i></u>	<u><i>Description</i></u>	<u><i>Full-Time Jobs Created</i></u>	<u><i>Investment</i></u>	<u><i>Location</i></u>
Daicel Safety Tube Processing, Inc.	New	Bottle tubular system for auto air bags	25	\$8,800,000	Beaver Dam
Dynamic Fabrication, Inc.	Expanding	Full service steel fabrication	22	\$957,000	Beaver Dam
Perdue Farms, Inc.	Expanding	Chicken slaughtering, processing & packaging	N/A	\$5,500,000	Beaver Dam
National Office Furniture	Expanding	Wooden office desks, bookcases & tables	34	N/A	Fordsville

Source: Kentucky Cabinet for Economic Development: *Report – Kentucky Locations and Expansions Announced/Reported, January-December 2011, January–June 2012.*

- Currently three industrial parks operate in Ohio County<sup>1</sup>:

**1. Industrial Park East** has 50 acres available for current industry to expand or for a small company to locate on. It hosts NEO Industries (chroming of aluminum rollers) and Stericycle (autoclave medical recycling). It also has a 30,000 square foot building ready for customization to a company's specifications.

**2. Industrial Park West** has 10 acres of property to develop for new or existing industry. Nestaway, a company that coats metallic and rubber coats metals, was the only tenant in 2010.

**3. Bluegrass Crossings Business Centre** has approximately 900 acres ready for development. Tenants in 2010 included Daicel Safety Systems America, Daicel Safety Technology America, and Ritatsu Manufacturing, Inc.

<sup>1</sup> Ohio County Industrial Foundation ([www.ohiocountyindustrialfoundation.com](http://www.ohiocountyindustrialfoundation.com)).



The Bluegrass Crossings Business Centre is a collaborative effort of Daviess, Hancock, McLean, and Muhlenberg Counties and provides over 1,000 acres of land for industrial development.<sup>2</sup>

#### E. Manufacturing

- Ohio County's manufacturing employment experienced massive growth from 1987 to 2010. In this time period, manufacturing employment increased 98 percent. Butler County, adjacent to Ohio to the south, showed a tremendous growth of over 196 percent between 1982 and 2000, is now slowly increasing after a brief decline in the early 2000s. Hancock County has experienced a 54 percent drop in manufacturing employment since 1987.

**Exhibit 2-15: Total Manufacturing Employment Growth, Ohio County Labor Market, 1987-2010**

	1987	1990	1999	2002	2010 Estimate
<i>Ohio</i>	1,140	1,327	1,800	1,636	2,256
<i>Breckinridge</i>	211	177	294	--	1,260
<i>Butler</i>	855	1,980	1,671	929	1,280
<i>Daviess</i>	5,499	6,397	6,921	6,315	7,580
<i>Grayson</i>	2,031	2,074	2,699	2,520	2,386
<i>Hancock</i>	2,934	2,896	3,599	--	1,355
<i>McLean</i>	407	382	213	--	702
<i>Muhlenberg</i>	781	928	1,143	1,104	1,352

Source: 1984 Kentucky Department of Economic Development, *Kentucky Economic Statistics*, 1989 *Kentucky Economic Statistics*; Kentucky Desk Book of Economic Statistics, 1999, 2000, 2009; American Fact Finder Census Data, 2010 (factfinder2.census.gov).

<sup>2</sup> GRADD Comprehensive Economic Development Strategy 2011 Update.

**Exhibit 2-16: Ohio County Manufacturing Firms, 2010<sup>2</sup>**

Beaver Dam			
<i><u>Firm</u></i>	<i><u>Product(s)/Service(s)</u></i>	<i><u># of Employees</u></i>	<i><u>Year Established</u></i>
Bluegrass Quality Services, Inc.	Provides services to the auto industry	5	2006
Daicel Safety Systems America, LLC	Inflators for automatic airbags	361	2001
Daicel Safety Technologies of America	Gas generate for air bag inflators for automotive customers	75	2005
Dynamic Fabrication, Inc.	Full service steel fabrication	25	2006
H B Stanley, Inc.	Ready-mixed concrete	15	1941
NEO Industries, Inc.	Hard chrome plating	15	1993
Nestaway, LLC	Powdered vinyl & nylon coated wire racks	100	1960
Ritatsu Manufacturing, Inc.	Small motor vehicle metal stamping parts	76	2004
Stericycle, Inc.	Medical waste removal	62	1991
Tamarlane Industries, Inc.	Sheltered workshop: wooden door sills, dishwasher parts, pallet repair, furniture hardware, boxes and inserts	165	1983
WPT Corporation	Manufacture nonwoven rolls	45	2008
Young Manufacturing Co., Inc.	Millwork, dimension lumber, door sills & stair treads	173	1946
Young Sawmill, Inc.	Sawmill: railroad ties, wood chips, softwood, hardwood, rough & dimension lumber	20	1973

Centertown			
<i><u>Firm</u></i>	<i><u>Products/Services</u></i>	<i><u># of Employees</u></i>	<i><u>Year Established</u></i>
Armstrong Mines and Processing Facility	Coal production, underground and surface mines, preparation plants and other surface facilities	740	2008

Cromwell			
<i><u>Firm</u></i>	<i><u>Products/Services</u></i>	<i><u># of Employees</u></i>	<i><u>Year Established</u></i>
Perdue Farms, Inc.	Chicken slaughtering, processing & packaging	1,273	1995

Fordsville			
<u>Firm</u>	<u>Products/Services</u>	<u># of Employees</u>	<u>Year Established</u>
Dunaway Timber Co., Inc.	Green lumber, wood chips & barrel staves	70	1953
National Office Furniture	Wooden office desks, bookcases & tables	220	1974

Hartford			
<u>Firm</u>	<u>Products/Services</u>	<u># of Employees</u>	<u>Year Established</u>
Bluegrass Materials Company, LLC	Crushed limestone & agricultural lime	14	1951
Gryphon Environmental, LLC	Environmental R&D (filtration and dewatering of wastewater produced by industrial processes)	3	2008

McHenry			
<u>Firm</u>	<u>Products/Services</u>	<u># of Employees</u>	<u>Year Established</u>
McHenry Brass, Inc.	Bronze castings, brass bushings & copper base alloys	8	1975

<b>TOTAL:</b>	<b>3,465 Employees</b>
---------------	------------------------

#### F. Retail

- While the volume of retail sales and the number of retail employees have increased steadily over the last few decades, there has been a noteworthy decline in the total number of retail establishments in the same time period (Exhibit 17). This reflects the decline of small local “mom and pop” entities in retail establishment and the influx of large chain groceries and discount department stores.
- Exhibit 18 shows the rate of growth in retail sales in Ohio County as compared to retail sales in the labor market area. Ohio County had the third highest rate of growth of the counties in its labor market area in 1982; in 1997 Ohio County dropped to fifth place in this category with Breckinridge and Grayson Counties growing at a faster rate.
- Since 1999, there has been a considerable increase of new businesses in the downtown area of Hartford that offsets the loss of “mom and pop” stores. Beaver Dam had a similar increase in the outer sections of the city, especially around the Embury Shopping Center. Wal-Mart Superstore, located on an 18-acre tract on US Highway 231 near Ohio County Schools, has brought a significant amount of revenue to the Hartford/Beaver Dam area.

**Exhibit 2-17: Retail Trade Trends, Ohio County, 1982-2002**

Category	1982	1987	1997	2002	% Change, 1982-2002
<i>Establishments</i>	162	108	75	72	-55.6%
<i>Employees</i>	771	803	1,093	N/A	N/A
<i>Total Sales (In thousands)</i>	\$69,729	\$74,605	\$89,772	\$128,486	45.7%

Source: U.S. Census Bureau, *Census of Retail Trade*, Volume II, Geographic Area Series, 1982 and 1989; Kentucky Desk Book of Economic Statistics, 1999 and 2009.

**Exhibit 2-18: Total Retail Sales (in thousands), Ohio County Labor Market Area, 1987-2007**

	1987	1997	2002	2007	% Change, 1987-2007
<i>Ohio</i>	\$74,605	\$89,772	\$128,486	\$142,528	91.04
<i>Breckinridge</i>	\$52,847	\$95,052	\$89,326	\$113,835	115.04
<i>Butler</i>	\$19,379	\$35,694	\$63,116	\$57,992	199.25
<i>Daviess</i>	\$545,223	\$853,769	\$1,046,101	\$1,282,912	135.3
<i>Grayson</i>	\$67,029	\$131,407	\$142,242	\$234,914	250.47
<i>Hancock</i>	\$13,953	\$29,335	\$34,842	\$28,055	101.07
<i>McLean</i>	\$14,422	\$40,751	\$43,894	\$48,015	232.93
<i>Muhlenberg</i>	\$141,014	\$198,709	\$230,892	\$265,567	88.33

Source: Kentucky Desk Book of Economic Statistics, 1999 and 2009.

#### G. Income

- Since 1990, average weekly wages for workers in Ohio County, Kentucky, and the nation has doubled. The average weekly wage in Ohio County in 2010 was about 81.5 percent of Kentucky's and about 67.5 percent of the nation's average wages.

**Exhibit 2-19: Average Weekly Wages, 1990-2010**

	1990	1995	2000	2005	2010
<i>Ohio County</i>	\$325	\$364	\$402	\$496	\$607
<i>Kentucky</i>	\$384	\$452	\$554	\$653	\$745
<i>USA</i>	\$454	\$545	\$679	\$782	\$899

Source: Bureau of Labor Statistics *Quarterly Census of Employment and Wages*, 2010.

- Exhibit 2-20 indicates that Daviess and McLean Counties have the highest per capita income levels in the labor market area.
- Butler and Grayson Counties have had consistently lower per capita income rates than Ohio County in spite of their rapidly growing manufacturing bases until the late 1990s. This may reflect commuting patterns for the manufacturing positions in these counties.

**Exhibit 2-20: Per Capita Personal Income in the Ohio County Labor Market Area, 1981-2010**

	1981	1990	1999	2007	2010	% Change
Ohio	\$7,611	\$11,512	\$16,514	\$24,353	\$18,258	139.89
Breckinridge	\$6,603	\$11,488	\$16,870	\$22,939	\$17,757	168.92
Butler	\$6,172	\$10,400	\$16,600	\$21,214	\$17,236	179.26
Daviess	\$9,713	\$15,417	\$23,383	\$31,121	\$22,064	127.16
Grayson	\$6,622	\$11,279	\$16,962	\$21,316	\$17,443	163.41
Hancock	\$8,689	\$16,229	\$22,147	\$25,492	\$19,952	129.62
McLean	\$7,943	\$12,294	\$23,302	\$27,586	\$21,071	165.28
Muhlenberg	\$8,487	\$12,727	\$18,546	\$25,204	\$18,538	118.43
Kentucky	\$8,416	\$15,085	\$23,227	\$30,024	\$22,515	167.53

Source: US Census Bureau *Census of Population*, 1980-2010; 1984 *Kentucky Economic Statistics*; Kentucky Desk Book of Economic Statistics, 1999 and 2009.

**Exhibit 2-21: Median Household Income, Ohio County Labor Market Area, 2000-2010**

	2000	2010	Number of Households, 2010
Ohio	\$30,580	\$36,050	8,770
Breckinridge	\$31,624	\$37,395	7,474
Butler	\$30,431	\$33,703	5,175
Daviess	\$38,067	\$42,821	37,644
Grayson	\$28,974	\$33,965	9,902
Hancock	\$40,005	\$44,892	3,234
McLean	\$32,346	\$39,115	3,736
Muhlenberg	\$29,787	\$36,750	12,364
Kentucky	\$35,150	\$41,576	1,676,708

Source: US Census Bureau *Census of Population*, 2010; Kentucky Desk Book of Economic Statistics, 2009.

### III. EXISTING LAND USE

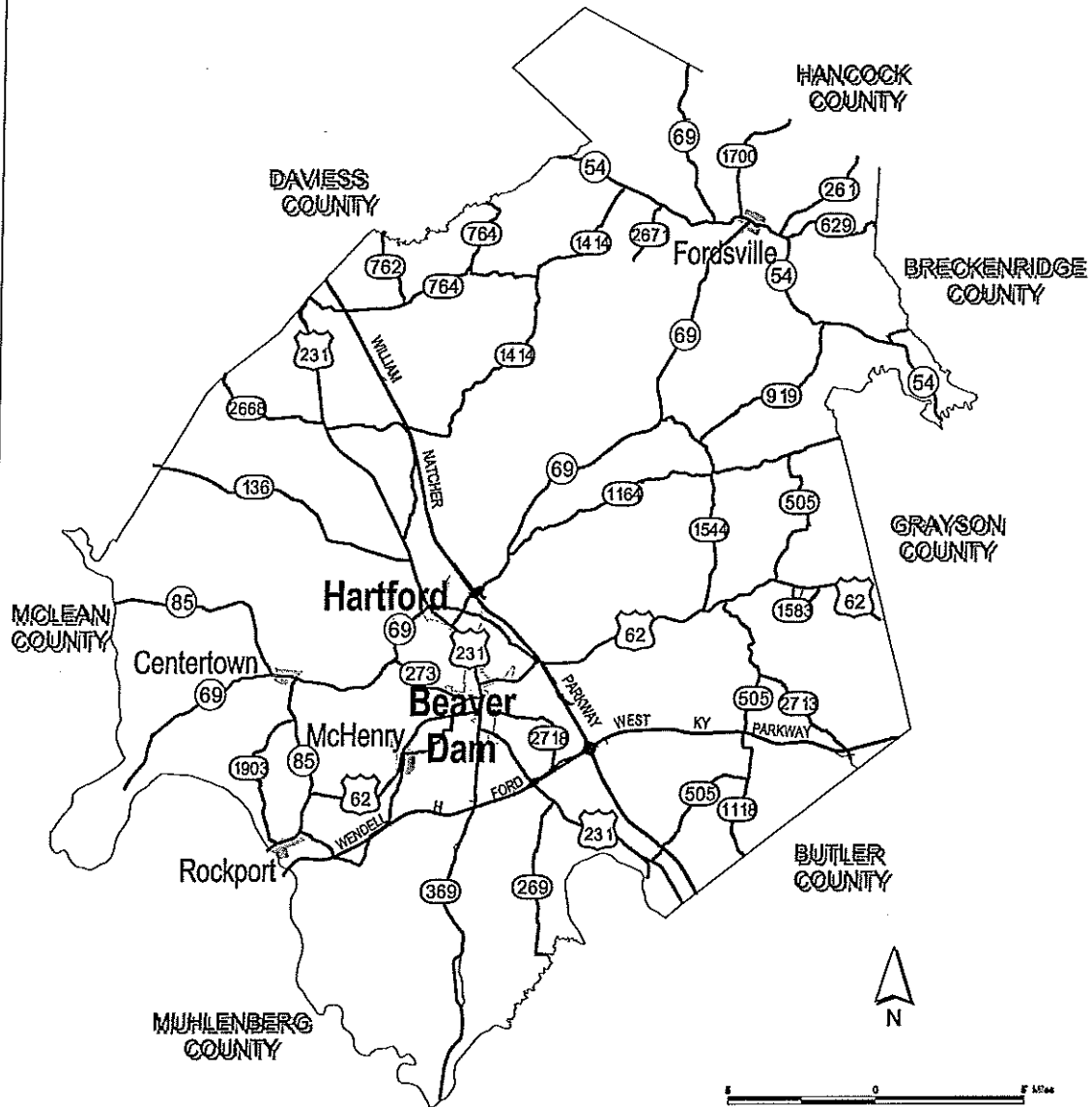
#### A. Introduction

The preceding two sections have analyzed two of the force, which have and will continue to influence the type, location, and intensity of land use patterns in Hartford and Beaver Dam and their urban areas and in rural Ohio County. The following section will inventory and analyze the existing land use patterns and physiographic features of Ohio County. Following a brief historic overview of the county, the text and maps will detail the manner in which the urban lands are used, discuss the land uses in the rural portions of the county, and provide information regarding soils,

geology, ground and surface water and topography. The factors mentioned above, as well as the extent of existing land uses, provide the basis for the preparation of future land use proposals.

Land use information can also be used by public agencies to help in making day-to-day administrative decisions. It can further be utilized by private developers, investors and business citizens in reaching decisions in their own personal and professional affairs.

### Map 2-1



LIMITATION OF LIABILITY: The Census Bureau Development Division has no reason to believe that there are any inaccuracies or omissions in information incorporated in this work and makes no representation of any kind, including, but not limited to, the accuracy or verifiability of figures for a particular area, for any such variables to be applied, with respect to the information in this furnished source.

## Hartford/Beaver Dam Comprehensive Plan

### Location Map

Ohio County, KY

hartfordcomp02.spr (Ohio County) 03/22/2002

## Green River Area

# GIS

Development District

1969 D.K. Hwy. 80 Trail, Owensboro, KY 42301  
E-mail: [plodgrad@com](mailto:plodgrad@com)

FD-302 (REV. 12-1-68) 157-4-433 FAX (276) 884-871

## B. Historic Background

Ohio County became Kentucky's 35<sup>th</sup> county in 1788. It was formed from Hardin County and originally included what is now Daviess County and parts of Breckinridge, Butler, Grayson, Hancock, Henderson, and McLean Counties, covering approximately 1,500 square miles. It gained its name from the Ohio River, which was its northern boundary at the time it was formed. The first permanent settlement in Ohio County was settled before 1785 at either Hartford or Barnett's Station, which was about two miles northeast of Hartford. Hartford was established as the county seat in 1799 at the first meeting of the county seat.

Ohio County is currently Kentucky's fifth largest county, covering a total land area of 596 square miles. Although Hartford is its county seat, Beaver Dam, located approximately four miles south of downtown Hartford, is the largest city in the county. The county currently has four additional incorporated areas: Centertown, Fordsville, McHenry, and Rockport. There are also many unincorporated rural settlements, which support urban services such as banks, stores, and fire stations.

Ohio County is a part of the Western Kentucky Coalfield physiographic region of Kentucky. It also falls under the auspices of the Green River Area Development District (GRADD), a seven-county administrative area with its offices located in Owensboro, Kentucky.

## C. Existing Land Use Patterns

### 1. Hartford

Historic Hartford is a small, fairly compact city on the east bank of the Rough River (Map 2-2). In recent years, the eastern city limits have been expanded to include KY 69, which accesses the William Natcher Parkway, and along US Highway 231 to Muddy Creek, which forms the northern boundary of Beaver Dam. Intense development to the west, south, and southeast of the city is greatly restricted by the extensive flooding which occurs along the Rough River and the forks of the Muddy Creek.

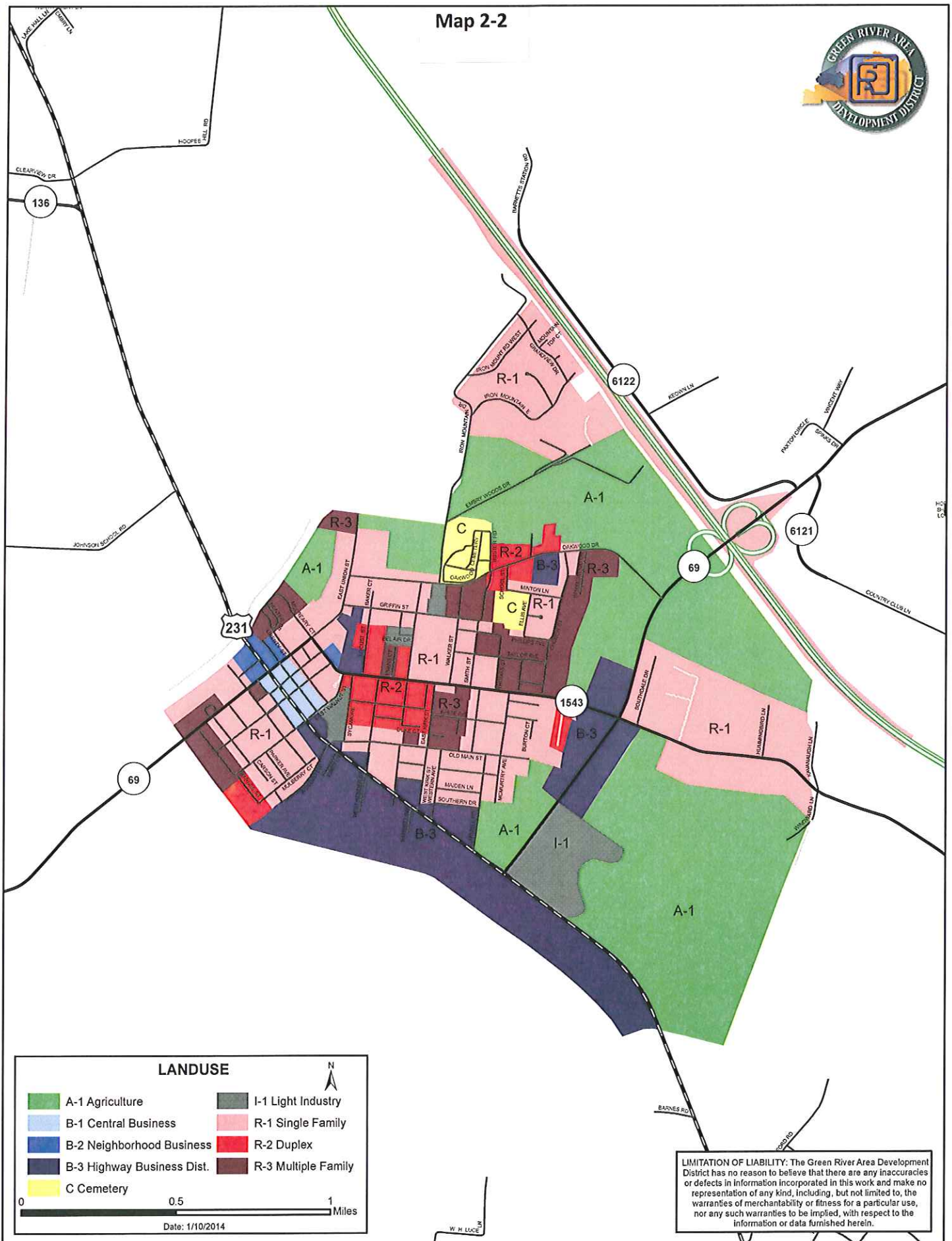
Hartford is primarily a residential community and serves as the county seat for Ohio County. The downtown area is dominated by the city and county government offices and supported by various commercial services.

In recent years, strip commercial development has occurred along US Highway 231 southeast of downtown Hartford to the Beaver Dam city limits.



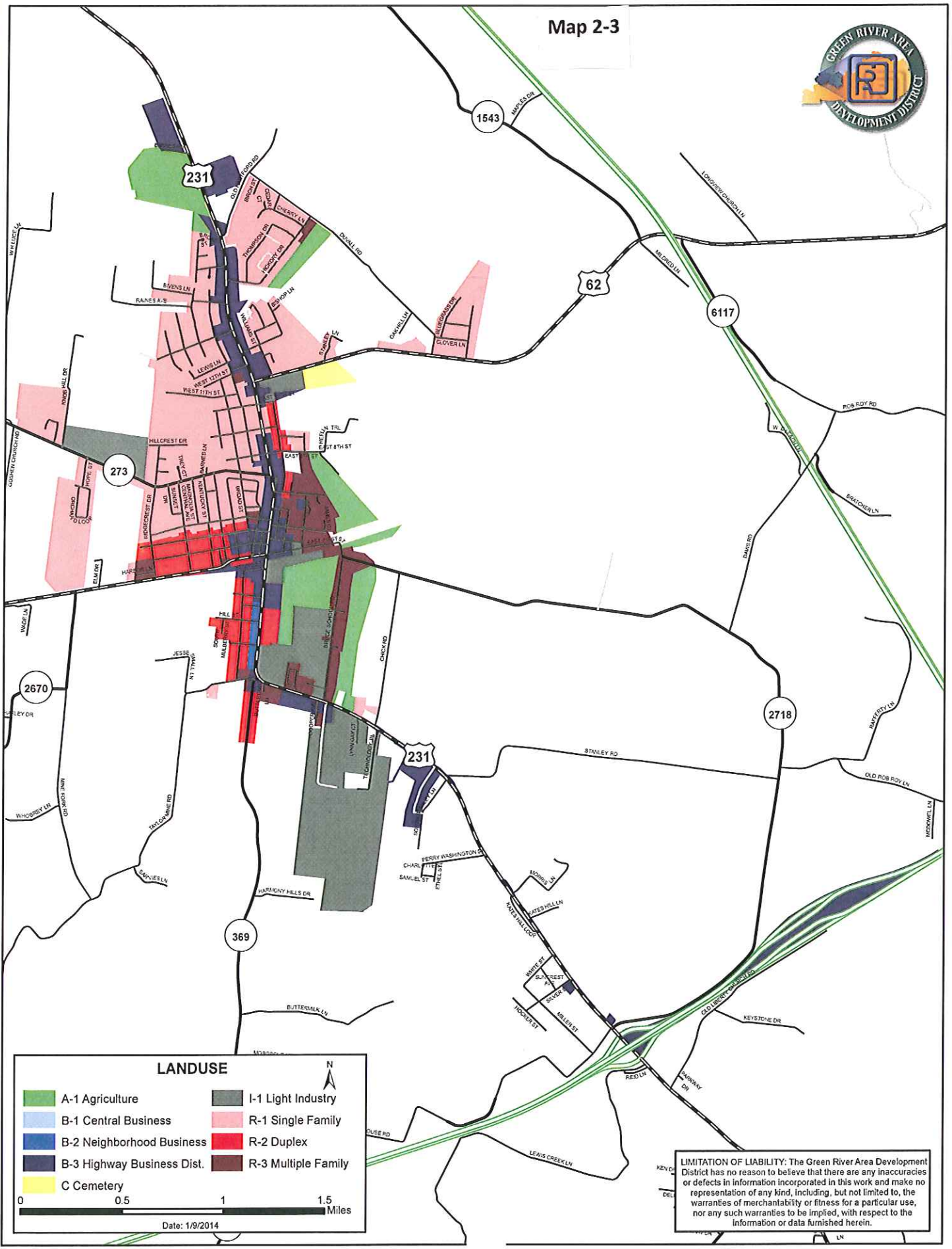
# Hartford/Beaver Dam Comprehensive Plan | Hartford Existing Landuse

Map 2-2



# Hartford/Beaver Dam Comprehensive Plan | Beaver Dam Existing Landuse

Map 2-3



KY 69 is beginning to have limited development between US Highway 231 and the William Natcher Parkway. Limited industrial development has also occurred within the city limits of Hartford.

In addition to the governmental offices mentioned previously, various public and semi-public land uses including churches, schools, cemeteries, police, fire, and ambulance services and parks occur throughout the city. Hartford also houses the Ohio County School Board administrative offices. Other public and semi-public uses located outside Hartford's city limits, but within the urban area, include the Ohio County Park and Fairgrounds, the Ohio County Country Club and the Ohio County Airport. All are located east of Hartford's city limits along KY 69, northeast of the William Natcher Parkway.

Hartford's residential uses are primarily single-family in nature; however, mobile homes are found in mobile home parts and on scattered individual sites throughout the city, and multi-family developments are also present.

Due to recent expansions of the city's boundary, Hartford contains a substantial amount of undeveloped land within its city limits.

## 2. Beaver Dam

Beaver Dam, while comprising approximately the same land area as Hartford, has a very different configuration (Map 2-3). The city, with its northern boundary adjoining Hartford at Muddy Creek, lies along approximately six miles of US Highway 231. It broadens out somewhat along the railroad tracks near the historic center of town.

Beaver Dam is the largest city by population in Ohio County. It currently contains a population of approximately 3,033 people to Hartford's 2,571. Beaver Dam also serves as a commercial and industrial center for central and southern Ohio County. Northern Beaver Dam contains much of the strip commercial development of Ohio County's urban area. This strip commercial development occurs along US Highway 231 North near the Beaver Dam/Hartford boundary at Muddy Creek and along US Highway 231 from Old Hartford-Beaver Dam Pike to US Highway 62.

The majority of the county's non-coal related industrial development is also found in Beaver Dam. The city's industrial development is primarily located

along U.S. 231 South of the railroad tracks, in the historic downtown core along the railroad tracks, and west of town on KY 273. Additional scattered industrial development occurs along US Highway 231 North of the railroad tracks and on US Highway 62 East.

In addition to scattered public and semi-public land uses such as churches, parks, cemeteries, and local safety and governmental offices, the City of Beaver Dam also contains the county high school and middle school complex. The school complex is located on US Highway 231 just south of the commercial strip development adjoining Beaver Dam's city boundary.

As Ohio County's largest city, Beaver Dam also has a substantial amount of residential development through the city. While primarily single-family in nature, multi-family and mobile home development has also occurred in the city. Some of the homes in the older neighborhoods near downtown Beaver Dam have been converted into apartments and/or office space.

The Wendell Ford Parkway, running in an east-west direction, is located approximately three miles south of Beaver Dam's southern boundary.

### 3. Other Incorporated Areas

Ohio County has four incorporated areas in addition to Hartford and Beaver Dam. These include Centertown, Fordsville, McHenry, and Rockport and are found throughout the county. Each of these cities provides a variety of services to its residents and contains commercial, industrial, and public/semi-public uses such as school, parks, and fire stations in addition to housing for 400 to 500 residents. Fordsville provides a substantial industrial base for the northern portion of the county. After considerable discussion, each of these cities chose not to participate in the planning and zoning process at this time. If the county government chooses to pursue the possibility of extraterritorial zoning or countywide subdivision regulation these small communities should be approached again for their possible participation and input.

### 4. Unincorporated Areas

Although the county has chosen not to participate in the planning and zoning process, it is impossible to produce a land use plan for the cities of Hartford and Beaver Dam without providing some discussion of the county as a whole. Like many coal counties, which have the opportunity to provide



employment at a variety of locations throughout the rural areas of the county, Ohio County has many well-developed unincorporated areas, which meet a wide variety of daily needs for local residents. Because Ohio County covers such a large area of land, and because of the coalmines and the coal towns, which already exist, the major incorporated areas is unlikely to occur. Rather, development will continue to occur throughout the county and it will be important for the county to consider adopting development guidelines to ensure that these developments are of the highest quality. These guidelines would provide a means to protect both the residents of the county and the fiscal court from incurring an unnecessary expense due to shoddy development.

#### D. Physiographic Features

The type and degree of development that occurs in a rural community often depends heavily on the physiographic features of the area. The terrain, soils, stream patterns and other natural resources either prohibit or encourage varying development patterns. Ohio County has very diverse physiographic features as a result of its location in Kentucky's western coalfield region. The topography and terrain of an area provide information about an area's potential water, sand, and gravel supply, drainage, runoff, erosion and general lay of the land for development purposes. Types of soils, slope and depth to bedrock, stability, and permeability are all-important factors in determining an area's natural limitations and strengths. The following is a brief discussion of Ohio County's natural features including soil types, geology, slopes and floodplains which all have an effect on an area's development potential. Physical features affecting Hartford and Beaver Dam directly will be emphasized.

##### 1. Soils

The process of physical and chemical weathering acting on rock form the various soil types. The properties, which a type of soil exhibits, are determined by the climate, physical and mineral composition, topography and the actions of those processes on the soil. Each soil type is a unique combination of the characteristics that affect the nature of the soil, its reaction to stress and its potential to sustain certain land uses. Development without regard for the limitations of the soil types may result in wet basements, unstable foundations, problems with septic systems and leach fields, increased erosion levels, flood hazards and other problems.

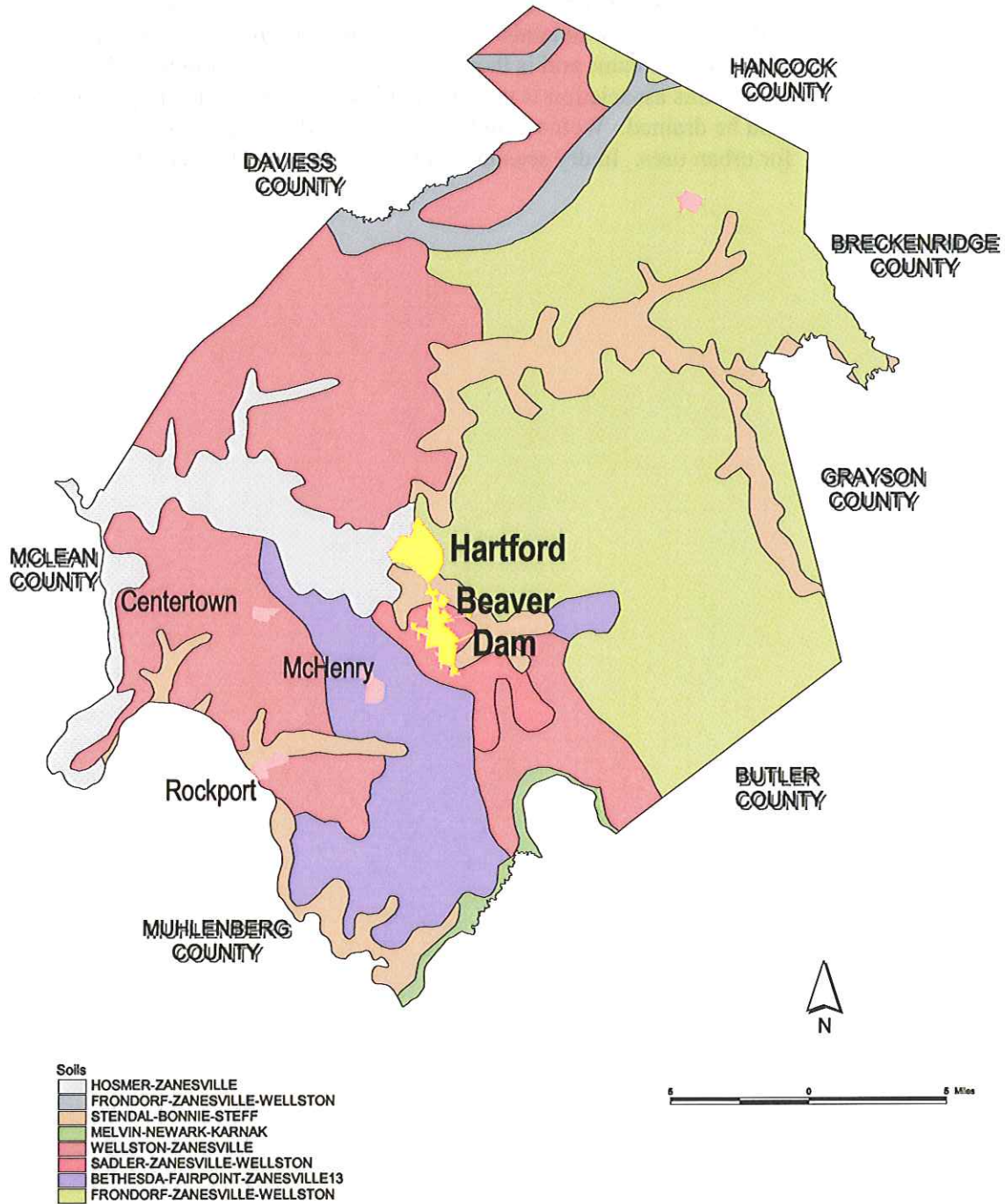
These problems affect not only the homeowner but the entire community as well.

Soils information is generalized into soil associations. A soil association is a landscape that has a distinctive proportion and pattern of certain soil types. The identification and consideration of the characteristics of each of the major soil associations found in Ohio County should be used to help to formulate land use alternatives and to promote the highest and best use of Ohio County's undeveloped lands. By using the physical characteristics of each soil association to determine the soil's strengths and limitations for both agricultural and urban land uses, the planning commission and local leaders should be able to make the best decisions regarding future development within Ohio County.

Ohio County has a soil survey issued by the USDA Soil conservation service in 1987. The text and maps in this plan will provide a broad overview of the characteristics of the seven (7) soil associations found in Ohio County (Exhibit 2-22), with particular emphasis on the three soil association in the near the cities of Hartford and Beaver Dam. This information is useful in providing data about the soil associations in the county and their relationship to each other. This discussion is not intended to provide sufficient detail to evaluate the development potential of an individual piece of property in a given association. Detailed soil maps can be found in the Ohio County Soil Survey and should be reviewed by the Planning Commission and the developer when a new development is proposed.

Both Hartford and Beaver Dam lie in the Sadler-Zanesville-Wellston soil association. This association makes up only four percent of the county's soil, but both of the major cities in the county lie in it. The landscape included in this soil association is dominated by gently sloping soils on ridge tops and toe slopes separated by sloping to steep soils on side slopes. Much of the acreage in this association is in farming and urban areas of Hartford and Beaver Dam. Crops in this association include corn, soybeans, wheat, tobacco, hay and pasture. There are limited woodland areas in this association. Limitations for urban uses include slope, depth to bedrock and slow permeability in the frangipan. These soils are well suited for a variety of recreational uses, as well as the development of wildlife habitats. It must be noted again that this is only a brief overview of the soil association and does not provide sufficient detail to evaluate the

Map 2-4



6

LIMITATION OF LIABILITY: The Green River Area Development District has no warranty or assurance that there are any inaccuracies or omissions in information incorporated in this map and that no representations of any kind, including, but not limited to, the representation of "certainty" or "fact" for a particular use, nor any such warranty to be made, with respect to the information or data furnished herein.

## Hartford/Beaver Dam Comprehensive Plan

Soils Map

Ohio County, KY

hartfordcomp02.apr (soils) 03/25/2002

**Green River Area  
GIS  
Development District**

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development potential of an individual piece of property in this association. The Planning Commission, developer and prospective homeowner should work closely with the Soil Conservation Service and the County Health Department to determine specific site limitations.

Immediately to the east of Beaver Dam is the association known as the Stendal-Bonnie-Steff. This association makes up about five percent of the county's soils. Its landscape is characterized by nearly level soils in valleys adjacent to uplands. This association is crossed by both perennial and annual streams and is therefore subject to heavy flooding. Most of the land in this association is used for cultivated crops, which required that the land be drained. Wetness and the danger of flooding are severe limitations for urban uses. In dry seasons, they are well suited to recreational uses.

The third association surrounds Hartford to the north, west and south. It is called the Melvin-Newark-Karnak association. This association makes up about 12 percent of the county's soils. Its landscape consists of nearly level soils on flood plains and in valleys, mostly along the Rough and Green Rivers. Many intermittent streams are found in this association and flooding is common. If the soils are drained, they can support some cultivated crops. Wetness and flooding are the most severe limitations to urban development.

The four other soil associations noted on the map do not directly affect the development potential of the Cities of Hartford and Beaver Dam and are discussed briefly in the maps legend. Changes in the topsoil and subsoil composition in the rural areas of the county due to the impact of mining serve to re-emphasize the need for an on-site evaluation of all sites to more accurately determine development potential.

## 2. Geology

The geology of an area is considered for several reasons, perhaps most importantly because geologic characteristics influence the efficiency with which septic tanks can be utilized as a sewage disposal technique. Bedrock type and depth affect the construction costs of providing collection, transmission and sewage disposal facilities. Shallow depth to bedrock will escalate the construction costs of sewage facilities. Geologic characteristics also influence the quantity and quality of groundwater resources. The greater the permeability of the rock type, the greater its capacity for storing water. In



addition, groundwater levels must be determined in order to prevent contamination from sewerage systems.

Ohio County lies within a geologic region known as the Western Kentucky Coalfield. This area is characterized by its Pennsylvanian-age strata and is one of two major coalfields in the state. The Western Kentucky Coalfield region is a part of the larger Eastern Interior Basin, which includes parts of Illinois and Indiana. The terrain of the county consists primarily of rolling hills with local reliefs up to 150 feet. The highest elevation of 800 feet is found in the northeastern corner of the county approximately four miles northeast of Fordsville. Rattlesnake Knob, in the southwestern portion of the county, has an elevation of 780 feet. Ridge top elevations of 500 to 600 feet are found throughout most of the balance of the county.

The Rough Creek Fault System also passes through Ohio County. The whole fault system extends from Morganfield to Grayson County and is a zone of ancient faulting, varying from one to five miles in width, with displacements of 300 feet or more. The fault system has led to the formation of small oil and gas pools beneath the surface among Mississippian aged sandstone and limestone formations. Thus the fault has played a major role in the exploration and development activities for oil and gas, coal and limestone.

The southern and western boundaries of the county are formed by the Green River, which flows to the Ohio River to the north. The Rough River meanders across the county east to west. The lowest point of elevation in the county is at the confluence of these two rivers near the west-central county border (365 feet). The valley floors of both rivers are broad and flat with average elevations of 380 to 400 feet.

### 3. Groundwater

The water table is the underground surface below which all spaces between soil grains are filled with water. Normally this is a sloping, flowing surface, which roughly follows the ground level above and slopes down to ponds, lakes and streams, seeps or springs where it intersects with the ground surface. Its depth below ground can vary and can fluctuate seasonally or over long periods. In areas of karst topography, often-natural springs exist reflecting the shallow depth to groundwater in these areas.

It is important to note the majority of the urban-type land uses in and around Hartford and Beaver Dam are served by the city or county public water systems, which derive their water from the Rough and Green Rivers. They, therefore, do not rely on groundwater as their primary source. Beaver Dam does, however, use wells as a backup source of water. Most of Ohio County has limited quantities of groundwater available for use. While some rural residents do still use wells and cisterns for water, the Ohio County Water District does provide an extensive public water supply.

Quantity is not the only factor to be considered when seeking a source of drinking water for human use. Quality is also very critical. The addition of organic and inorganic materials to the surface and groundwater can cause significant water quality deterioration.

Problems can occur due to agricultural run-off, inefficient, poorly designed or over capacity septic systems and run-off from streets and roads. Often mining can also alter the quantity and quality of local groundwater sources. Dumping into sinkholes and caves, which lead directly into underground watersheds, can result in serious pollution of both ground and surface water systems. Potentially hazardous materials such as animal wastes, fertilizers and effluent from septic tanks are not sufficiently filtered through the soils and the contaminants move quickly into the water supply. The use of abandoned wells for waste disposal is also very hazardous due to the direct contact with the groundwater reservoir.

Rural areas of Ohio County, which are not currently served by a public water system, should carefully monitor their wells and cisterns for quality, as well as quantity to ensure a healthy clean water supply. Some areas in the eastern portion of the county have been impacted by a toxic waste dumpsite and the groundwater in these areas is unusable.

#### 4. Slopes

The percent slope of the county's land must be considered as it affects both the use and maintenance of the lands in question. The relationship between slope and land use can generally be classified to help determine the appropriate land use activity. Slopes under four percent, rising four feet per 100 feet of horizontal distance, are relatively flat and are usable for all kinds of intense activity. Slopes above 15 percent are steep and make erection of buildings difficult and expensive.

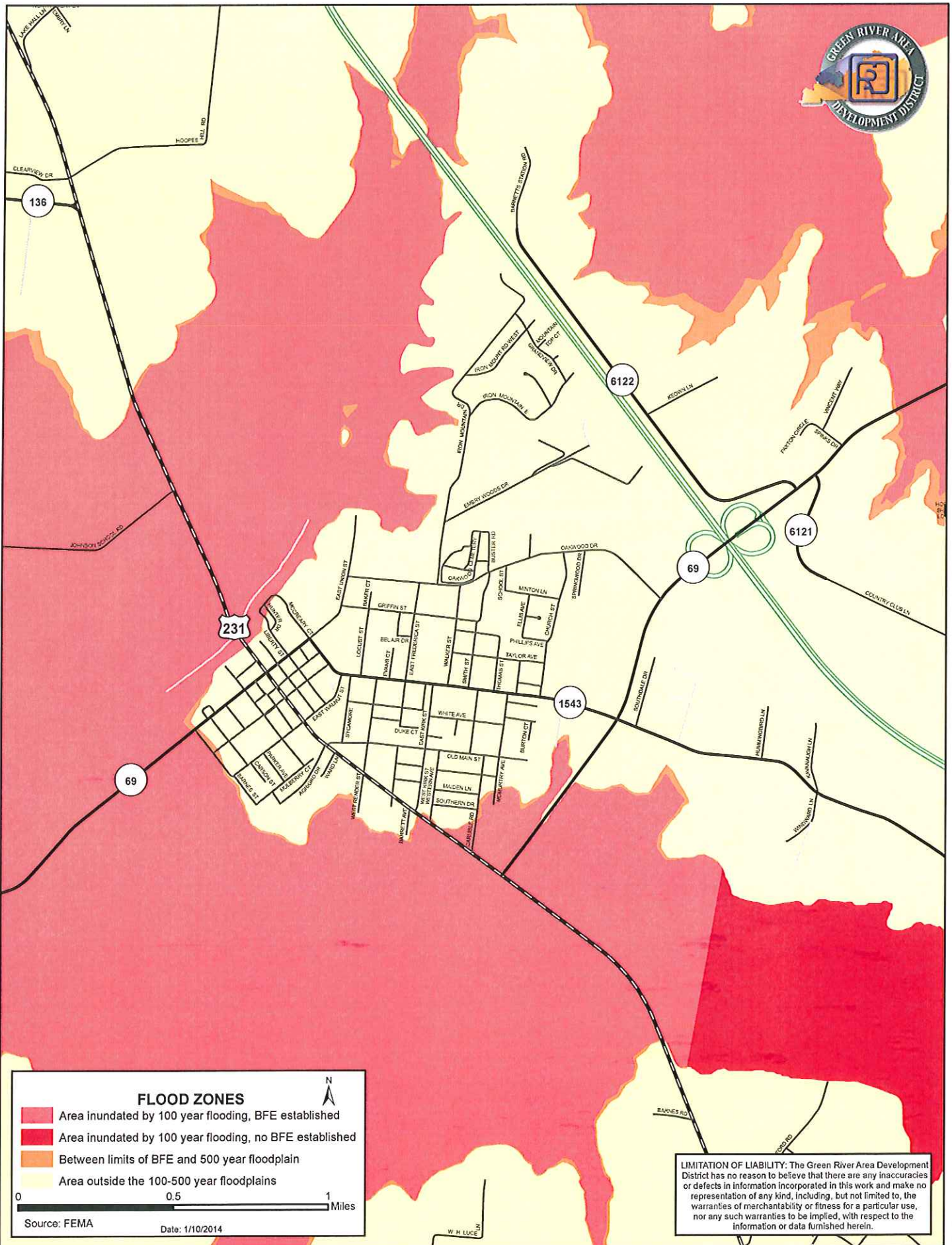
Slopes vary significantly across the county and each development needs a careful examination of the topography of the specific site before the development is approved. As noted previously, areas best suited for crop and pastureland also offer the fewest limitations to urban development. Steep slopes and knobs cannot support intense agricultural development or high-density urban type development. The more gently rolling topography often contains both the prime agricultural areas, the areas best suited for urban development. A good balance between these rural and urban uses must be thoughtfully maintained through sound planning and decision-making relating to new development. The Cities of Hartford and Beaver Dam, at this time, have adequate gently sloping lands within their city limits and urban areas to meet most of the urban land use requirements for the planning period.

## 5. Floodplains

Flooding is primarily the result of excessive amounts of rainfall or a heavy melting of snow. In undeveloped areas, flooding generally poses few problems because the natural floodplain allows for the storage of floodwaters. However, as urban development occurs in watershed and floodplain areas, surface runoff is increased and the natural storage areas can no longer retain all of the floodwaters. This results in flooding in the development within the floodplain areas as well as increases in flooding in downstream areas, which were previously, unaffected by floodwaters. Exhibits 2-23 and 2-24 graphically portray the 100-year flood boundaries for Hartford and Beaver Dam identified by the National Flood Insurance Program on their National Flood Insurance Rate Maps (FIRM) prepared in 1989. The boundaries of the 100-year flood plain will greatly affect both cities ability to expand and develop in the future.

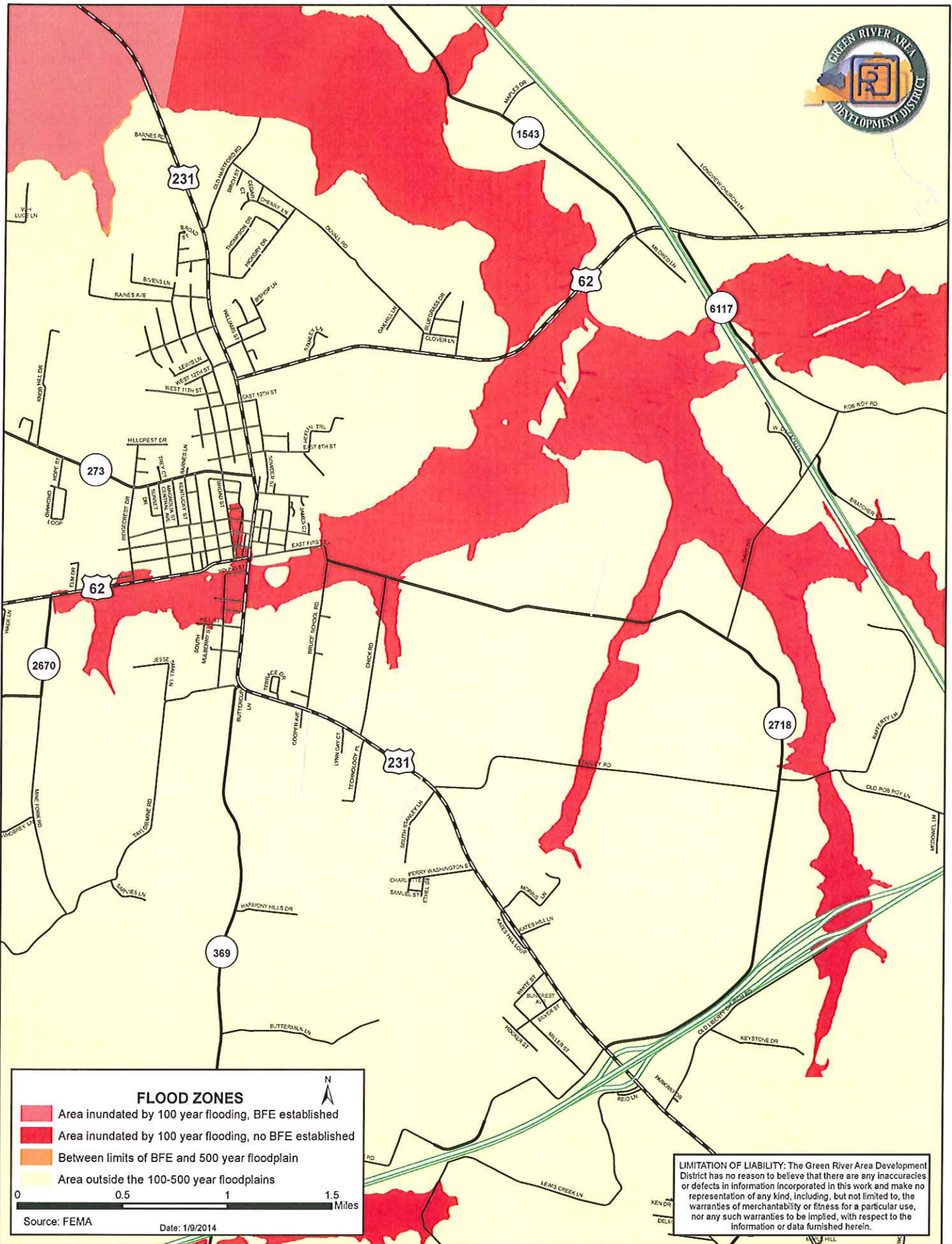
As urban development continues to alter the natural floodplain areas, the cities will need to be increasingly aware of the need for a comprehensive storm water management plan and system to deal with the excessive floodwaters in the developed areas. Actions as simple as maintaining a buffer zone along rivers and other natural wetlands, requiring detention ponds for new development and ensuring they are maintained, and ensuring that culverts under roads are appropriately sized for the amount of water passing through them can provide a tremendous relief to flooding and its resulting damage.

# Hartford/Beaver Dam Comprehensive Plan | Hartford Flood Zones





# Hartford/Beaver Dam Comprehensive Plan | Beaver Dam Flood Zones



## CHAPTER III – ISSUES ANALYSIS

### A. Introduction

An understanding of the strengths and weaknesses contained within the community and the external influences affecting Hartford, Beaver Dam and Ohio County, as a whole is essential for efficient plan development. The knowledge of the nature and composition for community strengths opens opportunities for various components to be pooled and greater benefit to be realized. Before a problem or weakness can be addressed, it must first be identified. In many cases, simple definition or redefinition of problems may seem difficult to overcome but through a systematic plan of attack become manageable.

A comprehensive plan is not completed in isolation. Through numerous public meetings and interviews, the interests of the various groups are taken into account. Larger state and national trends also serve to impact the local situation. Thus, knowledge regarding how the local economy contributes to and is affected by these larger trends allows decision-makers the opportunity to make wise decisions about community development. Finally, the understanding of such issues allows for the efficient allocation of scarce resources to those areas identified as having highest priority by the community policy makers.

### B. Participation

Public participation related to the development of this comprehensive plan initially included a number of meetings with planning commission, elected officials, business leaders and public service providers. Issue areas that were identified from these meetings were used as a foundation for the development of the goals and objectives. The issues ranged from annexation, downtown and economic development to land use, transportation and community facilities. In 1989, a number of meetings were held regarding the community issues and the need for and process of reestablishing a Planning Commission. Efforts were pursued regarding the establishment of a countywide Planning Commission and the possibility of some zoning in the unincorporated areas of the county. In 1990, it was determined that the Hartford/Beaver Dam Planning Commission would be established with no zoning jurisdiction outside the city limits at this time.

In January 1990, a workshop was held with those interested in forming a Planning Commission and in October, 1990 a second workshop was held with the newly appointed Planning Commission to orient them to the planning process and to facilitate their identification of the critical land use issues in their communities. Most of the participants had viewed the video "Why Plan?" during one of the 1989 meetings and were somewhat familiar with the planning process from this video. At the October 1990 meeting, all of those present participated in an exercise to enable them to identify the key issues in the community, which need to be addressed in the Comprehensive Plan.

Major issues were ranked from one to four by each participant, with the most critical issues receiving four points each and the least critical receiving one-point. These points were then tallied by issue to identify the four most critical issues to Hartford, Beaver Dam and Ohio County at that time. The ranking of the issues is as follows:

	Points
1. Land Use	24
2. Economic Development	17
3. Community Facilities	16
4. Transportation/Traffic	10
5. Annexation/Growth	8
6. Tourism	3
7. Downtown	2

Although it is often difficult to isolate one specific issue from another, the top three were discussed in more detail with the following comments and ideas as the result.

#### 1. Land Use

- i. Concerned about abandoned cars/abandoned houses/vacant lots/upkeep of property/leaf burning/other nuisances – not really zoning-related;
  - Planning and Zoning does not cover the above items. The agency could assist in the clean-up of abandoned buildings if building codes were adopted. Abandoned cars and lot up-keep is properly controlled by City Ordinance. Leaf burning is being very well controlled by the two cities under the State's Fire Regulations.
- ii. Would like to regulate yard sales (regarding length and frequency of sale, primarily no "permanent" yard sales);
- iii. Need on- and off-street parking regulations including minimum street widths for on-street parking;
- iv. Would like to protect river banks by minimizing future development (currently participate in Federal Flood Insurance Program (FIP);
- v. Concerned with drainage of storm water under KY 69 west of Hartford (Centertown Road) – tile under the road is not adequate to allow proper drainage to the Rough River;
- vi. Would like to regulate placement of utility lines in subdivision (new and old development if possible).
  - Utility lines are now being placed underground in new subdivisions. Utility companies still suspend lines in the old subdivisions; it leads to the devastation of trees and is unsightly.

#### 2. Economic Development

- i. Need to prepare available sites for development (i.e. by flood-proofing and/or making infrastructure available to the available sites);
  - This issue is being addressed by the Chamber of Commerce and the Industrial Foundation.

- ii. Private Industrial Foundation exists;
- iii. Need to examine long-term economic implications of the future connection of I-64 with the William Natcher Parkway near Owensboro and the long-term economic implications of the potential of I-66 replacing the Wendell Ford Parkway;
  - There has been no recent public discussion regarding this topic. The Green River Area Development District has been involved in the study regarding the creation of the I-66 corridor from Morton's Gap to Beaver Dam and then extending from Beaver Dam to I-65 in Bowling Green. This economic impact of I-66 on Beaver Dam and surrounding areas could be phenomenal.
- iv. Need some emphasis on downtown revitalization as well as industrial development;
  - An unoccupied hotel has been renovated to an office building in downtown Beaver Dam. An electrical supply store has been constructed. Other buildings are in the process of renovation for new businesses. Downtown Hartford has two (2) new restaurants, a barbershop, a beauty salon, pawnshop, an arts and craft shop, a printing shop, florist, and a computer store.
- v. Need to examine how the storm water/flooding problem acts as an economic hindrance;
- vi. Long range goals – countywide subdivision regulations and county-wide zoning ordinance;
  - Ohio County has rejected a planning and zoning ordinance. Long range goals have not been a topic of public discussion.
- vii. Need to examine economic benefit of sharing various city services between Hartford and Beaver Dam;
  - No formal arrangements have been made between the two cities for integration of services.
- viii. Future annexations by both cities need to be explored; and
- ix. There has been a survey relating to the poultry industry in Ohio County.
  - The Perdue Company has built a chicken processing plant near Cromwell. They employ approximately 700 people; including numerous farmers have contracted to raise chickens for the plant. It provides a nearby outlet for farmer's grain.

### 3. Community Facilities

- i. School issues;
  - The school board is currently conducting a new facilities survey.
  - The Fordsville High School was closed in the summer of 1990.
  - Hartford lost one ball field and tennis court due to the expansion of Wayland Elementary School. The expansion was based on the results of the facilities survey.
  - There are plans for elementary and middle school expansions.



- New facilities surveys have been completed and recommendations have been implemented to a high degree. Two new schools have been built, extensive renovations have taken place, and additions have been made.
- ii. A new county jail is needed – the county has agreed to apply for the money;
  - Ohio County Fiscal Court, located in Hartford, has renovated and modernized the old jail to the extent that it is now acceptable by the State for housing prisoners on a short-term basis.
- iii. Ohio County did not get either the state or private jail under consideration in 1989;
  - A new jail is desirable but it will not be built in the immediate future.
- iv. There is a need for a centrally-located joint fire department, at least shared by Hartford and Beaver Dam;
  - There has been no official action concerning this issue.
- v. The county has nine volunteer fire departments;
- vi. There are three Disaster and Emergency Services locations in Ohio County providing rescue service throughout the county;
- vii. A boat ramp exists on the Rough River. It would be a good location for a park;
- viii. Would like to see park areas east of US Highway 231 along the river in Hartford;
  - No public discussion regarding this issue has taken place.
- ix. Republic Service in Owensboro currently has a permit pending with the state to serve a 45-county area. The county owns the property (approximately 700 acres) and will franchise with Republic Service to run the landfill; and
- x. There was concern expressed about regulating the other small, inert landfills that local industries have for their own waste needs (i.e. Big Rivers).

#### 4. Other Issues

- i. Hartford needs additional public housing and/or apartments;
  - Building has progressed well in Hartford but there is still a need for affordable housing. Mobile homes have replaced site built houses for lower priced housing in both Hartford and Beaver Dam. Mulberry Court Apartments serve older persons. River Bend Apartment complex is public housing for low-income persons. City Manor and Evans Apartments cater to all classes of tenants. There are other apartment houses with four or more units. Numerous duplexes have eased the housing problem.
- ii. There is new handicapped public housing going into Beaver Dam;
  - Beaver Dam now has six apartment houses with a total capacity of over 75 units of housing. Most of them are handicapped-

accessible. Extensive construction of single-family homes has helped Beaver Dam overcome housing problems.

- iii. Interest was expressed in an additional access point/interchange on the William Natcher Parkway;
- iv. Interest was expressed in extending KY 69 from the intersection with US Highway 231, bypassing downtown Hartford, and connecting with KY 69 again west of Hartford; and
- v. There was some concern regarding the impact on the small county roads by the trucks if the 45 landfill is approved – need plan to maintain and upgrade.
  - There has been no public discussion of a larger landfill. Beaver Dam is heavily impacted by garbage trucks on Main Street, especially with turns from Main Street onto Seventh Street (Goshen Road).

## C. Summary of Issues and Analysis

### 1. Industry

In general, there has been considerable progress in Ohio County, despite the sharp decrease of mining, one of the county's most remunerative industries. The largest industry that replaces lost or reduced industries is the Perdue Plant that processes chickens at a location near Cromwell. It can provide employment for approximately 700 employees. A hatchery and feed mill have been built, as well. Farmers have contracted to feed newly hatched chickens to processing size. The combinations of opportunities for work can add up to over 700 employees. On the downside, there are some environmental concerns over the disposal of droppings and dead chickens. State laws may alleviate the problems. The amount paid in wages and contracts is on a scale considerably less than that which was paid in mining. The loss is offset somewhat by less days lost through variables that are customary in mining.

### 2. Labor

Employment is available to those willing and able to work in the new industries. The change in the type of industry caused a change in the male/female ration of workers. Older male workers are reluctant to take employment on pay scales that are significantly reduced from that which was paid on former jobs. Many older workers have dropped out of the labor market.

The need for a computer literate person in many jobs has created a barrier to many older workers. The increased use of machinery has created a need for persons who are younger and better educated, unless they are willing to work at unskilled jobs.

### 3. Population

As indicated in the Comprehensive Plan, the population in Ohio County has increased and decreased numerous times since 1980. The general trend has been an increase. A significant increase can be expected as out-of-state workers are recruited to fill jobs that are repetitive, low paying and undesirable to many local job seekers. The 1990 U.S. Census report lists the Ohio County population as 21,500.

Both Hartford and Beaver Dam have increased in population between 1980 and 1999, in proportion to county increases. The U.S. Census report of 1990 lists the Beaver Dam population as 2,904 and Hartford at 2,532. Reasons for the greater population in Beaver Dam can be due to the greater amount of new industry that has located in north and south Beaver Dam and to the greater amount of land in Beaver Dam that is suitable for both housing and industry. Floodplain borders the south and west and the greater part of the eastern boundary of Hartford. This seriously limits expansion of housing and industry.

The result of all of these efforts is the statement of Goals & Objectives found in Chapter IV. These were finalized after the January 8, 1991 update and amended with the 2002 update. A public hearing was held and the Hartford/Beaver Dam Planning Commission adopted the new plan on October 10, 2002. They have subsequently been adopted by both legislative bodies.

A final public hearing was held on the text and maps of the Comprehensive Plan on November 14, 2002. The Planning Commission adopted the plan on November 14, 2002.

## CHAPTER IV – GOALS AND OBJECTIVES

The following four objectives are the priority objectives of the Hartford/Beaver Dam Planning Commission for the short-term five-year planning period. Each objective is also included under the appropriate goal in the main body of the goals and objectives.

Ensure that all subdivision development is of high quality by requiring a public water system, proper grading techniques, adequate roads, and proper waste disposal through the adoption of and enforcement of subdivision regulations.

Accommodate mobile home development in a manner that is responsive to changes in the industry, sensitive to the needs of those seeking affordable housing and protective of adjacent property values.

Support active building and zoning code enforcement in Hartford and Beaver Dam.

Pursue the long-term goal of countywide subdivision regulation and zoning.

The following goals and objectives provide a broad structural base for all land use planning, zoning, and subdivision decisions to be made by the Planning Commission. They are based on the data and issues analysis conducted by the commission and reflect local needs and priorities. Following a public hearing held in January 1991, this final version was referred to the Hartford City Council and Beaver Dam City Commission for adoption.

### A. General Land Development

Goal: Achieve the best possible relationship between the various types of land uses and the major street system to provide for an increasingly safe, healthy and convenient environment in which the residents of the county can live and work.

Objectives: Lessen the cost and Impact of development by encouraging growth in directions, which most efficiently use the existing and planned utility systems.

Encourage future land development in centralized compact patterns near existing development and thus minimize decentralized sprawled patterns.

Goal: Ensure that all land use is developed in a manner compatible with surrounding land uses.

Objectives: Facilitate good transitions between land uses of varying density or intensity.

Control potential negative aspects of commercial development such as entry points, signage, noise, and lighting.

Foster the following complementary land uses:

Residential units within the Central Business Districts (CBDs), particularly in the vacant upper floors of existing businesses.

Higher density residential land uses near higher intensity land uses, such as shopping centers.

Higher density land uses on arterial streets, encouraging the use of frontage or service roads.

## B. Residential Land Use

### 1. Housing

**Goal:** Ensure that all housing units are constructed in a manner that protects the health, safety, and welfare of the residents and will be an asset to the county in general.

**Objectives:** Provide adequate housing opportunities to meet the needs of all citizens including high, moderate, and low income groups and special groups such as single, handicapped and elderly within Hartford, Beaver Dam, and Ohio County.

Encourage the creative design of residential developments.

Promote the revitalization and rehabilitation of blighted and deteriorating neighborhoods.

Promote the enforcement of standard building codes that ensure the structural quality of all dwelling units.

Control the intrusion of commercial land uses within residential zoning districts.

Protect residential areas from incompatible forces; desired features include well-planned neighborhoods, protected pedestrian ways, open space areas for recreation, and preservation of the natural topography.

Accommodate mobile home development in a manner that is responsive to change in the industry, sensitive to the needs of those seeking affordable housing and protective of adjacent property values.

Encourage residential subdivision development within designated residential zones and which can be effectively served by urban services.

Ensure that all subdivision development is of high quality by requiring a public water system, proper grading techniques, adequate roads, and proper waste disposal through the adoption of and enforcement of subdivision.

## 2. Neighborhood Development

Goal: Encourage the concept of planning and development at the neighborhood level and within the city limits of Hartford and Beaver Dam.

Objectives: Support strong, functional neighborhoods through planning and land use regulations designed to encourage the stability of existing neighborhoods.

Plan the development of new residential areas around the neighborhood concept, by creating new neighborhood areas, or by integrating them into established neighborhoods.

Ensure that neighborhoods have access to municipal services and facilities capable of supporting the population of the neighborhood.

## C. Economic Development

Goal: Provide a strong economic base for Ohio County as a whole through commercial expansion, industrial development, and the promotion of tourism as the key elements of this development. Encourage local employment opportunities rather than commuting to surrounding areas.

Objective: Address the issue that the existing and future major highway interchanges in the county need different land use policies other than commercial and industrial areas in the county.

Work with appropriate state officials to study the potential impact of the proposed I-66 corridor following the Wendell Ford Parkway alignment.

### 1. Commercial Development

Goal: Understand and accommodate the various levels of commercial needs of the cities and county.

Objective: Enhance the expansion and revitalization of commercial needs within the business districts of Hartford and Beaver Dam.

Encourage, through zoning, the development of well-located and designed commercial areas, limiting direct access to major streets unless specifically designated in the Land Use Plan.

Develop adequate sign regulations to address the various needs of commercial enterprises while providing aesthetically pleasing streetscapes.

Encourage commercial facilities that are specifically oriented to the automobile or that require extremely large amounts of parking to utilize standards to provide sufficient parking. Proper access/utility roads must accompany all commercial development on major streets.

Effectively buffer nearby residential areas from commercial areas.

Goal: Encourage the strengthening of the Central Business Districts of Hartford and Beaver Dam.

Objectives: Preserve and support the Central Business District(s) by recognizing their significance as historic regional centers and their appropriateness as locations for specialty retail, restaurants, and offices.

Promote the development of off-street parking within adequate walking distance of downtown activity centers.

Support efforts to provide the downtowns with a clean, uncluttered appearance.

Promote the historic character of downtown Hartford and Beaver Dam through the reuse of old buildings and new construction, which accents that character.

Encourage the development of a strong and broad-based organizational structure charged with the mission of downtown revitalization.

## 2. Industrial Development

Goal: Accommodate industrial development that will assist in providing for a broad and stable economic base conducive to the character of the area.

Objective: Support existing programs for industrial attraction and site development based on the community's assets and needs. Cooperate with industrial development agencies in helping to provide suitable locations for industrial parks.

Ensure that the cities and county have, or may acquire in a reasonable amount of time, the physical, social, and community resources to accommodate new history.

Ensure the establishment of clean industry, which will be a long-range asset to the cities and county and not harm the environment.

Encourage the development of medium-sized industry so that the community will not become economically dependent upon any particular industry.

Promote the expansion of existing buildings and properties.

Encourage small light industries in existing vacant buildings and properties.

Locate future industrial development where it will be most compatible with surrounding land uses, with the proper environmental controls, in areas served by utilities, police and fire protection, and with access to existing and proposed highway and rail transportation.

Buffer residential uses from industrial activity.

Encourage city-county cooperation in industrial development efforts.

### 3. Agricultural Development

Goal: Promote the protection and best use of the county's prime agricultural lands.

Objectives: Protect Ohio County's best agricultural land by promoting planned residential subdivisions, commercial developments, industrial sites, and other non-agricultural land uses that meet minimum standards for development.

### 4. Tourism

Goal: Promote the growth of the tourism industry in Ohio County as another means of broadening the cities' economic bases and provide a link among the various segments of the community that offer goods and services to visitors.

Objectives: Encourage the development of tourism-related businesses.



Encourage the cooperation among the various local interests that serve as attractions for visitors and encourage the development of service industries for visitors such as hotels, motels, restaurants, museums, and bed and breakfasts.

Support and encourage the preservation of historic sites and unique scenic areas that serve as “drawing cards” for the traveling public.

Support new and innovative means to encourage tourism and seek the assistance of state and local governments, as needed, to help bring this about.

#### D. Community Facilities

Goal: Provide desirable and easily accessible community facilities and services, such as fire and police protection, sewer, water, electric, cable and communication facilities, solid waste disposal, and parks and recreation in an orderly and efficient manner.

Objectives: Monitor growth to determine if existing developments, as well as all proposed new developments, will be provided with adequate community services and facilities in an orderly and efficient manner.

Develop a capital Improvements Plan estimating costs and prioritizing projects for construction and improvements in the areas of water and sewer expansion, electric, cable and communications facilities, parks, fire and police protection.

#### I. Utility Services

Goal: Encourage high-quality, efficiency, and cost effectiveness in the public utilities system.

Objectives: Improve water quality and water supply where substandard conditions exist.

Continue efforts to improve and expand Hartford’s water treatment and storage facilities to accommodate and direct growth within the urban area.

Encourage the development of a Regional Wastewater Facility and Authority to ensure sanitary conditions for residents of Ohio County as well as promote economic development.

Ensure that all solid waste through the county is handled and disposed of properly.

Balance the need for the preservation of natural storm water drainage areas with the need for additional outdoor recreation areas by exploring the possibility of providing park facilities along US Highway 231 and Muddy Creek and along the Rough River.

Expand the county's ability to provide natural gas services to prospective industries.

Encourage annexation of areas which have become urbanized and areas desiring the extension of city services.

Develop and enforce a policy of requiring underground utilities in residential subdivisions.

## 2. Safety Programs

Goals: Encourage high-quality, efficiency, and cost effectiveness in the public safety services and programs.

Objectives: Examine the economic benefits of shared city services between Hartford and Beaver dam (e.g. fire, emergency services). Continue to provide adequate police and fire protection to all areas of the cities.

## 3. Parks and Recreation Programs

Goals: Encourage high-quality, efficiency and cost effectiveness in the provision of parks and recreation opportunities.

Objectives: Pursue feasible alternatives to expand available indoor and outdoor recreation areas, acknowledging the special needs of the youth and the elderly of each community.

Study the feasibility of providing a park along the Rough River near the existing boat ramp facilities.

Balance the need for the preservation of natural storm water drainage areas with the need for additional outdoor recreation areas by exploring the possibility of providing park facilities along Muddy Creek and the Rough River.

Pursue the possibility of developing a hike/bike trail along the old railroad bed.

#### 4. Education Programs

- Goal: Encourage high-quality, efficiency, and cost effectiveness in the public education system.
- Objectives: Support school board efforts to conduct a new school facilities survey and to develop a comprehensive plan for the county school system.
- Replace and upgrade equipment and facilities as needed to provide better education for the children of Ohio County.
- Encourage the promotion of continuing adult education classes.
- Continue to promote the use of the vocational training programs by Ohio County residents.
- Continue to take advantage of federally-funded summer youth and in-school youth programs.
- Encourage high school and college graduates to remain in, or return to, the county.

#### 5. Health Program

- Goal: Protect, maintain, and improve the communal health and well-being of the citizens of Ohio County.
- Objectives: Encourage the continued provision of adequate emergency health and ambulance services.
- Encourage the provision of adequate health services to citizens of all ages at easily accessible locations.
- Encourage the provision of education programs in preventive medicine.
- Encourage expanded funding for mental health programs for all ages.
- Encourage the attraction of qualified medical specialists to Ohio County.

## E. Transportation

Goal: Provide for efficient transportation systems capable of moving goods and people in a safe manner.

Objectives: Develop restrictions, which prohibit heavy non-coal truck traffic on county roadways.

Improve safety at locations having high accident rates through channelization of intersections, signals, and other improvements.

Coordinate and plan future subdivision design so as to facilitate proper traffic circulation.

Improve traffic conditions and circulation within the county by encouraging, where appropriate, the extension of dead-end streets, loop streets, and widening of existing substandard thoroughfares.

Maintain arterial, collector, and local streets to serve their particular functions and separate through traffic from local business traffic along major access roadways.

All future land use and planning decisions shall be directed toward creating a street system, which is designed to serve its intended function.

Ensure the street system properly relates to residential, commercial, industrial, and public uses of the land.

Provide for the safe movement of pedestrians in all areas.

Upgrade existing rights-of-way and roads when new development occurs.

Provide effective and sufficient street construction with all new development.

Minimize the number of new curb cuts in order to increase the efficiency and safety of all roads.

Encourage the use of service roads, designated crossovers, and control of access points for all new construction along arterial corridors.

Develop, adopt, and enforce adequate on- and off-street parking regulations including minimum street widths for on-street parking in all residential, commercial, and industrial areas.

## F. Natural Resource Conservation

**Goal:** Protect and preserve the natural resources of Ohio County and ensure that all development is planned so as to mitigate significantly adverse environmental impacts.

**Objectives:** Identify and protect sensitive natural resource sites and unique special areas from the effects of incompatible development.

Minimize the impact of flooding in the human and natural environment of Ohio County through wise land use decisions by the Planning Commission.

Reduce and contain storm water runoff and ensure adequate drainage through the strict enforcement of the Federal Flood Insurance Program requirements and the consideration of the adoption of a local storm water drainage ordinance.

Encourage the development and utilization of construction methods, which effectively and economically control flooding, instability, slopes, and soil erosion.

Encourage protection of surface water (e.g. lakes and streams) and groundwater aquifers through sound transportation, land use, and agricultural practices, and by encouraging development in karst areas (e.g. sinkholes) to be sensitive to environmental hazards created both off- and on-site.

Develop adequate local environmental regulations, which regulate and control future developments engaged in the handling or disposal of all wastes, especially those considered hazardous to the health, safety, and/or welfare of Ohio County residents.

Review new development proposals to ensure that air and water pollution controls are adequate to meet EPA standards.

Discourage noise-sensitive land uses near major noise generators such as railroad tracks, airports, and loud industry.

Assemble and maintain a system of environmental information to be considered by the Planning Commission in making decisions regarding land use changes.

Encourage public education programs, conservation efforts by private organizations, and public policy, which will promote the protection of unique natural areas.

#### G. Historic Preservation

- Goal: Encourage the preservation and adaptive use of Ohio County's old and historic buildings, sites, and historic districts through the comprehensive planning process.
- Objectives: Maintain the historic downtown character of Hartford and Beaver Dam.
- Encourage the cooperation between local interest groups, public and private, to enable the recognition, restoration, and tourism potential of old and historic buildings, sites, and districts within Ohio County.
- Use information and surveys prepared by the Kentucky Heritage Council to help designate historic districts and structures. Use historic district zoning to maintain the districts and other incentives to maintain individual historic sites.
- Encourage the placement of all utility lines underground or in the rear of the buildings in the Central Business District.
- Work to qualify the cities and county as certified local governments by the State Historic Preservation Office (SHPO).
- Protect unique historic buildings, districts, and sites from destruction or harm which may result from land use changes.
- Prepare and maintain a countywide list of all historic buildings, sites, and districts of Ohio County.
- Encourage the productive use of old and historic buildings and sites through private ownership and restorative actions by adopting local codes and ordinances, which promote restoration rather than hinder it.

#### H. Local Government Operation

- Goal: Encourage effective and efficient city and county governments.
- Objectives: Encourage better communication and coordination among units of local government in order to achieve a planned and orderly growth.
- Provide an orientation on planning issues for all new members of the city and county governmental bodies, the Planning Commission, and the Board of Zoning Adjustment.

Encourage the hiring of professional staff for efficient long-term administration of city government (e.g. planners, building officials, zoning administrators, accountants, etc.).

Develop capital improvement budgeting and programming.

Support active building and zoning code enforcement in Hartford and Beaver Dam.

Pursue the long-term goal of county-wide subdivision regulations and zoning.

Continue the proper use of citizen ad hoc committees to advise on public issues.

## CHAPTER V – LAND USE PLAN

The land use plan portion of the Comprehensive Plan consists of two components. The first of these is the identification and discussion of the areas of the Hartford/Beaver Dam urban area considered for future development. The second is a set of guidelines for the location of various land uses. The Hartford/Beaver Dam Planning Commission should use these guidelines when they review future land use, zoning, subdivision, and development requests and make future land use decisions.

### A. Development Areas

#### 1. Introduction

The purposes of this chapter are to determine the future land use needs of Hartford and Beaver Dam and to designate those areas which are most appropriate for the needed growth and development. The future land use needs are projected by examining the existing land use patterns (Maps 2-2 and 2-3), development opportunities and constraints, and the population trends and projections (Exhibits 2-1 through 2-6) for both the cities and Ohio County as a whole. Economic trends (Exhibits 2-7 through 2-21) also provide a foundation for determining local future commercial and industrial needs. To meet most of these needs, urban land areas inside the city limits of Hartford and Beaver Dam, which are currently vacant, are considered for possible development by analyzing the existing adjacent land uses, transportation systems and community facilities. Some areas within Hartford and Beaver Dam, which are currently developed but may have potential for redevelopment for commercial, residential or industrial use, are also considered. It is anticipated that the Hartford/Beaver Dam urban area of Ohio County will continue to grow to meet most of the “urban type” needs of Ohio County. Availability of transportation, public location for much of the future commercial, industrial, and residential land use needs.

The county’s soil association map and the cities’ flood hazard area maps (Maps 2-4 through 2-6) provide an overview of the development constraints in and around the Hartford/Beaver Dam area due to environmental limitations. Flood hazard areas will be a major factor affecting future land use decisions in the Hartford/Beaver Dam area. Man-made limitations such as the locations of existing arterials, highways, railroads, airports, landfills, and strip and underground mine areas can also impact the potential future land use pattern.

The location of these factors should be taken into consideration when reviewing proposed development plans. When location, development constraints, and space requirements are integrated, a balanced and workable land use plan should result. The urban areas in and around Hartford and Beaver Dam best suited for development are designated in conceptual map form on Maps 5-1 and 5-2. These future land uses are classified as Residential, Commercial, Industrial or Public/Semi-Public. The concepts portrayed on the maps must be used in conjunction with the text of this plan, particularly relying on the goals and objectives (Chapter 4) and the urban location principles and text found later in



this chapter. Rural future land uses, to the extent that they fall within the extraterritorial jurisdiction of the cities for subdivision purposes, are discussed in text form only. This combination of map and text allows flexibility in the direction of growth both within and outside the urban areas. All land use changes must reflect the principles set forth in this chapter.

## 2. Map / Policy Plan

Overall, this Comprehensive Plan is a combination of a policy-type plan and a map plan. In projecting future land use needs and location requirements, the existing land use maps and other elements of the plan have been referenced. Maps 5-1 and 5-2 provide suggestions for specific future locations for urban-type land uses within the planning areas of Hartford and Beaver Dam. It should be understood, however, that these suggestions are flexible and/or may be contingent upon certain events or improvements occurring within the community. The future land use map must be used in conjunction with the text. The basic premise of this plan is there may be a variety of land uses which are appropriate in a variety of locations provided that certain improvements are made which make the proposed land use compatible with surrounding existing land uses overcome any environmental or man-made constraints upon the site. The primary function of the existing land use maps found in Chapter II is to provide a visual basis for determining how the proposed land use will fit into the existing development. The primary function of the future land use maps for the Hartford and Beaver Dam areas found in this chapter is to allow the Planning Commission to guide growth in areas where improvements to meet the development's needs are anticipated.

When mapping future urban land use needs, a surplus of land for all land uses has been set aside beyond that which is anticipated to satisfy future growth needs. The careful balancing of an exact amount of land needed to an exact location can result in a long-term detrimental situation, especially where topographic and other environmental conditions come into play when selecting sites for development.

In assuming suitable land for development cannot always be acquired, a community can generally place itself in a comfortable position by providing more land than needed within all land use categories. The land use plan may then be implemented regardless of problems in acquiring and/or developing land. If one or more areas are not acquirable or developable at a given point in time, the provision of adequate future land use designations should minimize the need for deviation from the plan due to physical, social, or economic changes which might occur otherwise.

While this is not a countywide plan, a plan for the Cities of Hartford and Beaver Dam would not be complete without some consideration of the surrounding rural lands. This is particularly true because, as permitted by state law, the Hartford/Beaver Dam Planning Commission will be exercising extraterritorial jurisdiction for the enforcement of subdivision regulations. The land use plan for the rural areas of the county surrounding the cities is found in text form only. This is also known as a policy-type plan. As a result, no future land use map, specifying proposed locations for changes in land use, is

provided for the rural portions of the county. This means that the Planning Commission will need to rely on the relevant text when making all future land use and zoning decisions affecting the rural portions of the county. It is critical that this text be recognized as the basis for making land use decisions for these unincorporated areas of the county just as the land use map and related text are used in the urban planning areas. The discussion of the unincorporated lands within the Hartford/Beaver Dam planning area is found in the "Future Rural Land Uses" portion of this chapter and will provide a policy basis for determining land use/subdivision decisions for these areas.

In all land use decisions made within the Hartford and Beaver Dam areas, the entire Hartford/Beaver Dam Comprehensive Plan must be looked at as a whole, with a balance provided between the base data collected, the future population projections, the adopted goals and objectives, and the text and maps found in the three future oriented chapters Land Use Plan, Transportation Plan, and Community Facilities Plan.

### 3. Agricultural Protection

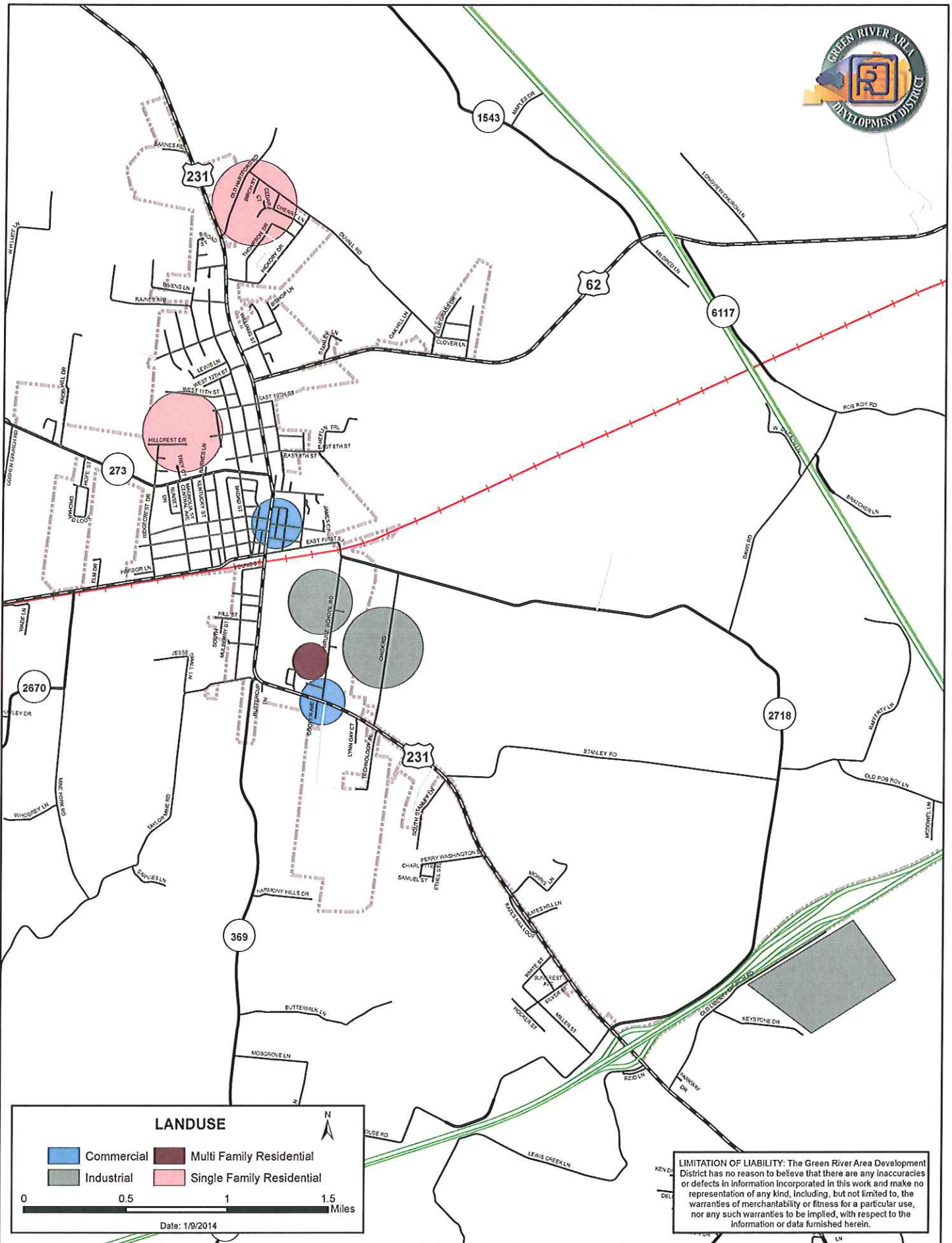
While this is not primarily a rural plan, this portion of the plan will briefly discuss the need to protect the best agricultural land of the county through wise planning and land use decision-making. When anticipating development, which may occur in the rural, areas surrounding Hartford and Beaver Dam, this plan is attempting to promote a balance between protection and regulation.

There is a need to protect rights of the farmers to carry on agricultural activities with a minimum amount of regulation and a minimum amount of impact from urban-type development. It is important to balance this with the rights of others to live in a rural setting, if they so desire, that is safe, quiet, and dust- and odor-free. Balancing these two often conflicting uses is a prime reason for encouraging countywide zoning and subdivision regulations. Establishing zones in which certain activities are allowed and others are prohibited can enable this balance.

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Determining which land is the most productive agricultural land is an important first step. The pattern of the conversion of the best agricultural land to other land uses not only eliminates this land as a potential source of agricultural income for both the farmer and county, but also requires the agricultural use of less productive land which could better be engaged in another activity. This type of trade-off can force the agricultural use of land, which might possess severe environmental limitations such as steep slope, high erosion hazards, and others.

Unfortunately, land which is best-suited to cropland or pastureland usually offers the fewest limitations to urban type development. As populations grow and the demand for space increases, invariably prime agricultural land will be converted to an urban type use. A point of equilibrium must be reached which will allow the best use of all land required to meet both the urban and agricultural needs of Ohio County. Subdivision of land involving this type of change in land use should be carefully considered by the Planning Commission to ensure that a sound agricultural economic base will continue to be maintained in Ohio County.

#### H. Future Urban Land Uses

This section of this chapter focuses on the land currently found within Hartford and Beaver Dam's planning areas (Maps 5-1 and 5-2). Discussion of policies regarding the land surrounding the cities is found in this chapter and must be looked at as a whole when considering land use decisions and not thought of as isolated pieces. This is a plan for the cities and each decision made must be looked at in the light of the whole Hartford/Beaver Dam Comprehensive Plan.

Current growth trends indicate that while some development will continue to occur in the small cities and settlements throughout the county, the majority of new commercial, residential, and industrial land subdivisions will occur within the two cities' planning areas. The cities, county, and Planning Commission would be wise to contain urban development by limiting urban sprawl and permitting development only in a controlled and efficient manner. In conjunction with the goals and objectives of the cities, growth should be encouraged only in directions which most efficiently utilize existing and planned utility systems and foster complementary land uses. In order to permit development to occur in a controlled and efficient manner, it is recommended that all development occurring within the cities' planning areas, but outside city limits, should be annexed prior to permitting the development.

##### a. Urban Residential Land

Residential land uses tend to occupy most acreage in cities like Hartford and Beaver Dam, which are comprised of a majority of single-family homes. Current residential densities can be expected to continue throughout the planning period; however, the cities may be influenced by newer trends in residential development, which could result in cluster development, such as planned unit developments and townhouses. Even with these types of

development, the smaller amounts of land required for these higher densities of cluster development are usually offset to some extent by the requirement of open space as a trade-off for the higher density single-family home developments.

Maps 5-1 and 5-2, the Conceptual Future Land Use Maps for Hartford and Beaver Dam, show the general areas for future single-family and multi-family residential development.

All new residential development, which occurs, must address storm water drainage issues. A development plan for all new proposed development in the urban planning area should be required and a Storm Water Management Plan is one element that should be addressed.

One additional area which future residential development is encouraged by this plan is on the upper floors of the businesses in the Central Business Districts (CBD). One critical factor for a downtown area to maintain its status as a vibrant commercial center is the proximity of customers, particularly those without vehicles. This plan encourages the use of the upper floors in both CBDs as dwellings by business owners, building owners, or as rental property in order to facilitate the revitalization of the downtown core.

The final residential classification is the mobile/manufactured home. It is a goal of the cities to accommodate mobile home development in a manner responsive to changes in their industry, sensitive to the needs of those seeking affordable housing, and protective of adjacent property values. The future land use plan does not identify the existing mobile home parks for traditional future mobile home land uses. Any existing parks will be permitted to continue in conformance with the Zoning Ordinance. Primarily, this plan proposes that the Zoning Ordinance address the classification of manufactured homes and certified mobile homes. The ordinance would then need to incorporate the development of a system by which these homes are permitted in all districts where similar dwellings constructed on site are permitted, subject to certain requirements regarding exterior appearance, construction, and installation standards. Additional standards regarding the development of high quality mobile home parks and subdivisions may also be included in the Zoning Ordinance.

All future urban residential development must reflect the goals and objectives adopted by the cities as a part of this plan in addition to meeting the minimum requirement of being noted on one of the Future Land Use Maps. Development will also be carefully reviewed and considered in the light of the location principles for proposed land uses found later in this chapter.

b. Urban Commercial Land

There are three broad categories of commercial development: downtown business commercial development, highway/strip commercial development, and neighborhood commercial development. Each of these types has different needs and impacts on the surrounding neighborhoods and each must be addressed in a future land use plan. All future urban commercial development must reflect the location principles found in this chapter.

Limited additional urban land will be required for the development of new commercial areas to meet local commercial needs; however, with Hartford and Beaver Dam's proximity to the William Natcher Parkway, and to a lesser extent, the Wendell Ford Parkway, there is considerable potential to meet the travelers' needs as well as the possibility of creating a regional shopping attraction. Strategically located commercial ventures, which would attract passing traffic to stop at the KY 69/William Natcher Parkway interchange could be used to attract travelers into the Cities of Hartford and Beaver Dam or back to Ohio County at another time.

Exhibits 5-1 and 5-2 depict projected areas for future commercial development. Proposals in these areas must be carefully tied to the text below and the text and location principles of this entire chapter.

i. Central Business District

The goals and objectives as adopted by the cities discuss the need for strengthening the Central Business Districts (CBDs) of Hartford and Beaver Dam. Many downtown commercial areas are adversely affected by the development of highway commercial areas such as can be found along US Highway 231. Hartford and Beaver Dam's CBDs need to provide a different type of commercial service in order to remain a vibrant retail and service center for the county. Specific recommendations include promoting the historic character of downtown Hartford and Beaver Dam, addressing on- and off-street parking issues and signage issues, and developing downtown revitalization organizations. Any redevelopment proposals which accurately reflect the adopted goals and objectives and meet the location requirements of this plan should be encouraged by the Planning Commission. There is also a need to encourage the location of offices and apartments in the upper floors of the downtown area. The redevelopment and promotion of the CBDs should be done in conjunction to the William Natcher Parkway. A coordinated development effort could provide a substantial amount of tourist traffic particularly in downtown Hartford.

ii. Highway/Strip Commercial

Highway/strip commercial development requiring large amounts of parking is currently primarily located along US Highway 231 in both Hartford and Beaver Dam. This area can continue to handle additional commercial development if careful consideration is given to the potential impact upon the local traffic patterns and to the location principles found later in this chapter. Limited shallow development could occur along US Highway 231 between KY 69 and Beaver Dam and in Beaver Dam across from the existing shopping center. All development in these areas would have to comply with federal floodplain requirements, could not adversely affect already dense traffic patterns, and would be required to have set aside sufficient right-of-way for future road expansion while maintaining all required off-street parking and setbacks. Additional future highway commercial development is recommended for the southwestern side of the KY 69/William Natcher Parkway interchange and, to a more limited extent, along KY 69 between the parkway and County Road 1543.

The wise development of this intersection could have wide-ranging positive economic impacts on the Hartford/Beaver Dam urban area as discussed earlier in this text. The northeastern side of the KY 69 / William Natcher Parkway interchange would also be prime for commercial and light industrial development; however, these areas should not be permitted to tie into Hartford's municipal water and sewer systems without first being annexed by the city. If this area develops outside the city limits, it will be a primarily urban area requiring urban services such as police, fire, water, sewer, and other utilities and should be a part of the city to receive them. This intersection would be the ideal location for a much-needed hotel or motel for Ohio County.

iii. Neighborhood Business Areas

Unless a business specifically meets the daily needs of the local residents, neighborhood commercial development should not be allowed to occur in a scattered fashion. Existing businesses will be permitted to continue to exist; however, it is the contention of this plan that in order to meet the goal of providing for the stability of existing and future neighborhoods, no new commercial development should be allowed to locate in these neighborhoods unless it can clearly be shown that it specifically serves the local residents. It is further the intention of this plan that all non-conforming commercial uses in residential zones should eventually move to a more appropriate commercial area. Because of the compactness of Hartford and Beaver



Dam and the desire to revitalize both cities' CBDs, no new residential areas are designated for neighborhood commercial use in this plan.

One area is recommended for future commercial neighborhood-type development. The area in the general vicinity of the US Highway 231/Bruce School Road intersection and along Bruce School Road in southern Beaver Dam could accommodate limited commercial development to meet the daily needs of the employees in the industries in southern Beaver Dam and the needs of the traveler accessing the Wendell Ford Parkway along US Highway 231. It is not recommended that this development occur in a typical strip highway commercial fashion, but that it be more compact as is typical of a traditional neighborhood type development. The intention of additional commercial development in this area would primarily be to serve day-to-day needs of the residents and employees of southern Beaver Dam.

#### iv. Development Review

All new commercial development proposals must address the storm water management issue to the satisfaction of the Planning Commission. Additional off-site runoff as a result of commercial and industrial development shall be regulated in the proposed zoning ordinance. Storm water retention/detention plans must be provided to the Planning Commission as a part of the development plan review process and reviewed by an engineer of the appropriate city's choice.

All new development shall also be carefully reviewed in light of existing traffic hazards. The Planning Commission may require a traffic study to be conducted by the developer and reviewed by an engineer of the appropriate city's choice if the proposed development in any way impacts the roads noted as problem areas in Chapter VI of this plan. The Planning Commission shall have the authority to deny or approve with conditions related to road improvements if it cannot be proven by the developer that the proposed development will not adversely affect traffic patterns.

#### c. Urban Industrial Lands

The national standard for industrial land is 12 acres per 1,000 persons (Planning Design Criteria, deChiara and Koppleman, 1969). Because industrial development serves more than just the immediate urban area, this standard should be applied to entire county population projections. Using this standard, Ohio County has an adequate amount of existing industrial land; however, because of Ohio County's ideal location along major east-west and north-south parkways, and because of the county's large landmass, the county may be able to accommodate additional industrial growth.

This plan recommends future industrial land adjacent to the proposed commercial land near the KY 69/William Natcher Parkway. This location is ideally situated near adequate highways for truck traffic and convenient to potential employees. However, it should not be permitted to tie into Hartford's municipal water and sewer systems without first being annexed by the city. If this area develops outside the city limits, it will be a primarily urban area requiring urban services such as police, fire, water, sewer, and other utilities and should be a part of the city to receive them.

Much of the industrial development in Beaver Dam has already occurred along US Highway 231 in the southern end of town.

There is substantial vacant land in this area both within the city limits, in the Bruce School road area, and south of the city limits. Again, the areas located outside the city limits should not be permitted to tie into Beaver Dam's municipal water and sewer systems without first being annexed by the city. If this area develops outside the city limits, it will be a primarily urban area requiring urban services such as police, fire, water, sewer, and other utilities and should be a part of the city to receive them. Another concern related to development in this area is the impact on the traffic patterns along US Highway 231. All new development proposals shall also be carefully reviewed in light of existing traffic hazards. The Planning Commission may require a traffic study to be conducted by the developer and reviewed by an engineer of the appropriate city's choice if the proposed development in any way impacts the roads noted as problem areas in Chapter VI of this plan. The Planning Commission shall have the authority to deny or approve with conditions related to road improvements if it cannot be proven by the developer that the proposed development will not adversely affect traffic patterns.

All new industrial development proposals must also reflect the goals and objectives adopted by the local governing bodies and the location principles discussed later in this chapter. All new industrial development proposals must also address the storm water management issue to the satisfaction of the Planning Commission. Additional off-site runoff as a result of commercial and industrial development shall be regulated in the proposed zoning ordinance. Storm water retention/detention plans must be provided to the Planning Commission as a part of the development plan review process and reviewed by an engineer of the appropriate city's choice.

d. Urban Public / Semi-Public Lands

Most of the issues relating to public/semi-public lands are addressed later in the Community Facilities Plan (Chapter VII). As can be noted on the future land use maps, new park development is recommended adjacent to the Rough

River and Muddy Creek. Park developments in these areas would serve to preserve the floodplain area and provide additional open space/outdoor recreation opportunities for local residents. An additional recommendation that needs to be pursued is the redevelopment of the old railroad bed into a hike/bike trail.

It is important to keep in mind the goals and objectives which were adopted as a part of this plan. These include ensuring that all land uses are compatible with surrounding land uses, facilitating good transitions between land uses of varying intensity, and promoting the growth of the tourism industry in Ohio County.

The primary goal of these plans and proposals is to ensure high quality and orderly growth throughout the Hartford/Beaver Dam planning area. Future planning for new development can be more flexible in encouraging creative high quality developments in a variety of locations. While the future land use maps (Maps 5-1 and 5-2) should provide a firm basis for future land use and zoning decisions, they are conceptual plans and must be used in conjunction with the entire text of the Comprehensive Plan. All future development should be reviewed carefully in light of the adopted goals and objectives, the location principles, and the text discussing various policies and programs found throughout the plan.

#### 4. Future Rural Land Uses

As noted in the Goals and Objectives of this Comprehensive Plan, it is the intention of the cities to protect the county's best agricultural land by promoting planned residential subdivisions, commercial developments, industrial sites, and other non-agricultural land uses that meet minimum standards for development. These are the principal goals and objectives governing land use and development decisions in the rural portions of the county. These are supported by the additional goals and objectives that encourage growth only in directions that most efficiently utilize the existing and planned utility systems, encourage the location of future industrial development where it will be most compatible with surrounding land uses and will meet specific location criteria, encourage the development of well-located and designed commercial areas, and provide an efficient transportation system.

Concentrating major development reduces the costs of providing services to these developments and enables the long-term assurance of leaving the remaining portions of the county in an undeveloped or agricultural character. The cost to the taxpayers for providing the many urban services that major developments require is directly related to the distance along which that service must be provided. For example, how far the policeman must drive to answer the emergency calls or how far the sewage line must be built to reach the housing development greatly affects the costs of each. Because every foot of distance traveled is costly, the legislative bodies and urban service providers like to make the "urban service" actually serve a taxpayer along every foot of travel--any time spent on open land is a waste of taxpayers' money.

While this ideal situation of having a continuum of taxpayers is not always possible, it is a primary goal of this plan to concentrate the urban-type development and make the most efficient use of the taxpayer's dollars.

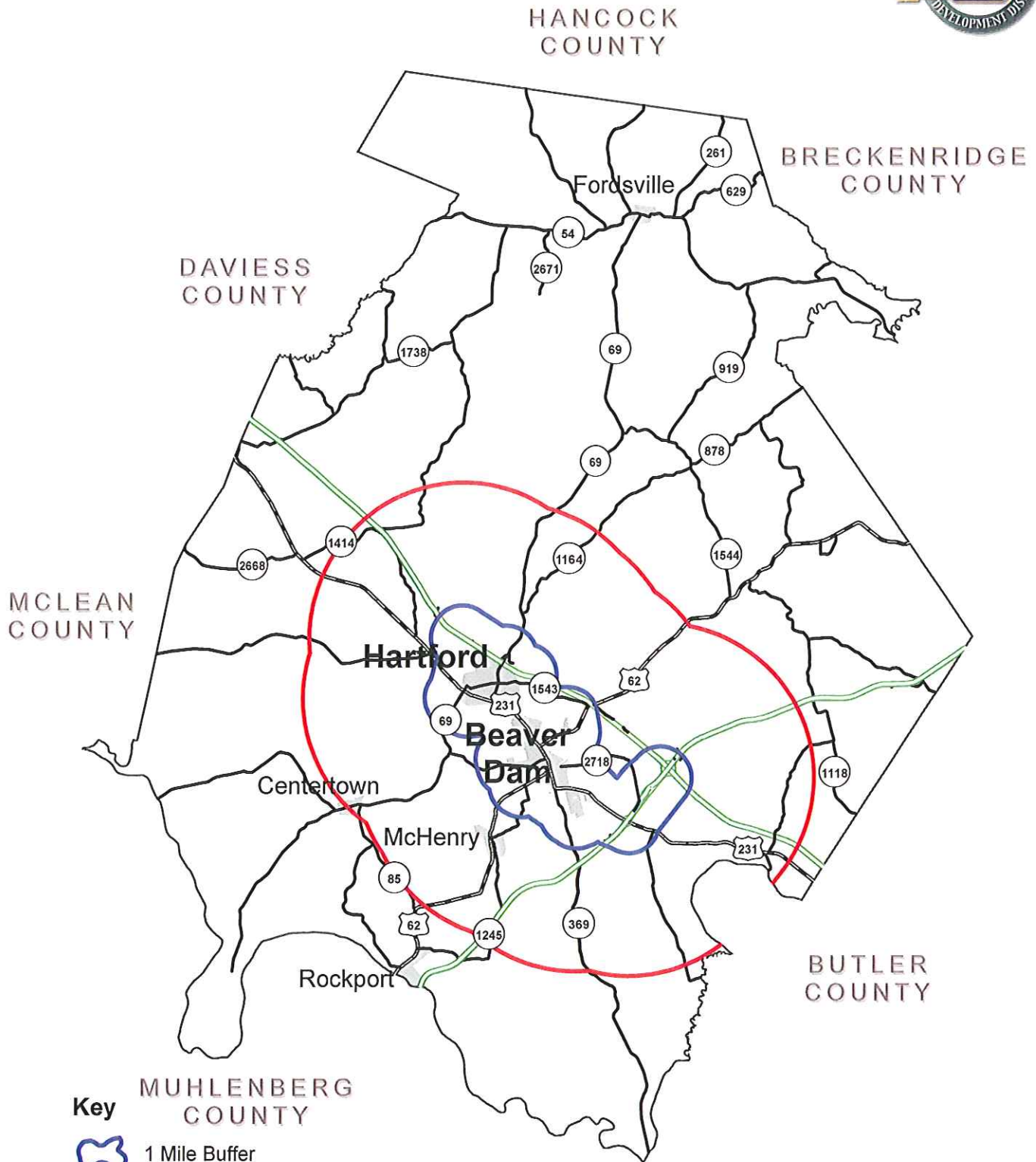
#### a. Rural Residential Use

The rural portion of this plan is limited to the lands immediately surrounding the city limits of Hartford and Beaver Dam. The only land use regulations to be enforcing outside the city limits of Hartford and Beaver Dam are subdivision regulations. While state law permits the enforcement of subdivision regulations up to five miles outside the city limits, there must be a logical line designated for this extra-territorial jurisdiction. Map 5-3 provides a general overview of the outside limits of the five-mile territory. Responsibility for land outside corporate limits was not accepted in the Planning Zoning Ordinance of 1991. The only control the Planning Commission will have at this time in this territory will be the enforcement of subdivision regulations. It is critical that these regulations are written to ensure that all subdivision development is of high quality by requiring a public water system, proper grading techniques, adequate roads, and proper waste disposal.

The primary area for residential development pressures, as evidenced by existing development, is immediately adjacent to the city limits of Hartford/Beaver Dam. While this is a good location for residential subdivision development, it is highly desirable that this type of development be annexed into the city before it is permitted. Even if the developments are large lot subdivisions, which can handle septic system drainage, these are essentially "urban" land uses, which eventually require all city services. The best method of preventing future development problems is to address this issue when the development occurs, recognizing the urban nature of residential and commercial areas adjacent to the city. This enables the Planning Commission to ensure a high quality development and to protect the integrity of development adjacent to the city. This also forces the commission, the city, and the utility companies to anticipate the impact of this type of development and plan for needed expansions and/or improvements to their water and sewer systems and other public services.

The Planning Commission shall have the authority to deny or approve with conditions related to road improvements if it cannot be proven by the developer that the proposed development will not adversely affect traffic patterns. All new development proposals must reflect the goals and objectives adopted by the local governing bodies and the location principles discussed later in this chapter. All new subdivision development proposals must also address the storm-water management issue to the satisfaction of the Planning Commission. Additional off-site runoff as a result of commercial and industrial development shall be regulated in the proposed zoning ordinance. Storm-water retention/detention plans must be provided to the Planning Commission as a part of the development plan review process and reviewed by an engineer of the appropriate city's choice.

Map 5-3



Subdivision Regulations Only

**LIMITATION OF LIABILITY:** The Green River Area Development District has no reason to believe that there are any inaccuracies or defects in information incorporated in this work and make no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor any such warranties to be implied, with respect to the information or data furnished herein.

Date: 1/13/2014

a. Rural Commercial / Industrial Uses

It is the contention of this plan that the Cities of Hartford and Beaver Dam will continue to meet most of the urban-type needs of the county. This includes most of the commercial and industrial services needed by the county, particularly for the areas within the extra-territorial subdivision jurisdiction.

It will be in the best interest of the county to closely monitor requests for commercial and industrial development in the unincorporated urban areas. The commission will need to ensure that wise development occurs through the careful consideration of access, traffic safety, storm water management, surface water runoff provision, and water and sewer service to these areas. All potential impacts of the development need to be addressed on the subdivision plat. Wise planning and careful monitoring of the quality of commercial and industrial development proposed in this area would have a positive economic effect on Ohio County.

b. Public / Semi-Public Uses

Because of the nature of the rural areas of the county, public and semi-public needs are minimal. There are a number of small local churches throughout the county serving local needs. Schools are part of the county-wide system and future needs are anticipated and planned for by the Board of Education, as they are needed. Recreational open space needs are in many ways met by the large acreage on which the residences are situated.

B. Location Principles for Proposed Land Uses

General principles relating to the location of land uses provide a reference for the Planning Commission in the development of a land use plan and other devices to promote the orderly and systematic growth of all areas of the Hartford and Beaver Dam planning areas. Principles for the major types of land uses are provided below as guidelines for consideration of zone change requests within the appropriate city limits.

1. All New Development

- a. All development must meet the development plan requirement set forth in the Hartford/ Beaver Dam Zoning Ordinance.
- b. No development should be allowed to be built in designated 100-year floodplain areas unless mitigation measures are taken.
- c. Developments should be prohibited from being constructed on sinkholes or from adversely affecting the drainage basin of any sinkholes. If and when the Cities of

Hartford/Beaver Dam adopt local storm water management ordinances, all development in the cities' limits will have to comply with their restrictions.

- e. Development should be contiguous to already built-up areas to minimize costs of public facilities such as water, sewer, police, and fire services.
- f. Cluster development should be encouraged to allow environmentally sensitive areas to remain undeveloped.

## 2. All Residential Uses

- a. Residential neighborhoods should be protected from adverse impacts of proposed developments, encroachments, and land use change.
- b. New residential developments should be such that their densities are compatible with adjacent residential areas.
- c. Residential development should be discouraged on land with steep (greater than 15%) slopes unless proper construction techniques are employed.
- d. Residential areas should be located on well-drained land.
- e. Parks and playgrounds should be incorporated into subdivision plans. In particular, high-density residential development proposals shall address the issue of open space and play areas.
- f. Residential areas should have a street system which will discourage through and non-residential traffic and which will provide convenient access to neighborhood facilities as well as to adjoining major thoroughfares.
- g. Residential areas should be provided with all necessary services, including fire and police protection, sanitary sewers and storm sewers. The use of septic disposal systems shall be under the jurisdiction of the county health department and in compliance with the locally adopted zoning ordinance.

## 3. High Density Residential

- a. High density residential developments should be located where there is a major access point on or very near an arterial or major collector street.

## 4. All Business Uses

- a. Business areas should be convenient to and separate from other use areas.
- b. Business areas should be accessible to major traffic arteries.

c. Concentrated clusters of stores, as opposed to linear developments along major thoroughfares, should be encouraged inasmuch as there are more in existing residential areas and along the street frontage.

d. Buffering, or screening, shall be required when a commercial area is proposed next to existing residential areas and along the street frontage.

e. Business development should be designed:

- i. To include, where appropriate, circulation patterns for pedestrians, bicycles, and handicapped people;
- ii. To provide, where appropriate, trees, landscaping, benches, and other site amenities;
- iii. To prevent signs from being a visual nuisance or a safety hazard to vehicular traffic;
- iv. With adequate parking facilities; and
- v. With entrances and exits from major streets that minimize interference with traffic flow and loading areas.

## 5. Downtown Business Area

The downtown business areas, serving a variety of functions, such as retailing, entertainment, administration, and government, are oriented to a county-wide or regional market. They require access to a relatively large number of people for support and are normally the focal point of all activities in the community. To ensure their stability and improve their economic functions, the downtown business areas should be:

- a. Efficient and compact places in which to move about and do business; the downtown business areas function more efficiently if shopping and other activities are oriented to the pedestrian; convenient parking lots are a necessity;
- b. An attractive place in which to shop because shoppers tend to patronize an area where facilities are pleasant and convenient;
- c. Providers of a wide range of economic activity; and
- d. Encouraged to develop vacant upper floor areas for residential and office uses.



## 6. Neighborhood Business Uses

a. Development of neighborhood businesses should be allowed when it can be proved that:

- i. The need clearly exists;
- ii. There is a clear benefit to that particular neighborhood; and
- iii. There is a good transition between adjacent uses that reflects existing architectural and residential character.

### I. Industrial

a. Industries should be located in planned industrial subdivisions or otherwise adjacent to an existing industry to form industrial clusters.

b. Industrial sites should have good access to highways as well as rail facilities, if necessary.

c. Water, electricity, gas, and sewage facilities in sufficient scale or quantity should be a prerequisite for an industry to begin manufacturing operations.

d. Industrial areas should be separated from other areas by such buffers as major highways, railroad lines, park or greenbelt areas or natural geological features. Buffers should be designed when not naturally provided on site (e.g. landscape on frontage roads).

e. Encourage annexation by the appropriate city so that industrial uses can assume their fair share of the local tax burden in return for the provision of municipal services.

f. Agriculturally-related industries should be encouraged to develop near the natural resources or cultivated products upon which they rely. These developments should be carefully reviewed for impact on neighboring properties, roads, water systems, and other community facilities to ensure high quality developments occur throughout the county.

### C. Application of Maps and Principles

Often, a major concern expressed about a comprehensive plan is how the land use map will be used and the extent to which it might be the sole indicator of rezoning requests. In order to answer this question, the maps must first be put into context with the rest of the decision making process.

The ideal development of a Land Use Plan is as follows. First, the major goals and policy objectives are identified by the elected officials with input from other community leaders and the general public. Next, more specific policy guidelines and procedures are

generated in text form in order to carry out the major goals and objectives. Finally, a map is drawn which applies both the major goals and the specific guidelines to the undeveloped areas to project the highest and best use of land and shows existing and future land use patterns.

After the plan is adopted, which contains the major goals, the specific guidelines and the map, the Planning Commission and the legislative bodies can then use the entire plan as a basis for their decisions.

The Kentucky law says that the request must agree with the "Comprehensive Plan," and the comprehensive plan contains the map and the text with specific guidelines and the major goals. In addition to these, the comprehensive plan also contains transportation, population, economics and public facilities elements. Therefore, when a rezoning application does not agree with the map, the Planning Commission and the legislative bodies must decide if the proposal agrees with the rest of the entire comprehensive plan. It is quite possible that a proposal would not agree with the land use map but would agree with the specific guidelines and the major goals and the other elements of the comprehensive plans. This is particularly true of a proposal for property, which is surrounded by undeveloped land.

If a proposal does not agree with the comprehensive plan, it can still be approved if it can be shown that the existing zoning is inappropriate and the proposed zoning is appropriate, or that there have been major physical, social or economic changes in the area that were not anticipated by this plan that justify the rezoning.

Undesignated areas on the land use maps are not expected to develop during the planning period. However, unanticipated circumstances may generate requests for such areas to be rezoned from their existing designation. When faced with such requests, the Planning Commission should consider the Location Principles for Urban Land Uses outlined in this plan. In addition, members should consider the map designations of lands surrounding the property in questions as well as actual development that has occurred up to the time of the request.

It is important to mention that sufficient land for all uses has been set aside above and beyond that which is needed to satisfy future growth needs. To provide only enough land for each projected use would hamper development since there needs to be competition, variety and equal opportunity for development. In assuming that suitable land for development cannot always be acquired, a community can generally place itself in a comfortable position by providing more acreage than actually needed within all land use categories. Thus, the land use plan may be implemented regardless of problems in acquiring and/or developing land. With this method of allocation, deviation from the comprehensive plan due to physical, social, or economic changes should be rare. Further details regarding the zoning map amendment process can be found in Chapter VIII of the plan and in the zoning ordinance.

## CHAPTER VI - TRANSPORTATION

An effective, efficient transportation system is one of the most critical elements a city or county must have if it is to grow and develop and provide its people with the necessary facilities. Land use is affected immeasurably by transportation. The transportation analysis of this chapter will concentrate on a description of the existing facilities. Chapter VI will further address the limitations of the existing facilities, as well as recommended changes, improvements or new construction.

Ohio County has an adequate inter-county, as well as intra-county highway network for the movement of its people and goods. However, it is imperative that normal upkeep and maintenance be continued, improvements are made when needed, and new construction be initiated where necessary if this system is to remain workable and effective. Ohio County is served by several major roads, which link Hartford and Beaver Dam with the smaller incorporated and other unincorporated areas of the county, as well as highways linking Ohio County with the surrounding counties and states.

### A. County Road Network

According to the Kentucky Transportation Cabinet, the most important roadways in Ohio County serving primarily to carry through-traffic are the William Natcher and Wendell Ford Parkways. Both are controlled access four-lane highways and are part of Kentucky's parkway system.

- The William Natcher Parkway enters Ohio County from the north and travels in a south-southeasterly direction before exiting into Butler County. There are two access interchanges to the William Natcher Parkway in Ohio County, at the intersection with the Wendell Ford Parkway and at the intersection with KY 69 leading into Hartford. A possibility exists that the William Natcher Parkway could become a spur of either Interstate 65 connecting Bowling Green to Louisville or the newly-planned extension of Interstate 66 designed to intersect the southern portion of the state. This would likely increase traffic in the area and could possibly bring economic benefits to communities along the spur, including Beaver Dam and Hartford.
- The Wendell Ford Parkway enters from Grayson County to the east and passes through Ohio County before exiting into Muhlenberg County at the western boundary. The Wendell Ford Parkway also has two access interchanges in Ohio County, one at the intersection with William Natcher Parkway and one at US Highway 231 south of Beaver Dam. It is designated to form part of the proposed extension of Interstate 66.
- Tolls were removed from both parkways in 2006.

The county also has three major roads that provide the main transportation corridors for movement within the county:

- U.S. 62 enters the eastern side of the county from Grayson County and travels in a western direction until it passes underneath the William Natcher Parkway and enters Beaver Dam. There it turns south for approximately one mile before turning west and heading in west-southwesterly direction passing through McHenry and Rockport before exiting into Muhlenberg County.
- US Highway 231 enters the county from Daviess County in the north and travels in a south-southeasterly direction, passing through Hartford and Beaver Dam. US Highway 231 has been rebuilt to four and five lanes between Hartford and Beaver Dam. The construction of the additional lane was completed early in the summer of 1999. At the southern boundary of Beaver Dam, the road turns southeasterly and exits into Butler County in the southeastern quadrant of the county.
- KY 69 enters from Hancock County and heads in a southerly direction until it intersects with KY 54. There the road turns east following KY 54 to Fordsville where it breaks off and heads in a south southwesterly direction toward Hartford. In Hartford, KY 69 turns west and heads in a southwesterly direction, passing through Centertown and Equality before reaching its terminus near the Green River.

Other important traffic corridors in Ohio County include KY 85, KY 369, KY 54, and KY 136:

- KY 85 enters Ohio County from McLean County near Point Pleasant and travels eastward for approximately five miles before turning south toward Centertown, where it turns east and follows KY 69. KY 85 then turns south and terminates at KY 62 just north and east of Rockport.
- KY 369 begins in Beaver Dam at the intersection of US Highway 62 and heads south through Cool Springs before exiting into Butler County near U.S. Lock and Dam No. 3 at the southern-most point of the county.
- KY 54 enters the county from Daviess County and heads east, passing through Fordsville before exiting the county into Grayson County toward the east. KY 136 begins approximately two miles north of Hartford and travels in a westerly direction before exiting into McLean County at Ohio County's western boundary.

B. Rural Traffic in Ohio County

**Exhibit 6-1: Ohio County Rural Road Traffic Counts**

<b>Location</b>	<b>2002</b>	<b>2011</b>
<u><i>US 62</i></u>		
At eastern boundary of Beaver Dam	2,458	4,401
At Muhlenberg County line	1,575	2,126
<u><i>US 231</i></u>		
Just north of intersection with Co. Rd. 1737	4,304	4,201
Just south of KY 269 intersection	4,955	4,305
Near Butler County Line	3,776	2,328
<u><i>KY 69</i></u>		
Just south of Fordsville	2,435	1,525
At Sulpher Springs	1,935	2,206
Just east of Centertown	2,517	2,778
East of Equality	340	400
<u><i>KY 85</i></u>		
Just west of Matanza	931	1,235
Just south of Centertown	1,239	1,352
Just south of intersection with US 62	2,179	2,078
<u><i>KY 369</i></u>		
Just south of Wendell Ford Parkway	339	571
Near Cool Springs	226	166
<u><i>KY 54</i></u>		
At Daviess County line	3,354	2,852
Just east of intersection with KY 69	3,089	3,661
South of Ellmitch	1,156	1,093
Just west of Shreve	867	976
<u><i>KY 136</i></u>		
Just east of McLean County line	1,100	974
Just west of US 231	1,604	1,448

Source: Kentucky Transportation Cabinet, 2011.

C. Traffic in Beaver Dam and Hartford

**Exhibit 6-2:** Beaver Dam and Hartford Road Traffic Counts

BEAVER DAM		
Location	2002	2011
<u>US 231</u>		
At northern city limits	17,222	11,603
Just north of intersection with KY 369	11,128	10,612
<u>US 62</u>		
At eastern city boundary	8,697	4,401
<u>KY 273</u>		
Just west of Main Street	2,839	3,898
HARTFORD		
Location	2002	2011
<u>US 231</u>		
At northern city boundary	5,640	6,343
Just south of Walnut Street	10,071	10,810
<u>KY 69</u>		
At western city boundary	2,940	5,136

Source: Kentucky Transportation Cabinet, 2011.

**Exhibit 6-3:** Six-Year Highway Plan for Ohio County, 2012-2018

<u>Project Description</u>	<u>Phase</u>	<u>Cost</u>
Reconstruct intersection at KY 54 and KY 2671 1.7-1.9 miles	2012-2013	\$1,800,000
US 62: Replace bridge over Muddy Creek 0.4 miles W of JCT KY 1543	2014-2016	\$1,535,000
CR-1194: Replace bridge over Threelick Creek 0.15 miles W of JCT CR 5172	2012-2016	\$710,000
US 62: Replace bridge over branch of Three Lick Fork 0.23 miles E of Green Meadows Drive	2014-2016	\$1,150,000
Address safety issues at intersection of KY 54 and KY 2671 near Fordsville	2012-2014	\$1,500,000
US 231: Address left turn lane issues at Southern Elementary School	2012-2014	\$2,100,000

Source: Kentucky Transportation Cabinet, *Six-Year Highway Plan*, 2012.

Ohio County is strategically located on the state's roadway system. The most important roadways in the county serving primarily to carry traffic passing through Ohio County are the William Natcher and Wendell Ford Parkways. Both are controlled access four-lane highways,

which are a part of Kentucky's parkway system. These parkways serve not only as vital transportation links to other parts of Kentucky and the nation but as an important economic catalyst as well. The William Natcher Parkway enters Ohio County from the north and travels in a south-southeasterly direction before exiting into Butler County. There are two access interchanges to the William Natcher Parkway in Ohio County, one at the intersection with the Wendell Ford Parkway and one at the intersection with KY 69 leading into Hartford. This parkway, which enters from Grayson County to the east and passes through Ohio County before exiting into Muhlenberg County at the western boundary, is no longer a toll road. The Wendell Ford Parkway also has two access interchanges in Ohio County, one at the intersection with William Natcher Parkway and one at US Highway 231 south of Beaver Dam.

The county also has three major roads that provide the main transportation corridors for movement within the county. The first of these, US Highway 62, enters the eastern side of the county from Grayson County and travels roughly in a western direction until it passes underneath the William Natcher Parkway and enters Beaver Dam. There it turns south for approximately one mile before turning west and heading in west-southwesterly direction passing through McHenry and Rockport before exiting into Muhlenberg County west of Rockport. The second roadway, US Highway 231 enters the county from Daviess County in the north and travels in a south-southeasterly direction, passing through Hartford and Beaver Dam. US Highway 231 has been rebuilt to four and five lanes between Hartford and Beaver Dam. The construction of the additional lane was completed early in the summer of 1999. At the southern boundary of Beaver Dam, the road turns southeasterly and exits into Butler County in the southeastern quadrant of the county. The third road, KY 69, begins in the northeastern section of the county, entering from Hancock County, and heads in a southerly direction until it intersects with KY 54. There the road turns east following KY 54 to Fordsville where KY 69 breaks off and heads in a south-southwesterly direction toward Hartford. In Hartford, KY 69 turns north and follows US Highway 231 for one mile before turning west and heading in a southwesterly direction and passing through Centertown and Equality before reaching its terminus near the Green River.

In addition to these three roadways, KY 85, KY 369, KY 54 and KY 136 are also important traffic corridors through the county. KY 85 enters Ohio County from McLean County near Point Pleasant and travels eastward for approximately five miles before turning south to Centertown. At Centertown, it turns east and follows KY 69 through Centertown before turning south and terminating at KY 62 just north and east of Rockport. KY 369 begins in southern Beaver Dam at the intersection of US 62 and heads south through Cool Springs before exiting into Butler County near U.S. Lock and Dam No. 3 at the southern-most point of the county. KY 54 enters the county from Daviess County in the northern section of the county and heads southeasterly passing through Fordsville before exiting the county into Grayson County at the eastern-most corner of the county. KY 136 begins approximately two miles north of Hartford and travels in a westerly direction before exiting into McLean County at Ohio County's western boundary.

Overall, most roads function adequately with only minor delays caused by slower-moving vehicles. According to the Highway Capacity Manual, a Level of Service C is that level where platoons, or back-ups behind slower vehicles, begin to form and average speeds equal to the speed limit are not maintained. On two-lane rural highways, to obtain a Level of Service C, average daily traffic (ADT) volume cannot exceed 4,700 vehicles per day. This volume assumes 12-foot wide travel lanes with six-foot shoulders, 14 percent truck traffic, rolling terrain, and 40



percent of the roadway having no passing zones. Given these criteria, none of the roadways in Ohio County exhibits traffic problems. However, adjustments are necessary because travel lanes are not uniformly 12-feet; six-foot shoulders are not maintained and truck traffic more closely approximates 20 percent. Given these adjustments, Level of Service C can be maintained on roads with an ADT volume of 3,500 vehicles. Based on this definition, US Highway 231 from the Daviess County line to the intersection with KY 269 in the southern portion of the county appears to be problematic. For four-lane limited access highways, Level of Service C is maintained if ADT does not exceed 25,000 vehicles per day. Given these criteria, neither the William Natcher Parkway nor the Wendell Ford Parkway has traffic problems.

Projecting future traffic patterns on rural roads is difficult because of the impact one business or industrial plant relocation will have. For the purposes of this study, Booker Associates assumed that no such changes will occur and that traffic growth will be consistent with traffic changes recorded in Ohio County since 1980. Given these parameters, a small stretch of U.S. 62 between Beaver Dam and McHenry, KY 69 between Hartford and Centertown, and KY 54 between the KY 69 intersection and Fordsville will exceed 3,500 vehicles per day during the planning period. No other roadways are expected to drop below Level of Service C at any time in the next 20 years. It should be noted, however, that should a major multi-county landfill be located in Ohio County, strict guidelines would need to be determined and enforced to ensure that truck traffic on small county and state roads does not become excessive. All heavy truck traffic should be confined to federal highways and/or the parkways unless substantial improvements are made to accommodate the increased heavy traffic.

#### D. Truck Transportation

The following trucking companies serve the needs of Ohio County businesses and industries. Two groups are listed: those that serve the entire county and those that serve Beaver Dam only.

##### All of Ohio County:

- Averitt Express, Inc.
- Consolidated Freightways Corporations of Delaware
- Hohenwald Truck Lines, Inc.
- Roadway Express, Inc.
- Jones Truck Lines, Inc.
- Majors Transit, Inc.
- Manning Motor Express, Inc.
- Overnite Transportation Company
- Yellow Freight System, Inc.

##### Beaver Dam Only:

- Advance Transportation, Inc.
- Central Transport, Inc.



All companies listed above provide both interstate and intrastate service. Ohio County is within two days drive of most cities east of the Mississippi, excepting New England. Truck routes are available using four-lane divided highways to all points.

#### E. Rail Transportation

Rail service to Ohio County is available from the Paducah and Louisville (P & L) Railway. The rail company provides service to Beaver Dam via a main line extending south from Owensboro. One through freight train northbound and one southbound passes through Beaver Dam on a daily basis but will make freight stops as necessary. Switching service is available as well as track space for five cars. The nearest piggyback facilities are available 33 miles away in Owensboro. CSX Railroad provides this service.

#### F. Water Transportation

Water transportation is available locally using the Green River as the transportation corridor. The Green River, which makes up three-quarters of the county's western boundary, flows in a west-northwesterly direction, beginning in Lincoln County, Kentucky and terminating at the Ohio River just east of Evansville, Indiana. The Corps of Engineers maintains a nine-foot navigation channel from the southwestern tip of Ohio County to the mouth of the Ohio River.

Channel and lock dimensions on the Green River permit modern barges along the entire length between the Ohio River and the southern tip of Ohio County. Primarily coal companies utilize this stretch of the river, with 97 percent of all river traffic being coal barges. Lock and Dam No. 3, located at the southern tip of Ohio County, was closed by the Corps thus restricting barge travel south of that point.

A few private firms in Ohio County take advantage of the Green River to provide transportation for their goods. Several coal-handling docks have been constructed along the Green River in Ohio County. Public riverport facilities are located 29 miles northwest of Hartford near Owensboro. The port offers open and covered storage, liquid storage, coal processing and loading, and twin 110-ton cranes for transfer of goods.

#### G. Air transportation

Local air transportation service is available from the Ohio County Airport near Hartford. The airport is able to handle small planes, and airfreight service is available if charter service is arranged in advance.

The airport is able to handle turbine and jet aircraft up to 20,000 lbs. gross weight. Aircraft charter service and airfreight is available through the operator. Aircraft instruction, aircraft rental, tie-down, and hangar services plus major airframe and power plant repairs are available.

The nearest scheduled commercial airline service is found at Evansville, Indiana's Dress Regional Airport, approximately 70 miles northwest of Hartford. The airport is served by several national airlines and has an airfreight terminal. Commuter air service is available on a very limited basis from the Owensboro-Daviess County Airport.

#### H. Parking

As the Planning Commission develops the new zoning ordinance and subdivision regulations, it will be important to include detailed road and parking standards. These need to include off-street parking requirements for various residential, commercial, and industrial uses, as well as on-street parking standards including minimum street widths for on-street parking.

Hartford needs to consider a detailed parking and traffic flow study for the central business district. The possible creation of additional one-way streets with angled parking would increase the number of parking spaces available and improve traffic flow around the courthouse and city hall at busy times.

#### I. Traffic Studies

All new development shall be carefully reviewed in light of existing traffic hazards. The Planning Commission may require a traffic study to be conducted by the developer and reviewed by an engineer of the appropriate city's choice if the proposed development in any way impacts the roads noted as problem areas in this chapter. The Planning Commission shall have the authority to deny or approve with conditions related to road improvements if it cannot be proven by the developer that the proposed development will not adversely affect traffic patterns.

## CHAPTER VII – COMMUNITY FACILITIES PLAN

### Importance of Community Facilities

The quality and vitality of the environment and lifestyle of the residents of Ohio County is dependent upon the facilities and public services available to them. These facilities and services support the social fabric of the community and include schools, libraries, parks, municipal buildings, public safety facilities and sanitation facilities such as water and sewer systems.

Public facilities, especially school systems, play an important role in attracting new residents and industries as well as retaining present residents and employers. The age and efficiency of the existing public facilities affect the revenue needs of the cities and county. The efficient layout and construction of new facilities determine the direction for future growth of residential, commercial and industrial development. For all of the above reasons, it is important that the development of public facilities be coordinated according to the needs and desires of Ohio County residents and elected officials for their future.

At the meetings held to address the issue analysis, citizens and public officials present were also asked to evaluate the community facilities within their respective jurisdictions as good, fair or poor. Community facilities discussed included police, fire, hospital, water, sewer, outdoor recreation, indoor recreation, schools, solid waste, gas, electric, library and cultural facilities. The following are the major areas of concern and future recommendations regarding local community facilities. It is difficult to provide detailed recommendations regarding many community facilities because each utility, school district and safety provider has its own staff and board, which make fairly detailed plans regarding their own expansion and renovation needs. It is the intention of this plan to bring the various issues to the forefront, providing the Planning Commission with some concrete potential problem areas and improvement needs when they are making what are primarily land use type decisions. The interrelationship of the various infrastructure needs and public services with current and future land use demands is complex. It is important that those in positions to make land use decisions consider all of these issues in their decision-making process as well as land use compatibility issues.

According to the Ohio County Industrial Foundation, service to Ohio County is provided by the following utility companies:

#### A. Electricity

1. Kenergy: serves more than 50,000 customers in 14 Kentucky counties.
2. Warren Rural Electric Cooperative Corporation: owned by those who purchase their electricity; WRECC generally serves the southern portion of the county.
3. Kentucky Utilities
4. Meade County Rural Electric Cooperative Corporation

## B. Natural Gas

Atmos Energy: supplies natural gas to over 180,000 residential and commercial customers throughout Western Kentucky. As of 2012, basic rates of service for residential property totaled \$12.50 per meter per month and \$30.00 per meter per month for non-residential property.

## C. Water

1. Ohio County Water District
2. Beaver Dam Municipal Water
3. Centertown Water System
4. Fordsville Water District
5. Hartford Municipal Water Works

**Exhibit 7-1: Water Utilities in Ohio County**

<u>Utility</u>	<u>Current Water Use</u>	<u>Water Source</u>	<u>Population Served</u>
<i>Ohio County Water District</i>	1.6 mgd*	Green River	6,921
<i>Beaver Dam Municipal Water</i>	0.325 mgd	Ohio River Alluvial Plain, OCWD	3,397
<i>Centertown Water District</i>	0.125 mgd	Hartford Municipal Water Works	692
<i>Fordsville Water District</i>	0.1 mgd	Ohio County Water District	820
<i>Hartford Municipal Water Works</i>	0.35 mgd	Rough River	2,892

\*mgd = million gallons per day

Source: Water Resource Information System – Water Management Plan, 2010.

- Perdue Farms is currently permitted to withdraw three mgd from the Ohio County Water District.
- In 2011, the Ohio County Water District completed a \$28 million treatment facility located in Beaver Dam that doubles the capacity of the old facility. OCWD has since increased production to four mgd. This has brought the OCWD into compliance with the regulations of the Kentucky Division of Water and the federal Environmental Protection Agency. A distribution product upgrade of existing water lines was recently completed by the OCWD as well.
- The Hartford Water Treatment Plant, which runs under the auspices of the Hartford Municipal Water Works, was one of 49 Kentucky plants to be recognized in 2012 for producing drinking water consistent with state water quality standards according to the Kentucky Division of Water.

**Exhibit 7-2: Projected Water Demand for Ohio County**

<i>Utility</i>	<i>2009 Demand</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>	<i>2030</i>
<i>Ohio County Water District (OCWD)</i>	1.6 mgd	1.74 mgd	1.9 mgd	2.07 mgd	2.26 mgd
<i>Beaver Dam Municipal Water</i>	0.325 mgd	0.354 mgd	0.386 mgd	0.421 mgd	0.459 mgd
<i>Centertown Water District</i>	0.128 mgd	0.139 mgd	0.152 mgd	0.116 mgd	0.181 mgd
<i>Fordsville Water District</i>	0.1 mgd	0.109 mgd	0.119 mgd	0.129 mgd	0.141 mgd
<i>Hartford Municipal Water Works</i>	0.35 mgd	0.382 mgd	0.416 mgd	0.453 mgd	0.494 mgd

Source: Water Resource Information System – Water Management Plan, 2009.

- The Ohio County Water District had a water treatment capacity of 2.09 mgd with 380 mgd of available water, while the Hartford Municipal Water Works had a water treatment capacity of one mgd with 18 mgd of water available.
- As water demand for the area grows, additional treatment capacity may be necessary to ensure that customers continue to receive adequate service as state and federal regulations are followed.

**D. Telecommunications**

- Ohio County is serviced by a variety of telecommunication companies. According to the Kentucky Broadband Mapping service of the Federal American Recovery and Reinvestment program, mobile wireless service is available to the vast majority of the county. Relatively few areas, mostly concentrated around Beaver Dam and Hartford, have fixed wireless, while availability of cable and DSL internet service is limited to the US Highway 231 corridor and small areas along the county's borders.
- ConnectGRADD is a service that provides broadband internet to the GRADD region (including Ohio County). As of 2011, ConnectGRADD had 2,650 customers across the region with 25 towers in Ohio County. Of the county's land area, 60 percent can be reached by ConnectGRADD internet service.

### Exhibit 7-3: Ohio County Service Providers

<i>Name</i>	<i>Service Provided</i>	<i>Speed (megabits per second)</i>
<i>AT&amp;T</i>	Mobile wireless	1.5 mbps-3 mbps
<i>HughesNet</i>	Satellite	1.5 mbps-3 mbps
<i>Bluegrass Cellular</i>	Mobile wireless	768 kbps-1.5 mbps
<i>Q Wireless</i>	Fixed wireless	1.5 mbps-3 mbps
<i>Skycasters</i>	Satellite	3 mbps-6 mbps
<i>Skyway USA</i>	Satellite	3 mbps-6 mbps
<i>Sprint/Nextel</i>	Mobile wireless	768 kbps-1.5 mbps
<i>Starband Communications, Inc.</i>	Satellite	3 mbps-6 mbps
<i>Time Warner Cable</i>	Cable Modem-other	3 mbps-6 mbps
<i>WildBlue Communications, Inc.</i>	Satellite	10 mbps-25 mbps
<i>Bellsouth/AT&amp;T Kentucky</i>	Asymmetric & DSL	10 mbps-25 mbps

Source: Kentucky Broadband Mapping, Recovery.gov.

#### E. Recreation

The Hartford/Beaver Dam urban area offers a variety of recreational opportunities to local residents. In addition to recreation facilities associated with the local schools, outdoor recreational facilities include Oldham Park and Little League Park in Beaver Dam and Little League Park and City Park in Hartford. Additionally, the Ohio County Park Board developed a 340-acre recreational complex housing the Ohio County Park and Fairgrounds. The park facility is located approximately one mile east of Hartford's northeastern city limits on KY 69 across the William Natcher Parkway. Its facilities include a softball field, two tennis courts, 50 full hook-up camping area sites, horse show arena, indoor and outdoor go cart tracks, paint ball range, shot gun and rifle range, park office building, a volleyball court, a horseshoe ring, two fair buildings and amphitheater and a picnic area with shelter and restroom facilities. The Park Board also has plans to develop a 10-acre lake, including a beach facility. Recently, a new Senior Citizen building has been added to the park and fairgrounds.

The Ohio County Wellness was completed in May 2002. This facility provides an indoor swimming pool, basketball courts, aerobic dance floor and weightlifting facilities.

Private recreational facilities include the Ohio County Country Club, which includes a nine-hole golf course, tennis courts, a swimming pool and a fishing lake.

A variety of fairs and festivals are held at various locations throughout Ohio County throughout the year.

The town of Rosine, just outside of Beaver Dam on US Highway 62, is the home of Bluegrass music pioneer, Bill Monroe. Mr. Monroe is credited as the Father of Bluegrass Music and has been inducted into the County Music Hall of Fame, the Nashville Songwriters Hall of Fame, and the Rock and Roll Hall of Fame. Visitors can find his restored childhood home high atop Jerusalem Ridge, just off US Highway 62 south of Rosine, and his monument at the Rosine Cemetery.

Other statewide recreation in the region includes the nearby John James Audubon State Park in Henderson, Lake Malone State Park at Dunmore, and Rough River Dam State Resort Park at the Falls of the Rough. The Ohio and Green Rivers also offer a variety of local recreational opportunities to county residents.

#### F. Safety and Health

Police protection in Ohio County is provided to the Cities of Hartford and Beaver Dam by their own city police departments and to the county by the County Sheriff's Department. The Hartford Police Department currently has a staff of five full-time, two part-time with two radio-patrol cars. The Beaver Dam Police Department currently has a staff of six, with three radio-patrol cars. The County Sheriff's Department has eight staff members and eight radio-patrol cars.

Fire protection is also provided to the two cities by their own fire departments, while the county is protected by volunteer fire departments. Currently, 25 volunteer staff members work to bring fire protection to the residents of the City of Hartford, which has an Insurance Service Office (ISO) rating of five. Eighteen volunteers work to bring fire protection to the City of Beaver Dam residents, which has an ISO rating of six.

Fire protection provided to rural Ohio County residents is more complex due to the size of the county. The county is served by 10 rural fire stations located in Beaver Dam, Centertown, Dundee, Fordsville, Masonville-Pleasant Ridge, Rosine, McHenry, Cromwell, Hartford and Rockport. An estimated 210 volunteers man these 10 local fire stations. The ISO insurance classifications vary throughout the county based on the area's proximity to a responding fire station and to a fire hydrant. Classifications range from eight to ten in the unincorporated areas of the county.

Concern has been expressed regarding the number of independent fire departments working within Ohio County. Recommendations regarding a centrally located joint fire department, at a minimum to serve the Hartford/Beaver Dam urban area should be actively investigated by the communities.

Rescue service is provided to the residents of Ohio County by the Ohio County Disaster and Emergency Services and volunteer fire departments within the county. Three Disaster and Emergency Service stations are located throughout the county. The county now has a 911 emergency station at the Ohio County Courthouse.

The Ohio County Emergency Ambulance Service has relocated to the former county garage immediately across the Rough River Bridge. The ambulance service is staffed by 13 volunteer Emergency Medical Technicians (EMTs).

The Ohio County Hospital is currently one of the major non-manufacturing or coal-related employers in Ohio County. The hospital provides a 68-bed facility to meet local medical needs. Renovations in recent years include the creation of additional private rooms, a new operation room, and the installation of a CAT-SCAN unit and a mammography unit. Other medical services are provided by the Green River District Health Department/Ohio County Health Center, the Green River Comprehensive Care Center, the Hartford Medical Center, the Beaver Dam Nursing Manor, the Fordsville Medco Center and the Hartford Professional Care Home. Over 30 physicians, 40 registered nurses and 10 licensed practical nurses serve the medical needs of the county.

#### G. Solid Waste

Municipal solid waste collection and disposal is provided to the residents of the Cities of Hartford, Beaver Dam and Fordsville. The principal service is provided by a private company, BFI, on a 700-acre tract that is owned by the county. The landfill is operated under a franchise agreement. Since 1992, the landfill was closed and a new facility was constructed. The new landfill is owned by Ohio County and a franchise agreement exists between the county and Ohio County Balefill, Inc., to operate and maintain the new facility. It serves Daviess, Edmonson, McLean, and Ohio Counties in addition to Bowling Green. There are some private haulers who serve certain businesses and some residents.

Without countywide planning and zoning, local residents cannot have any additional input or stricter regulations regarding the placement of landfills in their community than the existing state regulations. Locally adopted land use and development regulations can provide stricter compliance guidelines to ensure that proposed landfills meet local quality requirements. Changes anticipated as a result of recent and pending state legislation can be expected to impact all solid waste collection and disposal decisions. The County needs to continue to work with the Green River Area Development District (GRADD) regarding regional issues such as universal collection, regional recycling efforts and the development of landfills to meet regional solid waste needs.



## H. Education

The Ohio County School System currently consists of seven elementary schools, three of which serve kindergarten through sixth grades, one of which serves first through sixth grades and three of which serve kindergarten through eighth grades. Grade and enrollment information for each of the elementary schools is as follows.

School	Grades	Enrollment (12/90)
Beaver Dam Elementary	K-6	526
Centertown Elementary	K-8	260
Fordsville Elementary	K-8	375
Horse Branch Elementary	K-8	388
Southern Elementary	K-6	239
Wayland Alexander Elementary	K-6	660
Western Elementary	1-6	137

The school system currently has one middle school which serves two-thirds of the county's seventh and eighth graders, and one high school serving all of Ohio County's ninth through twelfth graders. The Ohio County School District's total enrollment for the 1990-91 school year is approximately 4,100, with just over 2,330 total in grades K-6, 660 in grades seven and eight, and nearly 1,100 in the high school. In 1999 the total enrollment was 4,293.

Beaver Dam Elementary recently moved into a new building, and other elementary schools have been renovated and expanded. Local private schools include Sugar Grove Christ Academy Elementary School and Ohio County Christian Academy.

The Ohio County Area Technology Center, located on U.S. 231 in Beaver Dam, offers courses for both high school and post high school students. It offers four major programs, including: Business and Office (Accounting/Management, Clerical, Secretarial); Health and Personal Services; Occupations; and Industrial Education (Auto Mechanics, Carpentry, Electricity, Welding).

Night classes and adult/GED classes are also offered at the Technology Center. Another school providing post-secondary technical courses is the Owensboro Community and Technical College, located in Owensboro, 29 miles north of Hartford. A wide variety of vocational and technical courses are offered at this school, including evening courses and adult/GED classes.

## H. Education

The Ohio County School System currently consists of seven elementary schools, three of which serve kindergarten through sixth grades, one of which serves first through sixth grades and three of which serve kindergarten through eighth grades. Grade and enrollment information for each of the elementary schools is as follows.

School	Grades	Enrollment
Beaver Dam Elementary	K-6	752
Fordsville Elementary	K-8	267
Horse Branch Elementary	K-8	199
Southern Elementary	K-6	311
Wayland Alexander Elementary	K-6	744
Western Elementary	1-6	306

Source: Ohio County Board of Education, 2014

The school system currently has one middle school with an enrollment of 610 students. One high school serves all of Ohio County's ninth through twelfth graders, with an enrollment of 1,030 students. The Ohio County School District's total enrollment in 1999 was 4,293. The 2013-2014 total enrollment was 4219.

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Night classes and adult/GED classes are also offered at the Technology Center. Another school providing post-secondary technical courses is the Owensboro Community and Technical College, located in Owensboro, 29 miles north of Hartford. A wide variety of vocational and technical courses are offered at this school, including evening courses and adult/GED classes.

## I. Library

The Ohio County Public Library, located in downtown Hartford, has a collection of approximately 63,750 volumes, with an average annual circulation of approximately 93,926 books. The 15,000 square foot building is handicapped accessible. An elevator has been installed to the second floor. In the past year, 6,907 children attended programs in the children's department. The library staff and the Book Mobile service local day cares, preschools and low-income housing. In addition, a Home-Bound Vehicle serves the elderly, caregivers, and those who cannot drive, as well as individuals in assisted living and in the hospital.

In the last decade, a second parking lot was purchased by the library to handle overflow. In 2012, a building was purchased across the street from the library to serve as an annex, housing the genealogy collection, an instructional computer lab, a meeting room, and a digitization room.

## J. Media

The Ohio County Times-News, based in Hartford, is the only local newspaper serving Ohio County. It has a weekly circulation of approximately 7,600 papers.

Ohio County currently has one radio station, WXMZ FM, based in Hartford. County residents also pick up stations from surrounding counties.

## CHAPTER VIII – IMPLEMENTATION

### A. General

The term “implementation” is intended to be broadly used for purposes of this study. With the completion of the county-wide comprehensive plan update, a necessary continuing step in the planning process has been accomplished. “Implementation,” however, is likely the most important and never-ending step in this process. The most accurate and complete comprehensive plan will mean very little unless steps are taken to ensure realization of its goals and objectives and of its specific recommendations. From the point of view of the private sector, the term implementation means “making-it-happen.” From the public sector viewpoint, the term implementation means to assist and guide development, by both the private and public sector, by reasonable and prudent application of the various land regulatory measures, which have been adopted.

### B. Adoption of New Local Land Use Regulations

Following adoption of the comprehensive plan by the Planning Commission, necessary steps must be taken to ensure that the proposed Zoning Ordinance and Subdivision Regulations adequately reflect the goals and objectives of the comprehensive plan and the plan’s recommendations. The plan and these regulations will need to be reviewed and revised periodically to reflect new needs and issues in the community. The following is an overview of a number of the issues, which arose during the issue analysis and plan development process, which also require consideration by the Planning Commission as they develop the subsequent Zoning Ordinance and Subdivision Regulations.

#### 1. Mining

While mining activity cannot be prohibited within the city limits, the cities should take full advantage of the opportunity given to the mayor to review all permit applications prior to the permit’s issuance to ensure the best interests of the city as a whole are also being met. Comments must be received by the state within 30 days of when the permits are mailed out for review.

#### 2. Landfills

As long as the county does not participate in the land use planning and zoning process, there will be no opportunity for additional local input regarding the placement of and/or quality of locally placed landfills. It is the recommendation of this plan, that when the county chooses to participate in the land use planning and zoning process, the zoning ordinance be amended to include strict review and compliance guidelines. These guidelines can in no way contradict prevailing state landfill requirements, but may allow for stricter review of an operator’s past record and stricter compliance with state and federal regulations.

### 3. Mobile/Manufactured Homes

As stated in the adopted Goals and Objectives of this plan, the Planning Commission needs to include detailed mobile and manufactured home regulations in the new zoning ordinance, which reflect recent changes in the mobile and manufactured home industry, are sensitive to the needs of those seeking affordable housing, and protective of adjacent property owners.

### 4. Supplemental Regulations

Proposed zoning and subdivision regulations need to adequately address such issues as the clear separation of incompatible land uses, parking, signs, placement of utility lines, storm water management techniques including riverbank and wetland protection and traffic impact study requirements for proposed development in high traffic problem areas.

## C. Future Zoning Map Amendments

This section describes the process of how to use this plan for zoning map amendment decisions and private development guidance.

### 1. Land Use Map vs. Zoning Map

The future land use map and text found in Chapter V project a proposed arrangement of future development based on current needs and trends. The graphic presentation found in the cities' future land use maps and the text proposals present an optimal plan but are not legally binding. The legally binding instrument, defining where uses can and cannot be located within the cities, is the zoning map.

It is the zoning map that an individual must consult when deciding how to develop property. If the intended use is not permitted in the designated zone on the map, the individual may apply for a map amendment. The land use map comes into use in the evaluation of a zoning map amendment request. An application to the planning office begins the map amendment process. Once received, the proposal must go through two review stages including the Planning Commission and the appropriate legislative body.

### 2. Planning Commission Consideration

After receiving a zone change request, the Planning Commission reviews the proposal for consistency with the comprehensive plan's land use maps. In addition, it is checked against the text and the location principles adopted in the land use plan.

The location principles ensure that all proposals meet minimal community standards for new construction. These guidelines are consistent with the expressed goals and objectives found in Chapter IV and serve to protect the larger community from long-term adverse impacts. For example, by restricting or prohibiting uses that use large

quantities of hazardous materials, the community is protected from potential drinking water contamination. Kentucky law specifically details the framework for the zone change process. KRS 100.213 states the findings necessary for a zoning map amendment:

- 1) *Before a map amendment is granted, the Planning Commission or the legislative body or fiscal court must find that map amendment is in agreement with the adopted comprehensive plan, or, in the absence of such finding, that one or more of the following apply and such finding shall be recorded in the minutes and records of the Planning Commission of the legislative body or fiscal court:*
  - a. *That the existing zoning classification given to the property is inappropriate and that the proposed zoning classification is appropriate; or*
  - b. *That there have been major changes of an economic, physical or social nature within the area involved which were not anticipated in the adopted comprehensive plan and which have substantially altered the basic character of such area.*
- 2) *The Planning Commission, legislative body, or fiscal court may adopt provisions which prohibit for a period of two (2) years the reconsideration of a denied map amendment or the consideration of a map amendment identical to a denied map amendment.*

*In zone change matters, the Planning Commission's power is largely advisory. Together as a body, the Planning Commission recommends approval or denial of the proposed change to the appropriate legislative body. Though it has only advisory status, this is not to say that the Planning Commission does not exert significant influence over the development of the county. In Kentucky, the Planning Commission has sole responsibility to adopt the comprehensive plan. The comprehensive plan provides the basis not only for zone change decisions, but also entire zoning ordinances and subdivision regulations. Thus a great deal of Planning Commission authority is exercised through the comprehensive plan. In addition, because the Planning Commission deals regularly with development questions, city councils usually place significant weight on their recommendations. Recommendations can either be to approve the application, deny the application, or approve with modifications.*

### 3. Local Legislative

The authority to pass ordinances regulating activities within the city or county boundaries rests with the appropriate legislative body. Because the zoning map is a part of zoning ordinance, any changes to the map must be approved by the legislative body that adopted the legislative ordinance. In this respect, map changes are like any other changes to local ordinances. All map amendment requests require legislative

body action to become legal. After the final action of the legislative body, two additional steps need to be completed by the Planning Commission. Approved map amendments need to be completed and approved map amendments need to be detailed on the official zoning map. The chairman of the Planning Commission needs to initial these changes. In addition, pursuant to a new law in KRS 100 passed in 1988, all zone changes and other types of land use actions must be filed with the county clerk. The form required for this action will be included as part of the proposed zoning ordinance. Exhibit 8-1 details all the steps included in the map amendment process.

