
**BARTON
COUNTY**

**COMPREHENSIVE
PLAN**

BARTON COUNTY COMPREHENSIVE PLAN

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BARTON COUNTY COMPREHENSIVE PLAN

INTRODUCTION



Barton County Comprehensive Plan

Introduction

INTRODUCTION

A Comprehensive Plan, as referenced in Kansas Statutes Annotated, 12-741, et seq., as amended, serves as a guide to the physical growth and development of a community. The purpose of a Comprehensive Plan is to identify challenges and opportunities related to community development. The public policies developed through the Comprehensive Plan will affect change to meet future needs of residents, property owners, businesses and the county in its entirety.

The Comprehensive Plan policies and future land use map will assist county leaders in substantive, well thought-out decisions that consider long-term implications in the county.

The scope of the plan is comprehensive. The plan should be viewed as a framework for land uses and capital improvements, leaving flexibility for adjustment to accommodate changing needs and opportunities. The plan represents an overall policy document, and all elements and concepts cannot be achieved in the near term, but only through continued effort and follow-through.

The Barton County Comprehensive Plan was adopted by the Barton County Board of Commissioners on August 23, 1999, following an extensive planning process conducted by the Barton County Planning Commission. The planning process included research, public meetings and public participation. The first comprehensive review, which resulted in an amendment, was approved on July 18, 2005, under Resolution 2005-25.

What a Comprehensive Plan Is and Is Not.

The Comprehensive Plan provides a general direction on the county's future development pattern. The plan also provides policies and actions for community decision makers to consider in the future. Some of the Comprehensive Plan's recommendations may be implemented through adoption of land use regulations such as zoning and subdivision regulations. However, the Comprehensive Plan itself does not impose zoning regulations on any property.

Many citizens and county officials alike do not fully understand exactly what a Comprehensive Plan consists of or what it actually does. It is often confused with other documents and regulations, especially zoning regulations. When reviewing this plan, it is helpful to remember the following comparisons.

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The Comprehensive Plan is:

- Prepared and adopted by the Barton County Planning Commission and approved by the Board of County Commissioners.
- A guide or working "blueprint" to future land use and development decisions and community facilities decisions.
- The foundation of any land use regulations adopted by the county.
- Comprehensive, in that it considers all appropriate land uses for the county.
- An informal or living document for the county.

The Comprehensive Plan is not:

- A law; it is a plan.
- A zoning regulation or map. It is a guide for zoning regulations.
- A basis for property tax assessments.
- Inflexible. It can be amended as conditions change.
- Permanent. It should be reviewed at least annually and amended if appropriate.

How to Use a Comprehensive Plan

The Comprehensive Plan is intended as a guide for county decision makers in land use, development and capital improvement decisions. The Board of County Commissioners, the Planning Commission, the County Administrator and all county departments should reference the Comprehensive Plan in many different circumstances, including, but not limited to, the following:

- The adoption or amendment of regulations. Consult the issues, goals and policies in the plan to determine regulatory measures needed for Barton County.
- Viewing changes in their long-range context. While regulatory measures tend to be present day, the plan is a long-range document. Therefore, the plan gives a broader view to changes affecting the county.

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-- Evaluate spending decisions on physical improvements. County decision makers should consider the plan when making decisions relating to infrastructure or capital improvements.

-- Maintaining the development plan. The Comprehensive Plan is intended to be a living document, not a shelf document. The Planning Commission should have an annual meeting to review the planning goals and policies and the future land use map.

-- Reviewing development proposals. Check to see if the proposal meets the goals and policies of the Comprehensive Plan.

Plan Implementation Measures

The Comprehensive Plan for Barton County was approved by the Barton County Board of Commissioners on July 28, 1999. The first comprehensive review, which resulted in an amendment, was approved on July 18, 2005, under Resolution 2005-25.

The Barton County Comprehensive Plan serves as a guide for the physical growth and development of the county. The real value of this guide will be measured in terms of the degree of success the county achieves in adhering to the adopted goals and policies when making future decisions affecting land use. Whenever public decisions are made relating to community facilities, transportation facilities or regulatory activities that may affect land use, the goals, policies and Land Use Map should be considered.

Zoning Regulations

Zoning is the basic mechanism for land use control by counties in Kansas. Zoning divides the county into districts and establishes different land use regulations in each district. Standards are established for the allowed uses in the district, the bulk of structures intensity or density of uses, and setback and other criteria.

Zoning regulations must be tailored to meet the county's unique land use relationships and problems. Zoning has been the topic of considerable debate during the comprehensive planning process. While many problems have been identified relating to land use relationships, a fear has been expressed that excessive regulation may have an adverse impact upon agricultural activities. The solution is to develop a set of regulations that address the problems, but are not overbroad so as to have an unwanted or unforeseen impact.

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Kansas law prohibits Counties from imposing zoning regulations on agricultural land or buildings except for the purpose of enforcing flood plain regulations. Barton County officials have had difficulty enforcing federally mandated floodplain regulations because there was no means of tracking new construction. Zoning regulations are being used to establish a simplified zoning permit procedure that will allow tracking development without imposing any unnecessary burden.

The Barton County Zoning Regulations were adopted by the Barton County Board of Commissioners on June 26, 2000, Barton County Resolution 2000-12. A comprehensive review of the regulations began in October 2008 and when completed, Version II of the Barton County Zoning Regulations was adopted on January 28, 2013, under Resolution 2013-04.

The cities of Great Bend, Hoisington, Ellinwood, and Claflin have adopted zoning limits that include unincorporated areas of Barton County. These areas are specifically excluded from Barton County Zoning Regulations. Questions and/or concerns about these areas should be directed to the appropriate city government and/or city planning commission. (See Maps on Pages 58- 61)

Planned Community Regulations

It is important to prepare for growth by assuring that tools are in place to direct development to occur in areas that can be provided with the necessary facilities and services. If transportation facilities and infrastructure are not readily available, then developers should be required to provide them before a project is occupied by the end user. The planned community pre-approval and final approval platting process is the primary vehicle to facilitate the dedication of rights-of-way and easements for streets, roads and utilities, as well as assuring that the requisite infrastructure is in place prior to occupancy of any new development.

The Barton County Subdivision Regulations were adopted by the Barton County Board of Commissioners on June 26, 2000, Barton County Resolution 2000-13. As part of the comprehensive review process and approval of the Barton County Zoning Regulations, Version II, the Subdivision Regulations were omitted and replaced with a new zoning district called a Planned Community District. The content of the Subdivision Regulations were merged into the Administration Article as well as the new district and a decision was made to change the name from Subdivision to Planned Community District.

The cities of Claflin, Ellinwood, Hoisington and Great Bend have adopted zoning limits that include unincorporated areas of Barton County. These areas

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are specifically excluded from Barton County Zoning Regulations. Questions and/or concerns about these areas should be directed to the appropriate city government and/or city planning commission.

Continuing Planning

The adoption of the Barton County Comprehensive Plan does not complete the planning process. The plan should be a living document and the process should be continual. Kansas law requires that the plan be reviewed each year, and at the time of each review it should be updated if appropriate. The Barton County Planning Commission should devote one meeting a year to a comprehensive review of the plan.

Elements

In order to adequately plan for the future of Barton County, the conditions and trends that currently exist and may have an impact upon the county were first examined. These conditions and trends were examined not only in the context of how they affect the present, but also in their probability of impacting the immediate and distant future. These conditions and trends combined with community aspirations, in the form of goals and policies, provide the basis for the comprehensive planning process. The following chapters will recommend planning goals and policies for Barton County, identify specific recommendations for future land use in the county, and summarize the conditions and trends examined and used by the Barton County Planning Commission in making those recommendations.

BARTON COUNTY COMPREHENSIVE PLAN

PLANNING GOALS AND POLICIES



Barton County Comprehensive Plan

Planning Goals and Policies

Goals and Policies of the Barton County Comprehensive Plan

In this context, goals will state the purposes or objectives of the planning process while policies will provide the guidelines for future decisions, and will be directed toward accomplishing the goals. Goals and policies are recommended within each of the categories set out for the identification of issues.

The Planning Commission is responsible for developing and reviewing the Comprehensive Plan. The Board of County Commissioners of Barton County must approve the Comprehensive Plan and is also the body responsible for administering many of the policies adopted therein. Consequently, it is recommended that, in the future, the Planning Commission and the Board of County Commissioners jointly formulate the goals and policies recommended in the Comprehensive Plan.

General Planning Goal

The quality of life in the county is the underlying theme of many of the issues identified during the planning process. It has also become apparent that citizens of Barton County place a high value on their individual freedoms and property rights. Based upon those factors, the following is recommended as an overall goal to guide the planning process in Barton County:

General Planning Goal--

The overall goal for planning is to produce within the range of democratic and constitutional processes a physical environment that provides for the optimum in quality of life for all citizens of Barton County. The planning process must emphasize the public welfare while safeguarding individual rights and vested interests.

Economic Goals and Policies

Much of the discussion and nearly all of the issues identified regarding the economy of the county relate to the impact of outside forces on the county, and the need to pursue economic development activities to replace those that have declined or left the area. Agriculture and petroleum industries are those mentioned most often. However, it has also been noted that railroad activity has continued to decline and some tracks have been abandoned. The county's population is suffering a gradual decline. However, there has been an increase in the numbers of employed persons since 1990. The workforce has gone up and down over the years with a 4.8% drop from 1990 to 2000 to a 9% increase in 2010 with 15,048 employed in various industries. Overall, the majority employed work in the oilfield, agriculture, healthcare, retail and government

Barton County Comprehensive Plan

Planning Goals and Policies

enterprise industries. Declines are present in the transportation & warehousing, professional & technical services as well as the education services, arts, entertainment & recreation sectors. Based upon all of the preceding factors, the following economic goal and policies are recommended:

Economic Goal—

Planning for Barton County will strive to provide a strong and diverse employment base with sufficient potential for growth to provide a broad choice of career opportunities to the present and future citizens of the county. The growth shall occur without unduly compromising the quality of life of Barton County.

policy e-1. Barton County will provide support and encouragement to local Chambers of Commerce and others involved in economic development activities in the county. Emphasis will be placed on industries and services with markets beyond the county boundaries.

policy e-2. Planning in Barton County will designate specific areas for future industrial and commercial growth.

policy e-3. Barton County will enforce regulations designed to protect the county's surface and ground water supplies.

policy e-4. Barton County will provide support and encouragement to cities in the county in their efforts to preserve and enhance their central business districts.

policy e-5. Barton County will continue to support the Great Bend Municipal Airport.

policy e-6. Barton County will work with cities and private industry to assure that the infrastructure is present for industrial expansion.

policy e-7. Barton County will provide support and encouragement for the growth of tourism.

policy e-8. Barton County will continue to provide support and encouragement for educational opportunities within Barton County.

policy e-9. Barton County will continue to support the growth of diversified health-related services within Barton County.

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Planning Goals and Policies

Housing Goals and Policies

Housing issues focus on two general factors. First, there is not a broad choice of housing types available and there are shortages in particular classifications. Second, housing is substandard in some areas of the county. The existence of areas of substandard housing has also been identified as a problem. The lack of choices of housing has been identified as an obstacle to economic development. The following housing goal and policies are recommended:

Housing Goal—

Planning in Barton County will strive to create a broad choice of quality housing opportunities at all price levels for present and future citizens of the county.

policy h-1. Barton County will provide support and encouragement to cities, industries and private developers in their efforts to create additional housing opportunities.

policy h-2. Planning in Barton County will designate specific areas for the development of additional housing

policy h-3. Barton County will enforce zoning regulations to reduce substandard housing.

Transportation Goals and Policies

Transportation facilities are of extreme importance to the general economy of the area and the improvement of those facilities is imperative for future growth. The following transportation goal and policies are recommended:

Transportation Goal—

Barton County will strive to provide an efficient and well-maintained multi-modal transportation system available to all citizens, institutions and businesses.

policy t-1. Barton County remains interested in either a super two or four-lane highway extending from Wichita to I-70 in the vicinity of Russell and Hays. The most immediate project is a super two highway from Nickerson to just north of Sterling on HWY 96.

policy t-2. Barton County should support outside funding

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Planning Goals and Policies

and development of highway bypasses to divert through traffic around congested areas in cities.

policy t-3. A truck route study should be conducted to determine if it is possible to direct heavy truck traffic to identified routes in order to reduce maintenance on rural roads.

policy t-4. Barton County will continue to support the Great Bend Municipal Airport.

Land Use Goals and Policies

Since the basis of the principle policies and recommendations of a Comprehensive Plan are oriented to land use, this category is perhaps the most important. Identified issues relate to the protection of resources, the elimination of blight, and the adoption of means to provide reasonable controls for future development activities. Concerns have been raised that regulations to implement the Comprehensive Plan should not unreasonably burden landowners, especially farmers. The following land use goal and policies are recommended:

Land Use Goal—

The Barton County continuing planning process will seek reasonable mechanisms to accommodate, direct and guide future growth and to protect natural resources and address blighting influences without placing an undue burden on property owners.

policy l-1. Barton County will enforce adopted regulations establishing standards for commercial and industrial development activities.

policy l-2. Barton County will improve the system for monitoring flood plain development and enforcing regulations relating to such development.

policy l-3. Barton County will work with state and federal agencies to assure the protection of Cheyenne Bottoms Wildlife Area and the Quivira National Wildlife Refuge.

policy l-4. Barton County will enforce the sanitary regulations to ensure protection of surface and ground water resources.

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Planning Goals and Policies

policy 1-5. Barton County will enforce adopted planned community district regulations to assure that appropriate improvements are guaranteed concurrent with urban and rural development.

policy 1-6. Barton County will enforce adopted land use regulations and standards that cover the unincorporated area.

policy 1-7. Barton County supports efforts to maintain and develop high-speed telecommunication and similar technology.

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FUTURE LAND USE PLAN

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Future Land Use Plan

Future Land Use Plan

The Future Land Use Plan is directed toward the unincorporated areas of Barton County. This is not to infer that the cities and their urbanized areas have been overlooked, rather the plan recognizes that each of the cities is unique and is vested with the authority to plan independently. The plan recognizes that the cities provide the primary stimulus for urban growth, and that cities are the best equipped to provide most community facilities and services.

Barton County has experienced population decline over the years due primarily to changes in the national agricultural and petroleum industries. The county can anticipate a reversal of this trend if economic development activities are successful and substantial industrial growth occurs. The county has recognized the importance of taking proactive planning measures to deal with the challenges presented by industrial expansion and the associated growth in other land use categories.

Unplanned growth can eventually destroy a sound economic structure by requiring a high level of urban services throughout a widespread area of development. Development that does not recognize natural constraints may cause the public to incur substantial costs, at a later date to remedy problems created and may carry with it unnecessary social costs. Moreover, development that occurs without providing the necessary public services will place undue pressure on the remainder of the county to provide those services.

Land use is analyzed by classifications. In cases where a parcel of land contains more than one use, the primary or predominant use determines the classification. The following classifications describe the land uses in Barton County:

- Agricultural: Agricultural lands are lands and structures used for agricultural purposes, including farm homes.
- Residential: Residential lands are lands occupied by residences, whether they are in the form of single family or multiple family dwellings; site built structures or manufactured homes; or group quarters.
- Public and Institutional: Public and institutional lands include lands that contain governmental facilities, schools, parks and recreational areas, churches, hospitals and cemeteries. Roads, streets and utility easements are not classified as public and institutional, but are classified based upon the land uses that abut them.
- LMSC Light Manufacturing Service Commercial lands are designed to promote and encourage diverse economic growth through coordinated and efficient use of land, and colocation of light

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Future Land Use Plan

industrial and commercial activities.

--Industrial

Industrial lands are those occupied by manufacturing plants, warehouses, and industrial services or storage. For the purposes of this study, the industrial land use category includes salvage yards and scrap yards as well as equipment suppliers and storage yards for equipment related to the petroleum industry.

Residential, commercial and industrial land use patterns have come under close scrutiny in the planning effort. Each of these classifications provides its own unique planning challenges. The planning process identified mechanisms to resolve many of the problems presented by the interface and growth of these land uses.

There is only one freestanding commercial area in the unincorporated area of Barton County. Most of the commercial facilities are found mixed with small industrial facilities along transportation corridors radiating outward from the cities of Great Bend, Hoisington and Ellinwood. Because of these established land use patterns, the planning process has not attempted to deal with land uses separately in these corridors, but has classified them as Light Manufacturing Service Commercial (LMSC). Recommendations have been formulated to perpetuate their existence as LMSC while addressing some of the challenges they present.

Future Land Use Map

The Future Land Use Map identifies desirable land use relationships for future development and redevelopment in Barton County. For mapping purposes, land uses are grouped into five broad classifications: 1) Agricultural, 2) Residential, 3) Public and Institutional, 4) LMSC and 5) Industrial. The LMSC classification, as applied here, includes Commercial and Light Industrial land uses.

Most of the unincorporated area of the county has been classified as Agricultural. Residential land uses are planned adjacent to existing residential development and the cities of Great Bend, Hoisington, Ellinwood and Claflin avoiding flood prone areas as much as possible. There is no expansion planned in the classification of Public and Institutional land uses. LMSC are planned along the existing corridors with anticipated expansion and infill in these areas. Industrial land uses are expected to expand where they currently exist.

It is important to recognize that the Future Land Use Map is not set in stone. It is intended as a guide to assist decision makers when reviewing development proposals. Lands that are not so designated may be appropriate for particular land uses and each proposal must be evaluated on its own merits.

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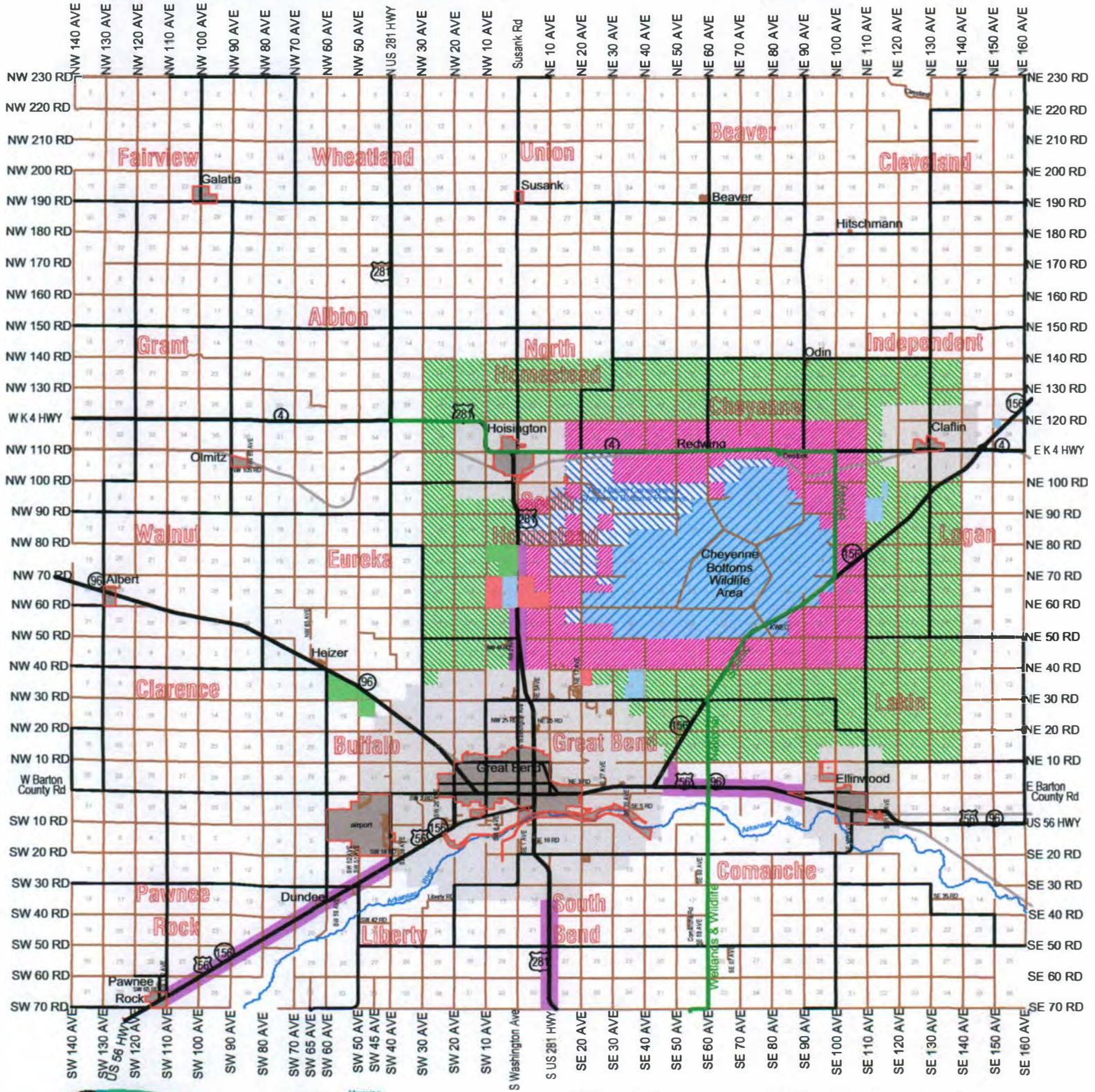
Future Land Use Plan

This fact is particularly true where major economic development proposals are concerned. It is impossible to anticipate all of the locational needs of a particular industry in the planning process.

Barton County Future Land Use Map

Adopted February 22, 2016

- Agricultural
- Residential
- Light Manufacturing Service Commercial
- Industrial
- WECS - No Build Zone
- WECS - Conditionally Permitted Zone
- Public & Institutional
- Incorporated Cities
- Extra Territorial Zoning Boundaries
- Wetlands & Wildlife National Scenic Byway
- The Nature Conservancy Cheyenne Bottoms Preserve
- Cheyenne Bottoms Wildlife Area



Mapping
 1400 Main St Room 102 Great Bend, KS 67530
 v: 620-793-1802 f: 620-793-1807 e: mapinfo@bartoncounty.org
 The contents of this map were developed for the use of various departments of Barton County. Property descriptions and other information as indicated on the map are unofficial and are not intended for conveyances. This map is not a legal survey. Barton County does not assume responsibility for any use of the map beyond the regulations or guidelines established for the county departments.

911 addresses reflect the distance from the E/W & N/S dividing roads in 1/100's of a mile.
 The E/W dividing road is Washington Ave-Susank Rd. The N/S dividing road is Barton County Rd. The even number addresses are on the east and north sides of the road and the odd numbers are on the west and south sides of the road.
 ex: 245 NE 30 Rd (BCCC) is almost 2.5 miles east of N Washington Ave on the south side.



BARTON COUNTY COMPREHENSIVE PLAN

CONDITIONS AND TRENDS



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Conditions and Trends

CONDITIONS AND TRENDS

The identification of planning issues facing Barton County is an important step in the planning process. Planning goals and policies must derive from genuine issues facing the county. Four major categories have been used to classify issues that have been identified and planning goals and policies have been developed in each of the four categories: Economic, Housing, Transportation, and Land Use.

In order to adequately plan for the future of Barton County, the conditions and trends that currently exist and may have an impact on the county were first examined. These conditions and trends were examined, not only in the context of how they affect the present, but also in their probability of impacting the immediate and distant future.

The following chapters summarize the conditions and trends that were considered in setting planning goals and policies for Barton County and making specific recommendations for future land use in the county: land use and building intensity, population, housing, the economy, natural resources, and community facilities and transportation.

Most of the statistical research used in the Conditions and Trends section was accumulated from The Kansas County Profile Report which contains 12 categories of information: Population, Vital Statistics and Health, Housing, Education, Social Environment, Business, Employment, Income, Banking, Government, Crime, and Agriculture. This report is updated annually by The University of Kansas, Institute for Policy & Social Research and can be found on the Barton County website under the Economic Development tab; Barton County Facts.

An additional chapter containing results from the series of workshops held in 1998 that were used to formulate the initial Comprehensive Plan for Barton County, approved by the Barton County Board of Commissioners on July 28, 1999, may be found in the Appendix.

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Conditions and Trends

Land Use and Building Intensity

LAND USE AND BUILDING INTENSITY

Existing land use patterns necessarily provide a basis for a comprehensive plan because the uses and patterns change slowly. Moreover, established land uses tend to establish precedents for the future. An analysis of land use and building intensity highlights conflicts that may exist between the various uses of land in Barton County and provides the community with some of the essential indicators of solutions to some of the challenges that confront it. A study and analysis of land use relationships in Barton County provides the foundation for the development of the Comprehensive Plan Update, and, coupled with the issues facing the county, gives the basis for the formulation of goals and policies to guide future land use decisions.

Land use is analyzed by classifications. In cases where a parcel of land contains more than one use, the primary or predominant use determines the classification. The following classifications describe the land uses in Barton County:

- Agricultural: Agricultural lands are lands and structures used for agricultural purposes, including farm homes.
- Residential: Residential lands are lands occupied by residences, whether they are in the form of single family or multiple family dwellings; site built structures or manufactured homes; or group quarters.
- Public and Institutional: Public and institutional lands include lands that contain governmental facilities, schools, parks and recreational areas, churches, hospitals and cemeteries. Roads, streets and utility easements are not classified as public and institutional but are classified based upon the land uses that abut them.
- LMSC: Light Manufacturing Service Commercial lands are designed to promote and encourage diverse economic growth through coordinated and efficient use of land and collocation of light industrial and commercial activities.
- Industrial: Industrial lands are those occupied by manufacturing plants, warehouses and

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Conditions and Trends

Land Use and Building Intensity

industrial services or storage. For the purposes of this study, the industrial land use category includes salvage yards and scrap yards as well as equipment suppliers and storage yards for equipment related to the petroleum industry.

Land Use Planning

Traditional planning philosophy suggests that land uses of similar classifications need to be grouped together. There are two primary reasons for this philosophy. First, similar land use classifications require similar facilities and services. Moreover, such a grouping provides the ability to protect particularly vulnerable land uses from the impacts caused by exposure to the more intense activity generating land uses.

Industrial land uses tend to require access to distribution facilities and transportation networks for the delivery of raw materials and the distribution of their products. Industrial parks are usually located adjacent to highways and rail services. They may locate near airports for the same reasons. Many industrial uses require large quantities of water for cooling or processing, and most require higher volumes of water to be available for fire protection. Many industries have unique utility needs, and may require high voltage or three-phase electric service, or high volume natural gas service. Many communities provide different waste disposal services to industries than to other land uses. Industrial services such as tool and die shops and machine shops may serve several manufacturing customers in the same area.

Commercial land uses require convenient access to its customer base, and by grouping together can take advantage of common facilities such as parking lots. Retail stores and services benefit from a shared customer base. By locating in nodes or centers they can provide the convenience of one-trip shopping to their clients and customers. They also tend to have different trash disposal and utility needs and some may require high volumes of water or high capacity sewer services.

Residential land uses require an intricate network of infrastructure that is different from that required for industrial or commercial land uses. Streets, water lines and sanitary sewers in residential areas are laid out to serve the smaller residential lots.

Local streets, pedestrian ways and sidewalks provide safe movement within the neighborhoods without the exposure to through traffic that is necessary in industrial and commercial areas. Neighborhood schools and

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Conditions and Trends

Land Use and Building Intensity

parks are amenities necessary to residential districts.

Many industries generate noise, emissions, light and activity that may impact the peaceful enjoyment and quality of life in residential areas. Truck traffic in industrial areas does not mix well with pedestrian and automobile traffic in residential neighborhoods. Heavy trucks can create maintenance problems on local residential streets. Therefore, residential home sites near industrial areas are considered less desirable and are harder to market than those separated from industries by distance or buffering land uses. Good planning will strive to separate industrial traffic from residential traffic.

Commercial land uses also generate traffic, noise, light, odors and activity that is not compatible with traditional residential neighborhoods. However, a case can be made for mixing some kinds of residential land uses with retail shopping areas. Some business owners prefer to reside at their place of business. Citizens who cannot drive or do not want to be dependent upon the automobile may prefer to live within a central business district or adjacent to a retail shopping area. The activity and convenience of commercial districts often attracts young adults or senior citizens that are not living with traditional families.

Agricultural land can also be impacted by other land uses. Residential subdivisions adjacent to agricultural property may create problems. Unconfined pets can cause damage to livestock and complaints may arise regarding livestock odors, the application of chemicals, or the noise of farm machinery operation.

To some degree, the grouping of land uses by classification occurs naturally. Retail commercial uses traditionally sought downtown locations. Industrial land uses with common needs tend to locate together. The most desirable residential areas are within neighborhoods where families can interact. Nevertheless, it is important that the planning process acknowledge and encourage such grouping to the extent it enhances the quality of life in the county.

Land Use Quantitative Analysis

For the purposes of this analysis, land uses are approximated based upon the predominant use and ancillary uses are not categorized. For example, although petroleum extraction is prevalent in most areas of the county, most of the land containing oil and gas wells is under crop production or is used as pastureland and, therefore, is classified as agricultural.

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

The unincorporated area of Barton County contains approximately 886 square miles and the nine incorporated cities collectively occupy approximately 14.5 square miles. The largest land use in the county is agriculture, 558,977 acres in 2010. In the unincorporated area of the county, agriculture use represents approximately 99% of the land use (873.4 square miles). The second largest land use in the county is public land, most of which is found in the Cheyenne Bottoms Wildlife Area which contains 19,857 acres (approximately 31 square miles). The Cheyenne Bottoms Wildlife Area is owned by the state of Kansas and is operated by the Kansas Department of Wildlife, Parks and Tourism as a wildlife management area. The Nature Conservancy, a private internationally recognized non-profit organization, owns and manages 8,000 acres adjacent to the Cheyenne Bottoms Wildlife Area that is classified as agricultural land for the purposes of this study. The predominance of agricultural land within the county is not surprising considering the relative size of the communities within the county and their distribution across the county.

The city of Great Bend covers approximately 10.7 square miles, including the Great Bend Municipal Airport. The other communities within the county collectively cover approximately 3.8 square miles. The Cheyenne Bottoms Wildlife Area covers just over 31 square miles. This makes a total of approximately 46 square miles that are used by city and public uses in the county. Another 12.6 square miles would account for most of the development that is not agricultural that exists within the unincorporated area of the county.

Non-farm development in the unincorporated portion of Barton County includes a broad mix of land uses from all categories. The most intense development radiates outward from the Cities of Great Bend, Hoisington and Ellinwood along highways. There is also non-farm development in the unincorporated communities of Beaver, Dundee, Heizer, Hitschmann, Odin and Redwing.

Agricultural Land Uses

Agriculture is a major segment of the Barton County economy. There are 694 farms in Barton County according to the 2012 Census of Agriculture.

Land in farms in Barton County totals 566,088 acres, with the average size of a farm in Barton County reported at 816 acres, about 10 percent larger than the average size of farms statewide. By land use, cropland accounts for 74.4 percent of the land in farms in Barton County while pastureland is reported at 21.9 percent and other uses at 3.7 percent.

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

Winter wheat leads cropland use in Barton County with nearly 164,000 acres planted to wheat, 13th among Kansas counties and 38th among all counties in the U.S. more than 54,000 acres were planted to grain sorghum in Barton County, 6th among Kansas counties and 14th among U.S. counties. Soybeans and forages (hay, haylage, silage, and greenchop) each account for around 45,000 acres in Barton County.

Cattle and calves lead the county's livestock inventory with nearly 115,000 animals, ranking 12th among Kansas counties and 92nd among U.S. counties. The number of farms in Barton County producing hogs and pigs has fallen to the point where inventory statistics are no longer reported to avoid disclosing data for individual operations. There were, however, 305 horses and ponies and 837 laying hens reported in Barton County in 2012.

Agricultural land use in Barton County was impacted by changes in national legislation in 2002 that removed requirements to plant and harvest traditional crops on specific crop acres in order to participate in federal agriculture programs. In Barton County and across Kansas, agricultural producers changed traditional crop rotations and increased crop diversity. Agricultural producers are able to respond more quickly to changing market or weather conditions.

Other changes affecting agricultural land use in Barton County and across Kansas result from the adoption of new technology and agricultural practices, particularly no-till farming, and challenges created by factors that cannot be dealt within the county planning process.

The protection of farmland and agricultural operations from other land uses that may impact them or diminish the quality or quantity of farmland is the primary challenge to agricultural land use that can be dealt with in the planning process. Generally, such threats occur in areas where there are pressures for urban, including residential, development near existing population centers. There is evidence that expansion of non-farm family residential land use within a few miles of the city of Great Bend and in the immediate vicinity of the cities of Ellinwood and Hoisington may intrude into agricultural land. Even when development is directed toward marginally productive agricultural land, the resulting decrease in agricultural production, as well as the decreased need for agricultural inputs and services, may have a greater impact on the local economy than first anticipated. There is also a growing concern in Kansas over the purchase of agricultural land to remove that land from agricultural use, but not develop the land for other purposes.

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

The state of Kansas has a “right-to-farm” statute to protect agricultural activities from nuisance lawsuits. The planning process can be used to anticipate the potential for conflicting uses and avoid creating problems that will be difficult to remedy in the unincorporated area of the county.

Residential Land Uses

Land used for residential use forms the neighborhoods where daily living is carried out. These are the areas that can be easily impacted by neighboring land uses of a more intense character, such as commercial and industrial uses. Therefore, it is desirable to plan for separation of residential neighborhoods from commercial and industrial areas when feasible. That separation can be achieved by adding landscaped setback areas known as green space, by placing public or institutional uses between the residential and commercial or industrial areas, or by buffering the residential dwellings from the more intense land uses with medium intensity residential or commercial uses such as office buildings or apartments. If separation is not feasible, “screening” such as walls, fences and dense landscape screens may be used to screen the view or soften the impact of the more intense commercial or industrial activities.

The disbursement and location of residential dwellings may impact agricultural land uses and create problems relating to public improvements and services. Scattering non-farm residences throughout a productive agricultural area may require more land to be taken out of agricultural use than just the land needed for the houses, in order to establish a buffer between agricultural activities and the homes. As agricultural land is converted to non-farm residential use, the potential for complaints about noise, odor, dust, chemical application, livestock movement, machinery operation and other agricultural activities may increase. The number of access points created when non-farm residences are scattered along county and township roads can create traffic hazards and road maintenance problems, as well as difficulties for agricultural equipment that must utilize those same roads to access agricultural land. The establishment of minimum lot sizes through zoning regulations can be used to balance the desire for non-farm residential dwellings in the unincorporated area of the county, while diminishing the impact of such development on agricultural land use. If residences are established in areas without public improvements and services, pressure may be brought to provide those amenities, and the general public often is burdened with the cost.

Planned community district regulations can eliminate this problem by requiring that developers install improvements concurrent with the development of planned communities before lots can be sold.

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

A substantial majority of the non-farm residential land uses in the unincorporated area of the county are single-family homes although there are also a large number of manufactured homes. Most of the residential land uses exist in the townships surrounding the city of Great Bend. In recent years, there has been growth in these areas of the county. Should economic development activities be successful, these are the areas of the county that are likely to experience the greatest growth rate.

Public and Institutional Land Uses

As previously indicated the largest area of public land use in Barton County is the Cheyenne Bottoms Wildlife Area, owned by the state of Kansas and managed by the Kansas Department of Wildlife, Parks and Tourism as a wildlife management area. The Cheyenne Bottoms Wildlife Area contains 19,857 acres (approximately 31 square miles).

Other examples of land uses in the unincorporated areas of Barton County that fall into the public and institutional land uses classification include: Barton Community College and the Camp Aldrich Conference Center, the Barton County Historical Society's Village and Museum, the 4-H Buildings and 4-H Grounds, Lake Barton Golf Club, the Claflin Golf Course, Pawnee Rock State Historic Site, Kansas Wetlands Education Center and the churches and cemeteries scattered throughout the county.

Commercial Land Uses

Commercial land uses in the unincorporated portions of Barton County are primarily located adjacent to or near the cities of Great Bend, Hoisington and Ellinwood, along the highways leading into those communities. In these areas commercial land uses are typically mixed with industrial uses. This type of development is typical of cities in Kansas and across the country, and is known as strip development. Strip developments develop incrementally over time to take advantage of the direct access to the highway. They are initially developed with little regard for the interface of each business with the one next door, and typically, none of them, standing alone would be said to have an impact upon highway safety in the area. Nevertheless, in aggregate they can have a serious impact upon highway safety, and they frequently impair the efficiency of the highway for the purpose it was originally intended, to provide for the transport of people and goods. Multiple access points in these areas create multiple turning movements and thus, multiple points of conflict along the road. If the roadside becomes too congested, traffic is slowed and becomes erratic. In recognition of that fact, the Kansas Department of Transportation has developed driveway guidelines and is attempting to regulate direct access

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

to state highways whenever new development is proposed.

Strip developments along highways generally provide relatively low cost commercial and industrial real estate and attract occupants that in some cases are marginal businesses that are not able to maintain the property as well as their competitors who are located in clustered centers or central business districts. Strip developments are also the location of choice for many auto salvage yards. These areas in Barton County have been identified as areas of concern. The largest areas of strip development occur north and south of Great Bend along U.S. Highway 281, and west of Great Bend along Kansas Highway 156. In these areas, industrial and commercial land uses line the highways and access was previously unregulated.

Industrial Land Uses

Industrial land uses in unincorporated Barton County, like commercial land uses, are primarily located adjacent to or near the Cities of Great Bend, Hoisington and Ellinwood, along highways. They are generally mixed with commercial uses, although some are freestanding plant facilities. When mixed with commercial land uses in strip developments they may create some of the same problems that the commercial uses do.

Industrial land uses are considered the most intense and the most likely to be incompatible with land uses of lesser intensity. Therefore, it is generally desirable to use the methods discussed in the section describing residential land uses to create a separation or screen between industries and neighboring properties of less intensive uses. There is a wide variety of industry in Barton County, ranging from intensive industrial land uses, such as brick manufacturing, cable, wire and electrical insulation products, pet product production and petroleum extraction, to manufacturing and assembly plants where all industrial operations are carried out mainly within enclosed buildings. The impact upon adjacent uses depends on the character of the particular industrial operation. Large factories or industries generating heavy truck traffic, those producing odors, dust, noise or other emissions, and those requiring the use of open land for their operations or storage of products tend to have the greatest impact.

Industries also have the greatest potential to stimulate the economy, so it is important that any regulation of industrial land uses be based upon reason and not be so restrictive as to discourage industrial development. Regulations that are too broad in scope can play a role when an industry is making locational choices.

Barton County Comprehensive Plan

Conditions and Trends

Land Use and Building Intensity

Industrial expansion tends to generate spin-off development in the form of additional industrial, commercial, and residential development. New industry or expanded industry will often create a need for additional industrial services. Industrial growth or expansion brings workers and their families to the area and creates a need for additional housing in the communities in the county as well as the unincorporated area of the county. Additionally, infrastructure and public services may also be needed when industrial growth or expansion occurs in the county or when such growth is accompanied by an expansion in residential land use. The increased population will stimulate retail growth and opportunities for service-related businesses. Each of these factors must be taken into consideration when planning for future development.

By adopting Zoning Regulations, Barton County has taken a proactive approach to accommodate and manage future development and growth.

Barton County Comprehensive Plan

Conditions and Trends

Population

POPULATION

The analysis of population trends characteristics provides Barton County with important indicators of community trends. The relationship of population variables and other factors affecting the county is so entwined that population studies, and particularly, population projections cannot stand alone. They must be considered along with other factors such as economic development efforts, national trends, community facilities, housing availability and transportation improvements, in order to provide a base for planning for the future.

It is important to understand the characteristics and trends of the population so that we can develop policies that encourage positive characteristics and minimize unfavorable trends.

Population Trends

In recent years, the Barton County population has been decreasing. Population in the county during 2010 was 27,674, down 2.0% from 2000. The State of Kansas, at the same time, grew to 2,853,118 up 6.1% in the same time period. This data suggests that younger citizens are taking up residence in the larger metropolitan centers. A more recent population count estimate reflects a .5% further decrease by the end of 2013 in the Barton County population.

The population data from Barton County Cities and Towns is as shown:

Cities & Towns Population

Cities	1980	1990	2000	2010	2013*
Albert	236	219	181	175	176
Clafin	764	729	705	645	641
Ellinwood	2,508	2,497	2,164	2,131	2,114
Galatia	69	64	61	39	39
Great Bend	16,608	16,098	15,345	15,995	15,901
Hoisington	3,678	3,292	2,975	2,706	2,685
Olmitz	140	140	138	114	115
Pawnee Rock	409	375	356	252	247
Susank	52	58	57	34	34
Total	24,464	23,472	21,982	22,091	21,952
Barton County	31,343	29,382	28,205	27,674	27,509

*estimated

(Source: Census.gov)

Barton County Comprehensive Plan

Conditions and Trends

Population

The population from Barton County Townships is as shown:

Townships	Barton County Population by Township				
	1970	1980	1990	2000	2010
Albion	112	90	60	58	63
Beaver	249	185	119	108	99
Buffalo	420	529	573	490	417
Cheyenne	430	316	274	238	207
Clarence	159	163	142	125	117
Cleveland	141	91	78	69	42
Comanche	401	362	488	452	462
Eureka	151	147	146	116	82
Fairview	187	156	126	129	89
Grant	142	119	78	79	55
Great Bend	1,523	1,918	1,865	1,839	1,752
Independent	1,049	914	850	844	758
Lakin	426	346	305	299	262
Liberty	291	316	372	321	262
Logan	203	195	151	176	138
North Homestead	163	133	141	133	111
Pawnee Rock	582	536	540	544	373
South Bend	533	750	786	682	674
South Homestead	312	480	380	343	322
Union	217	161	145	128	101
Walnut	599	556	525	474	403
Wheatland	114	86	82	74	53
Totals	8,404	8,549	8,226	7,721	6,842

(Source: Census.gov)

The main source of persons migrating into Barton County is Hispanic. In 2010, there were 3,683 Hispanics in residence, up 57.1% from the 2,344 present in 2000. This fact highlights the notion that out-migration of resident young people has a greater impact than would first appear.

Aging

Aging is another factor that has changed in Barton County's workforce. Persons who are 65 years and older numbered 4,688 in 2010, compared to 5,043 in 2000. This represents a 7% decrease.

The following is the cohort of the Barton County population since 1970:

Barton County Comprehensive Plan

Conditions and Trends

Population

BARTON COUNTY POPULATION BY AGE

AGE COHORT	1970	1980	1990	2000	2010
75+	1,313	1,782	2,248	2,560	2,539
65-74	2,090	2,500	2,651	2,483	2,149
60-64	1,459	1,562	1,350	1,229	1,533
55-59	1,582	1,682	1,540	1,326	1,883
45-54	3,647	3,335	2,998	3,642	4,186
35-44	3,579	3,133	3,798	4,302	2,844
25-34	3,277	4,642	4,536	2,789	3,248
20-24	1,671	2,857	1,567	1,541	1,658
15-19	3,057	2,878	1,844	2,378	2,007
10-14	3,468	2,330	2,226	2,221	1,826
0-9	5,520	4,642	4,624	3,734	3,801
Total	30,663	31,343	29,382	28,205	27,674

(Source: U.S. Bureau of Census)

Urbanization

The process for rural people moving into town is still under way in Barton County. In 2010, 22,091 people lived in the urban towns and cities in the county. That number is up from 21,982 in 2000, representing a .5% increase. That, working the math, means the rural population dropped from 6,223 in 2000 to 5,583 in 2010, or a reduction of 10.3%.

Sales Tax "Pull Factor"

The Barton County "Pull Factor" (that is, the per capita Sales Tax/Kansas state per Capita Sales Tax) was 1.31 in 2013, increasing from a factor of 1.02 in 2000, an increase of 28%. The "Pull Factor", as a barometer of economic activity, is favorable. As it passes above 1.0, Barton County begins to keep more money in the county than it sends out.

Population Projections

The Kansas Statistical Abstract 2013 projects the population of Kansas to grow from 2,831,749 million in 2010 to 3,238,356 million in 2040, an increase of 14.36%. In the face of these numbers, the Barton County Projection looks grim. The Abstract offers the following projections:

Barton County Comprehensive Plan

Conditions and Trends

Population

Barton County Population Projection

Year	Projection
2010	27,674
2015	26,817
2020	26,019
2025	25,001
2030	23,958
2035	22,889
2040	21,685

Overall Decrease of 21.6% from 2010 - 2040

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Conditions and Trends

Housing

HOUSING

An important measure of the quality of life of a community is the availability of housing adequate to meet the needs of its current and future citizens. Housing has economic development implications. Industries looking to relocate often list the availability of housing as an important factor in their decisions.

In 2010 there were a total of 12,696 housing units in Barton County, down 1.51% from 2000. Of these housing units, 1,413 (12%) were vacant according to the 2010 U. S. Census. The remainder provided shelter for 11,310 households. A 2010 Housing Needs Study showed a vacancy rate of only 11.7%. In either case, there would appear to be a surplus of housing in Barton County. A 2% vacancy rate is considered adequate to deal with normal immigration and movement within a community. (Kansas Statistical Abstract, Sept. 2013)

Of the 11,283 occupied housing units, 7,971 are owner occupied and 3,312 are rental units. The median value of owner-occupied housing units in 2008 was \$73,600. The home ownership rate for 2010 was 70.65%.

Great Bend had 7,113 housing units, up only 33 units (.46%) from 2000.

THE ECONOMY

The economy represents the single most influential factor affecting the growth of a community, and is, therefore, the factor which most affects future land uses. An analysis of the economy is an essential element of the planning process. A community's economy does not stand alone, but is greatly influenced by the state, national and world economy.

The Kansas Economy

The Kansas economy has remained strong in recent years. Non-farm jobs have experienced growth, and the unemployment rate was 3.8% in 2013. Jobs in the mining sector, which includes oilfield activities, represent the strongest job growth with construction, information technologies, real estate, education services, health care and social services assistance also showing steady growth. Manufacturing, transportation, warehousing, waste management, arts and entertainment and state and local government continue to be areas of steady growth with no significant changes. Food service, utilities, wholesale, retail, finance, insurance, professional and technical services sectors of the economy represent the most decreases in jobs in Barton County.

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Conditions and Trends

The Economy

The Barton County Economy

The median per capita income in Barton County in 2011 was \$35,309, up 45.4% over 2001. That number was \$19,588 in 1995, resulting in a 23.9% increase over the 6 year period. The growth in per capita income seems to be steadily climbing.

The Barton County unemployment rate in 2013 was 3.8%, better than the Kansas average of 5.4%. The labor force in 2011 contained 21,170 which is a sharp increase from 1995 with a labor force of 19,421. This represents a 9.0% increase in employment since that period.

Barton County unemployment dropped from 2003, which was 4.0%, to 3.8% in 2013. There were 626 people unemployed in Barton County in 2013.

Annual wage levels generally attract new employees into communities. The average wage per job in Barton County was \$35,309 in 2011, up from \$24,284 in 2001 by 45.4%. Although this seems attractive, the average wage per job for the State of Kansas was \$40,958 in 2011, or 16% higher than the Barton County average. Factors other than wages must then be considered in attracting workers to Barton County.

3,262 individuals were Food Stamp recipients in 2012, up from 1,579 in 2002, an increase of 106.7%, indicating a sharp increase in the poverty level in Barton County. Likewise, the poverty level in all of Kansas is sharply increasing with an overall increase of 130.0% for the same reporting period.

Total bank deposits in Barton County have decreased from \$879 million in 2012 to \$859 million in 2013, or 2.4%. Deposits generally are an indicator of economic health and Barton County has shown a slight decline.

Sales tax collections in Barton County were \$31.1 million in 2012, up 6.44% from 2011. This compares to an increase of 4.65% in all of Kansas for the same period. Economic activity in Barton County is vigorous. Additionally, retail sales are steadily increasing with a strong increase of 53.5% over the past ten years.

Agriculture is a major contributor to the Barton County economy. According to the 2012 Census of Agriculture, there are 694 farms in Barton County. This represents a 2% increase in the number of farms in Barton County between the 2007 and 2012 Census of Agriculture reports. However, the average farm size in Barton County decreased 1% in the same time period.

Barton County Comprehensive Plan

Conditions and Trends

The Economy

Nearly 46% of Barton County farms are operated by people who report farming as their primary occupation. The average age of the principle operators of Barton County farms, 58 years, is the same as the statewide average age. Statewide, nearly 11% of the principle operators of farms are women while women account for only 8.5% of the principle farm operators in Barton County. The number of minority farmers in Barton County more than doubled between the 2007 and 2012 Census of Agriculture.

In 2012, in terms of the total market value of agricultural products sold, Barton County ranked 16th among the 105 counties in Kansas and 320th out of the 3,077 counties in the United States. The market value of agricultural products sold in Barton County was reported at nearly \$279 million for 2012, ranking 16th among the counties in Kansas. Livestock sales accounted for nearly \$183 million (66%), ranking 16th among Kansas counties. Crop sales were reported at over \$96 million (34%), ranking 24th among Kansas counties.

The economic characteristics of the farms in Barton County vary widely. According to the 2012 Census of Agriculture, 25% of the farms in Barton County reported less than \$1,000 in sales. In contrast, 32% of the farms in Barton County generated more than \$100,000 in sales, with nearly 10% reporting sales of \$500,000 or more. Total farm production expenses were reported at over \$242 million in 2012.

The number of farm workers in Barton County – as a percentage of those employed in Barton County – was around 4% of those employed in Barton County in 2010. (Source: U.S. Bureau of Economic Analysis as published by the Institute for Policy & Social Research at the University of Kansas) In Barton County, the number of farm workers has remained fairly steady since 2005.

Retail and Wholesale Trade employed 2,330 people in 2012, or about 21% of the work force. Transportation, Warehousing, Professional, Scientific and Technical Services establishments are continuing at a steady pace with about 10% of the workforce in Barton County as of 2012.

Manufacturing is one of the major declining factors in Barton County. 1,129 people were employed in 2012, down 30% from 1998 levels. There appears to be a further decline in those numbers, as fewer workers are available from the declining workforce. Wages, although very favorable in Barton County, are offset by taxes and the distances to major metropolitan centers.

Barton County Comprehensive Plan

Conditions and Trends

The Economy

Oil and Gas Extraction as well as Mining and Quarrying have sharply increased over the past twelve years. For nearly the past decade this industry was solid in Barton County. In 2012 there were 809 people employed which represents a 100% increase in employment since 2000. However, the declining value of oil over the past year has already created a sharp decrease in this sector.

An average of 4,708 students attended Barton County schools between 2011-2012 and 2014-2015, with another 4,300 full-time-equivalent (FTE) students enrolled at the Barton County Community College in 2014-2015 and 222 “early childhood through 6th grade” students enrolled at Holy Family Catholic Parochial School in 2014-2015. Enrollment trends have sharply increased even though school employment has not kept up during the same period. Taxation pressures as well as a steady decline in State funding will continue to adversely impact the work force.

The brightest spot in the Barton County economic picture continues to be the medical field. New clinics and practices are continuously being added, and Barton County is rapidly becoming a regional medical center. 2,058 people were employed in Health Care and Social Assistance in 2012. This represents 19% of the Barton County workforce. That number is increasing as a result of the newly established and renewed practices and clinics, and the addition of adult care centers which are catering to an increasing proportion of elderly people in the community.

The medical industry has a strong presence in Barton County. There are three hospitals and many other major medical facilities. They include the Ellinwood District Hospital in Ellinwood, the Clara Barton Hospital in Hoisington and Great Bend Regional Hospital in Great Bend. The major medical facilities include the Surgical & Diagnostic Center of Great Bend, Heartland Cancer Center and Fresenius Medical Care also located in Great Bend and there are numerous specialized care facilities and clinics in Ellinwood, Hoisington and Great Bend. The medical and social assistance industries have become Barton County’s largest employment industry as of 2012.

In all, the economic outlook for Barton County is holding steady as of 2012. There continue to be funding and taxation concerns at the State level and the current downturn in the oil and gas values may create serious economic issues over the next decade if they continue on the current path.

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Conditions and Trends

Natural Resources

NATURAL RESOURCES

The Future Land Use Plan for Barton County must acknowledge and utilize the natural resources of the county and the amenities they present for future development as well as the constraints they present to development. The topography of the area, geology, ground water, surface water, wetlands and flood plains are important factors affecting the built environment and should be taken into consideration to guide future land use decisions.

Topographic Features

Barton County is relatively level with few areas of extreme slope. Lands generally slope from west to east typical of the Great Plains area of the country. Topographic features are primarily defined by rivers and streams. The county is traversed by the Arkansas River and several tributary streams.

The county is located on the dividing line between the two major river watersheds in Kansas. Lands in the northern five miles of the county tend to drain to the Kansas River tributary streams, while those in the remainder of the county drain to the Arkansas River and its tributaries. The highest elevations occur northwest of Pawnee Rock at approximately 2,132 feet above sea level, and the lowest occur on the southeast corner of the county at the Arkansas River. The lowest point is approximately 1,754 feet above sea level. Steepest slopes occur in the northern portion of the county along Blood Creek and its tributaries. This area and the area further north are located in a Physiographic region known as the Smoky Hills Region of Kansas. The remainder of the county is in the Kansas Physiographic Region known as the Arkansas River Lowlands.

The areas with least topographic relief occur in the Arkansas River Lowlands portion of the county. In particular, an area encompassing the Cheyenne Bottoms Wildlife Area and the surrounding Cheyenne Bottoms basin and extending southeasterly to Ellinwood and the east county line covers approximately 140 square miles of relatively level land with little or no topographic relief.

Geology and Ground Water

Mineral resources and ground water are the products of the underlying geology of Barton County. Limestone, sandstone, shale, coarse gravel, sand and silt make up the majority of the geological series in this area. Coarse gravel, sand and silt exist in the Cheyenne Bottoms basin and on the north side of the Arkansas River. Inter-bedded lenses of unconsolidated gravel, sand

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Conditions and Trends

Natural Resources

and silt compose most of the geological formations south of the Arkansas River.

These two formations are the most important providers of ground water in Barton County. The Dakota formation is composed primarily of alternating lenses of varicolored clay, shale, siltstone and sandstone and is the chief source of ground water in upland areas of the county. Unfortunately, the water from private wells drilled into this formation tends to be salty and not palatable; therefore, much of the northern portion of the county is served by rural water districts.

Ground water is most abundant and available in the southern portions of the county with potential yields from wells greater than 500 gallons per minute. In many areas in the northern part of the county, potential yields are less than 100 gallons per minute. Ground water supplies are threatened by intensive use and salt contamination in some areas. Salt contamination has occurred in southeastern portions of Barton County and there is the potential for salt contamination in the Cheyenne Bottoms basin and north to the County line. Agricultural irrigation is the primary use that diminishes groundwater supplies in the southern portion of the county, although there are also issues of municipal supply and drought.

Groundwater Management Districts have been established in Kansas to provide water use administration, planning and information. These districts are instrumental in providing information and identifying research and regulatory needs within their boundaries. The southern half of the county is under the jurisdiction of the Big Bend Groundwater Management District Number 5, located in Stafford, Kansas.

The Wet Walnut Intensive Ground Water Control Use Area (IGUCA) extends north and west from the Great Bend city limits through the county to the Rush County line and is administered by the Kansas Division of Water Resources.

The geology of the county supports mineral resources in the form of oil, gas, salt, shale, sand and gravel. The minerals having the greatest impact on the economy of the county, historically, have been oil and gas.

In 2014, there were 1,974 wells in Barton County which produced approximately 2,011,139 barrels of oil. During the same year, 39 gas wells produced approximately 277,212,000 cubic feet of gas. Oil wells are located throughout the county, and gas wells are concentrated in the far northeast and southeast portions of Barton County and west and southwest of Great Bend to the county line.

Barton County Comprehensive Plan

Conditions and Trends

Natural Resources

These changes in production from 1995 to 2014 represent a total of 339 less oil wells (15%) in Barton County that yielded an increase of 134,139 (11%) barrels of oil and 11 (40%) more gas wells in Barton County that yielded 33,788,000 (10.5%) less cubic feet of gas.

Soil Resources

Barton County has an abundance of good soils. These soils have been mapped by the Natural Resources Conservation Service cooperating with the Kansas Agricultural Experiment Station. Of the total land area in Barton county, 74.4% or 418,500 acres are classified as prime soils. These soils are defined by the U.S.D.A. as land that is best suited to food, feed, forage, fiber, and oilseed crops. It may be cropland, pasture, woodland, or other land, but is not urban or built-up land or water areas. It is used for food or fiber or is available for those uses. The soil qualities, growing season and the moisture supply are those needed for a well sustained high yield of crops. Prime farmland produces the highest yield with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment.

In addition to providing a growing medium for crops and grasslands, the soils provide growing areas for natural resources such as windbreaks and environmental plantings. They also provide areas for recreation, camp areas, wildlife habitat areas, picnic areas, playgrounds, paths and trails for hiking, horseback riding and bicycling.

Soils also affect the type and amount of vegetation that is available to wildlife as food and cover. Good soils mean that a good wildlife habitat will be available to produce an abundance of wildlife.

Soils are also an important consideration for planning land usage related to urban development and to water management. Soils are suited for various uses and the most limiting features need to be identified before proceeding. Building site development, sanitary facilities, construction materials, and water management should all be considered when developing land.

Surface Water

Surface waters in Barton County consist of the pools at Cheyenne Bottoms Wildlife Area, the Arkansas River and its tributaries, and Kansas River tributaries in the northern portion of the area. Most of the tributaries of the Arkansas and Kansas Rivers are intermittent streams and cease to flow in times of drought. The flow of the Arkansas River is also intermittent and

Barton County Comprehensive Plan

Conditions and Trends

Natural Resources

greatly impacted by activities upstream. The pools at Cheyenne Bottoms are used to hold and manage water for the benefit of migratory birds and waterfowl.

Wetlands

The predominant natural feature in Barton County is the Cheyenne Bottoms basin, 41,000-acre natural land sink. Bordered on three sides by low bluffs, Cheyenne Bottoms lies in a natural basin that traps water from the Blood and Deception Creeks. Maintaining the Bottom's mosaic of aquatic habitats - large, small, shallow, deep, weedy and open - requires careful management. The Kansas Department of Wildlife, Parks and Tourism uses dikes, pumps, and water diversions to control water levels on the nearly 20,000 acres it manages. The Nature Conservancy manages nearly 8,000 acres, restoring grassland and marsh habitat with rotational grazing, prescribed fires, and other management techniques to create diversity in vegetation.

The largest interior marsh in the United States, Cheyenne Bottoms is one of the most important shorebird migration stopover points in the Western Hemisphere. More than half of all shorebirds that migrate east of the Rockies pass through this 41,000-acre lowland, including 90% of North America's population of Wilson's phalarope, long-billed dowitcher, white-rumped sandpiper, Baird's sandpiper and stilt sandpiper.

Annual visitation at the Cheyenne Bottoms Wildlife Area, using car counts provided by Kansas Wildlife, Parks and Tourism, is 60,000 people.

The Cheyenne Bottoms Wildlife Area provides a unique focal point in Barton County and contributes substantially to the quality of life in the county. On-going efforts to develop additional tourism in central Kansas are focused on bringing additional visitors to the Cheyenne Bottoms area. The planning process can be used to buffer vulnerable habitat areas while maintaining desired economic activities generated from land uses in the county.

On April 24, 2009 the Fort Hays State University's Kansas Wetlands Education Center was opened and as of 2014 the facility has made contact with 23,357 people through education efforts on and off site as well as walk-in visitors to the facility.

Barton County also benefits from the Wetlands & Wildlife National Scenic Byway designation of 2004. The 77-mile Byway connects two of the world's most significant natural wetlands - Cheyenne Bottoms in Barton County and Quivira National Wildlife Refuge in Stafford and Reno Counties. More than

Barton County Comprehensive Plan

Conditions and Trends

Natural Resources

60,000 acres of wetlands host millions of migrating birds each year, including waterfowl, shorebirds, even Whooping Cranes. The WWNSB is recognized as one of the Eight Wonders of Kansas and goes right through Barton County.

Floodplains

Floodplains present natural constraints for non-farm development and farm structures. The Federal Emergency Management Agency in collaboration with the United States Geological Survey has identified flood prone areas in Barton County. These areas are generally classified in three major groupings. The 500 year floodplains are defined as lands that have a .2% chance of being inundated by flood waters in any given year. The 100 year floodplains are defined as lands that have a 1% chance of being inundated by flood waters in any given year. Floodways are riparian lands adjacent to rivers and streams that carry the flow of flood waters.

Development in the 100 year floodplain and the floodway is regulated because Barton County is a participant in the National Flood Insurance Program. No regulatory controls exist for lands classified as 500 year floodplain.

The relatively level terrain in Barton County has resulted in regulatory floodplains adjacent to nearly all natural rivers and streams in the county, including intermittent streams. Map 1 on the following page presents a pictorial representation of the regulatory floodplains in the county.

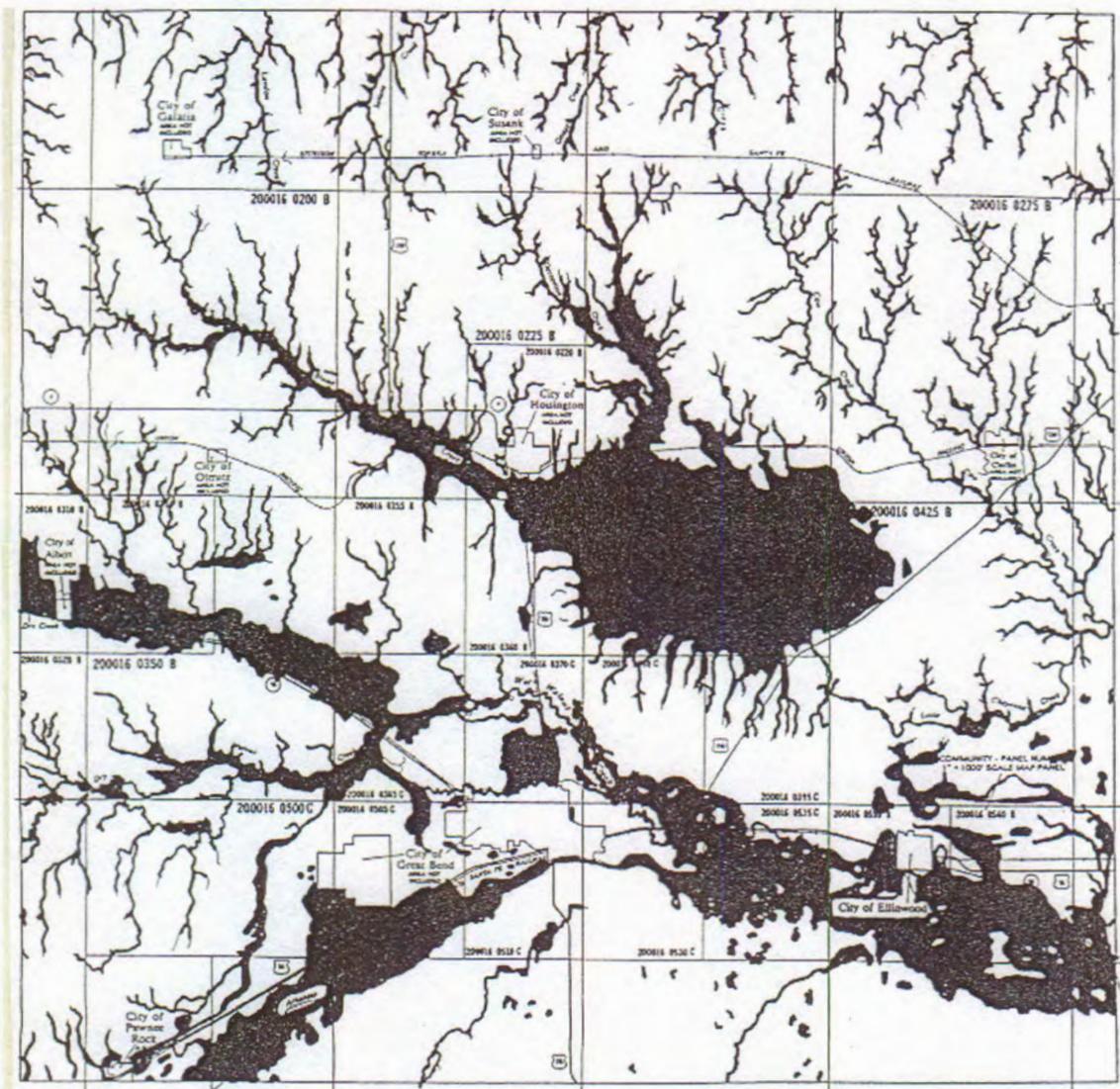
The regulation of construction activity in the 100 year floodplain and the floodway is mandated as a requisite for participation in the National Flood Insurance Program. With the adoption of Zoning Regulations, Barton County has the permitting procedures in place to regulate and track construction activity in floodplains and floodways and assure continued participation by county property owners in the National Flood Insurance Program.

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Conditions and Trends

Natural Resources

**Map 1.
Flood Prone Areas in Barton County**



Shaded areas depict regulatory floodplains

This map is generalized and should not be used to site structures.

Source: Federal Emergency Management Agency

Barton County Comprehensive Plan

Conditions and Trends

Community Facilities and Transportation

COMMUNITY FACILITIES AND TRANSPORTATION

For Barton County planning purposes, community facilities include water and sewer systems, police and fire departments, parks and recreational facilities, and the transportation network. Each of these elements must be considered in examining the potential for growth for the county.

Water and Sewer Systems

The availability of public water and sewer systems determines the density and character of non-farm development in the area. If public systems are not available, or are not capable of serving intense development, then the county may not be able to accommodate growth unless it is of a nature that can provide its own services. Barton County has no county water system; however, the unincorporated areas are served by private wells, three rural water districts, and, in some cases, municipal water supplies. The cities of Claflin, Ellinwood, Great Bend, Hoisington, Olmitz and Susank have water systems that serve their present populations. Should development occur that includes users of large amounts of water, it will be necessary to either establish additional supplies, or to work with one or more of the cities, to assure that water is available.

Barton County, as most counties in Kansas, has no county sewer system. Most of the sewage disposal in the unincorporated areas is in the form of private septic tanks and lagoons. The cities of Albert, Claflin, Ellinwood, Great Bend, Hoisington, Olmitz, Pawnee Rock and Susank each have municipal systems. Growth in the unincorporated areas will either provide its own method of dealing with sewage disposal, or will need to locate near enough to an existing system to be served.

Storm Water Drainage

Topographic features and floodplains in Barton County were discussed in the Natural Resources chapter of this plan. The relatively level surface in many areas combined with the converging streams and rivers to create serious storm drainage problems. Major projects have been undertaken to abate these problems, including the Arkansas River levee system and the construction of a drainage channel which extends northwest from the Arkansas River between the city of Great Bend and the Great Bend Municipal Airport.

Drainage problems are likely to increase as more intense urban development occurs in the future, unless remedial measures are taken in concert with that development. Urban development creates substantial areas

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Community Facilities and Transportation

of surface impervious to water absorption. These areas generate greater runoff than natural areas or agricultural land. It is possible to mitigate some of the problems associated with additional runoff by establishing regulations that require drainage facilities to be constructed whenever large areas of impervious surface are created. Those facilities may include drainage ditches or detention facilities, depending on the circumstances in each individual case.

Police and Fire Protection

The level of police and fire protection services must be continuously analyzed to determine needs for future growth and to assess the adequacy of services for economic development purposes. Emergency response time can be a factor in selecting sites for business or residential developments.

The unincorporated portions of Barton County are served by the Barton County Sheriff's Department. The department includes 43 personnel, charged with law enforcement in the county, and the operation of the modernized county detention facility. The department is equipped with specialized units, including a crisis response team (Tactical Operations Unit), one K-9 Unit, and a reserve deputy force. The Sheriff's Office is involved in many crime prevention programs.

Barton County is served by 10 Fire Departments, of which 8 are all-volunteer agencies. They include the following:

Great Bend---

Great Bend has a full time department with 27 employees, supplementing its force with volunteers. The Great Bend Fire Department provides contract services to the townships of Liberty, Buffalo, South Bend, and Great Bend. The remaining unincorporated areas of Barton County are served by one District and 8 Area fire departments.

Clafin---

The Clafin Fire District includes Cleveland, Cheyenne, Logan and Independent Townships, and the city of Clafin.

Albert---

The Albert Fire Department serves an area composed of Clarence Township and the city of Albert.

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Beaver---

The Beaver Fire Department serves only the area of Beaver Township.

Pawnee Rock---

The Pawnee Rock Fire Department serves the area of Pawnee Rock Township in Barton County and River Township in Pawnee County, along with the city of Pawnee Rock.

Ellinwood---

The Ellinwood Fire Department serves the area of Lakin and Comanche Townships and the city of Ellinwood.

Hoisington---

The Hoisington Fire Department serves the area of Albion, Eureka, North Homestead, South Homestead, and Union Townships, along with the city of Hoisington.

Galatia---

The Galatia Fire Department serves the area of Fairview and Wheatland Townships, and the city of Galatia.

Olmitz---

The Olmitz Fire Department serves the area of Walnut Township and the city of Olmitz.

Otis---

The Otis Fire Department, which is in Rush County, serves the area of Grant Township.

Parks and Recreation Facilities

Barton County does not maintain parks or conduct recreation programs. The State of Kansas owns and maintains The Cheyenne Bottoms Wildlife Area, which probably has the highest use rate of any facility in the area. Cheyenne Bottoms is discussed at length in the Natural Resources section of this document. Lake Barton Golf Course is located in the unincorporated area of

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Barton County about 6 miles north of Great Bend. It is a semi-private 18 hole course built in 1916. The county's population relies upon local school districts, cities, and private agencies for the remainder of its organized recreational activities.

Solid Waste Disposal

Solid waste disposal presents unique problems to contemporary communities. Society generates vast quantities of solid waste, and disposal sites and methods are monitored closely by state and federal government agencies. The location and establishment of new disposal sites present problems because they frequently are locally unwanted land uses and must be sited and developed so as to minimize environmental hazards presented.

The Barton County Landfill, located northeast of the city of Great Bend, is owned and operated by Barton County, and accepts waste from the adjoining Counties of Ellsworth, Pawnee and Russell, as well as Barton. The landfill is currently operating as a "Subtitle D" landfill, and is designed to provide for disposal of solid waste for approximately 42 years.

Transportation and Transportation Facilities

Transportation facilities are an important factor in shaping our communities. When Kansas was being settled, railroads accelerated the growth of cities along their routes, and a century later the interstate highway did the same. Today, we are a highly mobile populace and have the need to be able to move people and goods with speed, efficiency and comfort.

Barton County is served by three modes of transportation – air, rail and highways, but is primarily dependent on its road system.

Air Service

Barton County is served by two municipal airports. One is the Great Bend Municipal Airport and the other is the Ellinwood Municipal Airport.

The Great Bend Municipal Airport is located two miles west of the city, and is the only airport in the county that is on the Federal System. Commercial airline flights are conducted every day. The Airport has a 7850 foot by 100 foot runway, with an alternate lateral runway, accommodating crosswinds. The runway was resurfaced in 2003. Reconstruction of the taxiways was completed in 2007 and the ramp was resurfaced in 2012. Scheduled passenger service and general aviation operate at this facility as well

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as 50 private aircraft based at the airport.

The Ellinwood Municipal Airport has two sod runways, the larger of which is 2550 feet long and 150 feet wide. It is used exclusively for general aviation purposes.

Railway Facilities

At one time several major railroads operated in Barton County. Today, the only railroad operating in Barton County is the Kansas and Oklahoma Railroad, one of the largest short lines in the rail industry. One Kansas and Oklahoma Railroad line runs through Claflin, Hoisington, Boyd and Olmitz. Another line runs through Ellinwood to Great Bend, where it splits into two lines, one of which goes through Heizer and Albert while the other line goes through Dundee and Pawnee Rock. The abandonment of the rail line through northern Barton County and other changes in the rail industry have increased the use of trucks for the transport of grain. The increase in truck traffic has increased the maintenance requirements for many of the roads and highways in Barton County.

Grain Handling Facilities

In recent years there has been a trend toward improving the Agricultural access for grain storage and for grain handling facilities in Barton County. The Pawnee Coop Association started this trend with the addition of a liquid storage tank and new shop building project in June 2013 at their Dartmouth Facility, and later with an addition of a Grain Bin in November 2014. The Great Bend Coop added two grain bins, a new office and scale at their Boyd Facility in December 2013, Bartlett Grain Company added a 98 acre Grain Handling Facility complete with grain storage, scales, rail system and the various service buildings in July 2014 and a flat grain storage building in the fall of 2015 and then United Ag Services added a new grain bin and equipment storage at their Stickney Facility in January 2015. All together these projects added more than 25 million dollars of infrastructure back into the Barton County economy and the agricultural industry.

Highways

Barton County is dependent upon state and federal highways, and county roads, to fulfill most of its transportation needs. Federal highways include US 56 which crosses the county from east to west through the cities of Ellinwood, Great Bend, and Pawnee Rock. US 281 crosses the county from north to south through the cities of Hoisington and Great Bend. State highways include

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K156, K4 and K96. These highways serve to connect the major population centers of the county, and function as the primary routes to other counties and other states.

US 281 Highway serves as the Main Street in both Great Bend and Hoisington, creating issues with downtown parking and pedestrian traffic for the downtown district.

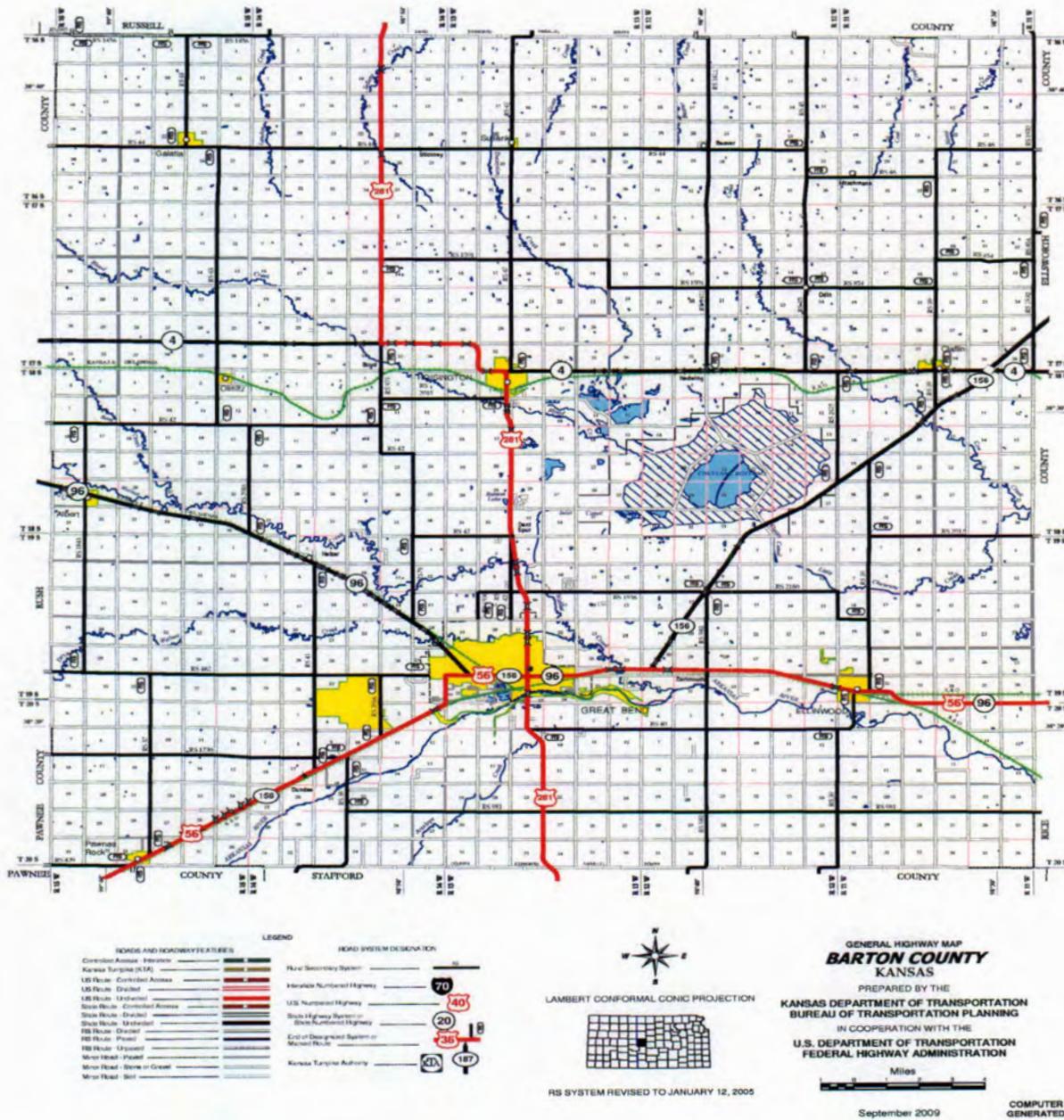
Barton County has more than 1,000 miles of county roads, and more than 1,200 bridges. The high proportion of paved roads (389.5 miles) strains the county resources because they require more sophisticated maintenance. This is also an issue with the bridges in Barton County. 369 bridges are over 20 feet long and 857 of these bridges are less than 20 feet long. Keeping these bridges in good condition comes with a price. The closing of the railroads in some areas of the county has generated additional truck traffic and intensified maintenance problems.

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Map 2 is the General Highway Map for Barton County, illustrating the state and federal highways, and county roads, in Barton County.

**Map 2
General Highway Map**



APPENDIX

Barton County Comprehensive Plan

Appendix

1998 Issues Identification Results

The Formation of the Barton County Comprehensive Plan

For the purposes of the initial Comprehensive Plan Update issues were identified in two phases. The Planning Commission, at its meeting of November 4, 1998, identified key issues relative to the planning process. A countywide Issues Identification Workshop was held at the Barton County Community College on December 2, 1998. The purpose of the workshop was to identify and rank issues important for planning the future of Barton County. Participants included members of the Barton County Planning Commission, county and township officials and citizens from across the county who were interested in the planning process.

During the workshop, participants identified: attributes which make Barton County a desirable place to live and which should be taken advantage of in the planning process; challenges confronting Barton County which must be dealt with in the planning process; and aspirations that, if achieved, would make Barton County an ideal place to live and work in:

Attributes:

1. Cheyenne Bottoms is a dominant resource that adds to the quality of life in the county and is important to the tourism industry.
2. The Barton County Community College provides higher education opportunities to citizens of Barton County and also is an important community resource because of the facilities that are available to the general public.
3. The county is a farming community and as a result a strong work ethic and wholesome values are prevalent.
4. There is a good mix of industry within Barton County.
5. The location of the county in the center of the State of Kansas gives it good access to the rest of the state.
6. The county is adjacent to Quivira National Wildlife Area.
7. The airport is an excellent facility for general aviation and scheduled airlines.
8. The city of Great Bend has a well maintained downtown.

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9. Four major highways run through the county.
10. The county contains excellent hospitals and nursing homes.
11. There are three good solid cities with good vitality; Hoisington, Great Bend and Ellinwood.
12. The county has excellent public and parochial schools.
13. There are excellent library facilities in Great Bend.
14. The historic Santa Fe Trail traverses the county.
15. There is a low unemployment rate.
16. There is an ample water supply in most areas of the county.

Challenges:

1. The county needs to aggressively pursue development of the Northwest Passage, a major highway proposed to connect Barton County to other communities in central Kansas.
2. Concerns about a major pork processing plant proposed in the county and the implementation of mechanisms to deal with the resulting impact has divided the community.
3. There are housing supply problems.
4. There is a shortage of labor to attract industrial development.
5. National trends have impacted the local agriculture and petroleum industries. Both are important to Barton County and both have suffered recent declines.
6. The county has lost tax base from the decline of railroads and the petroleum industry.

Aspirations:

1. To have a strong industrial base in Barton County.
2. To have strong central business districts in the cities.

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1998 Issues Identification Results

3. To have the Northwest Passage complete from Hutchinson to Great Bend and to Interstate 70.
4. To become a tourist destination.
5. To have industries that pay higher wages than the prevailing rates in the county.
6. To benefit from property tax reform.
7. To increase the population in the 19-to 32-age cohorts.
8. To retain young people when they graduate from high school.
9. To achieve planned development, particularly in commercial and residential including multiple family developments.
10. To have better transportation facilities including bypasses around cities.
11. To beautify the fringe areas of cities.
12. To have a coordinated telecommunication systems. There are currently seven separate telephone systems.
13. To have strong medical services including better airlift facilities.
14. To have more scheduled passenger aviation.

Four major categories were used to classify the issues identified in the workshop. The participants identified and ranked issues according to the categories of the economy, housing, transportation, and general land use issues. The issues identified previously by the Planning Commission were in many cases duplicated by the efforts of the participants in the workshop. The following issues represent the products of both workshops. They are presented by category and the top four in each category are listed in the order of ranking.

The remaining issues were not ranked:

Economic Issues:

1. There is a need for more basic industries with higher wages than are currently being paid.

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1998 Issues Identification Results

2. There has been a loss of tax base that needs to be replenished.
3. Although water is seen as an attribute, there is a supply and quality problem in some areas of the county.
4. There is a labor shortage that hinders economic development.
5. There are not enough scheduled passenger flights into the Great Bend Municipal Airport.
6. The central business districts of the cities in the county lack vitality.
7. National agricultural policy has depressed the local economy.
8. The world oil market has depressed the local economy.

Housing Issues:

1. There is a shortage of investors to develop large projects.
2. There is not a good mix of housing types or costs.
3. In many areas housing is substandard.
4. There is a need for more assisted living facilities.
5. Mobile home parks have a high vacancy rate.
6. Rural non-farm home sites are developing in some areas without regard for the necessary public services or improvements.

Transportation Issues:

1. Through traffic uses local streets in the cities, particularly in the central business districts.
2. Railroad closures have increased grain elevator truck traffic on rural roads creating maintenance problems.
3. There is a need for a direct highway route to Hutchinson and the Interstate system. (Northwest Passage)

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1998 Issues Identification Results

4. The Great Bend Municipal Airport needs continued funding and should have more scheduled passenger service.

General Land Use Issues:

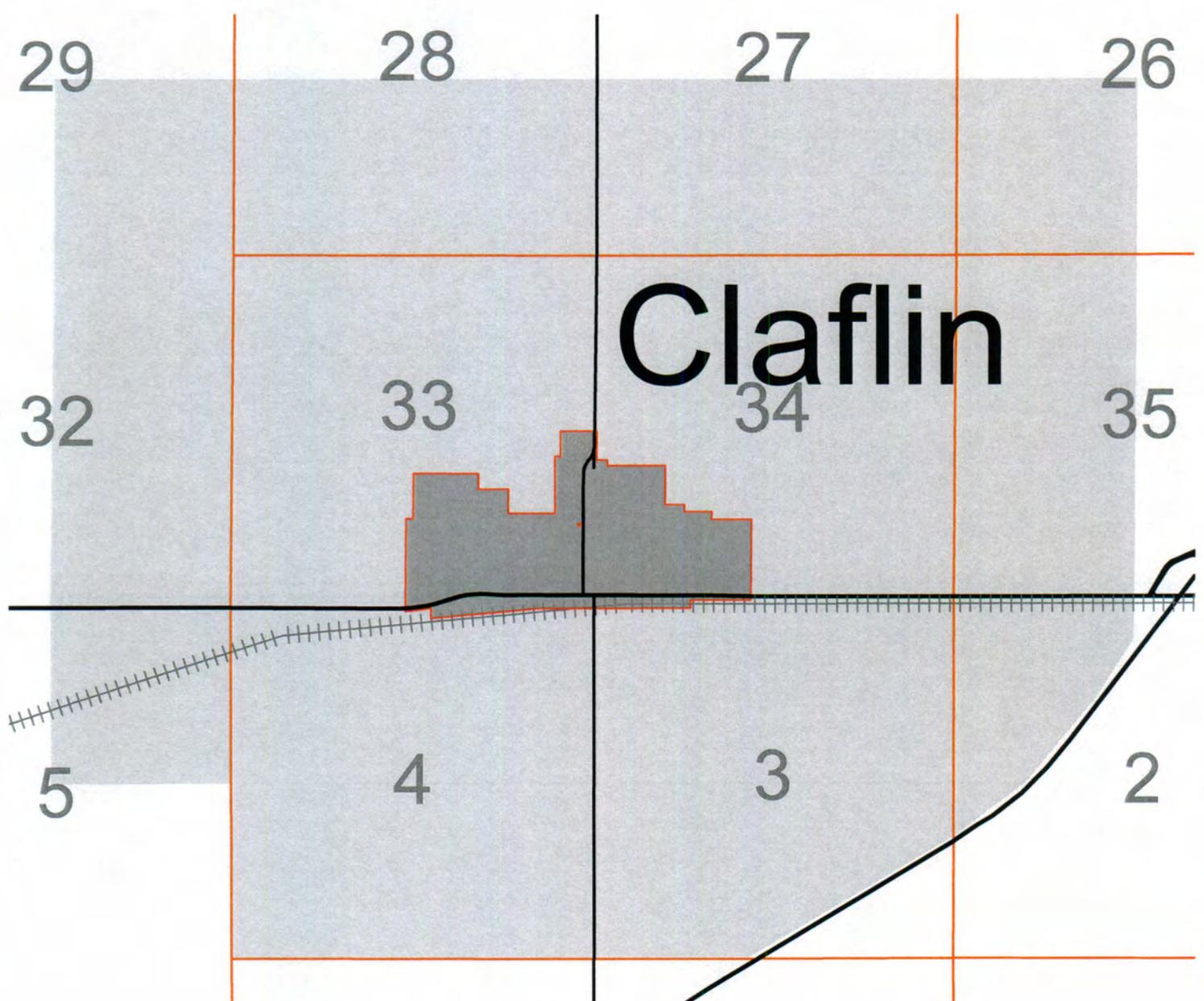
1. Fringe areas of cities show signs of blight that need to be addressed.
2. Flood plains and flood ways need to be protected.
3. There is a proliferation of abandoned oil wells and collection facilities.
4. Water is scarce in some areas and there are water quality problems in others. There is a potential problem of contamination of groundwater by sanitation facilities.
5. Cheyenne Bottoms and the Quivira National Wildlife Area need to be protected.
6. The county needs reasonable restrictions to reasonably control growth resulting from economic development and promote healthy growth without placing burdensome restrictions on landowners in the community.

The results of the workshops were utilized to formulate recommendations for planning goals for Barton County and policies aimed at achieving those Goals.

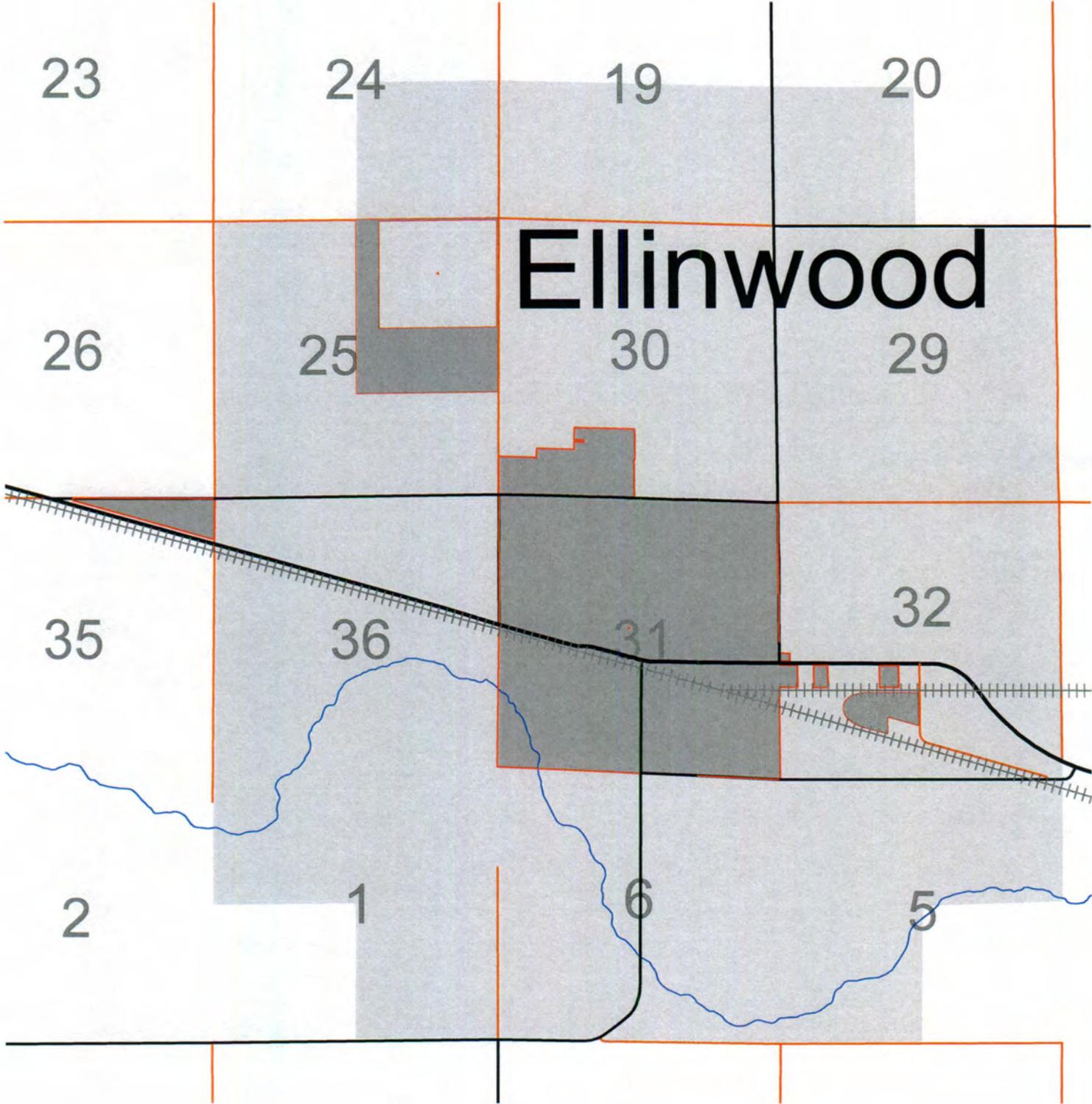
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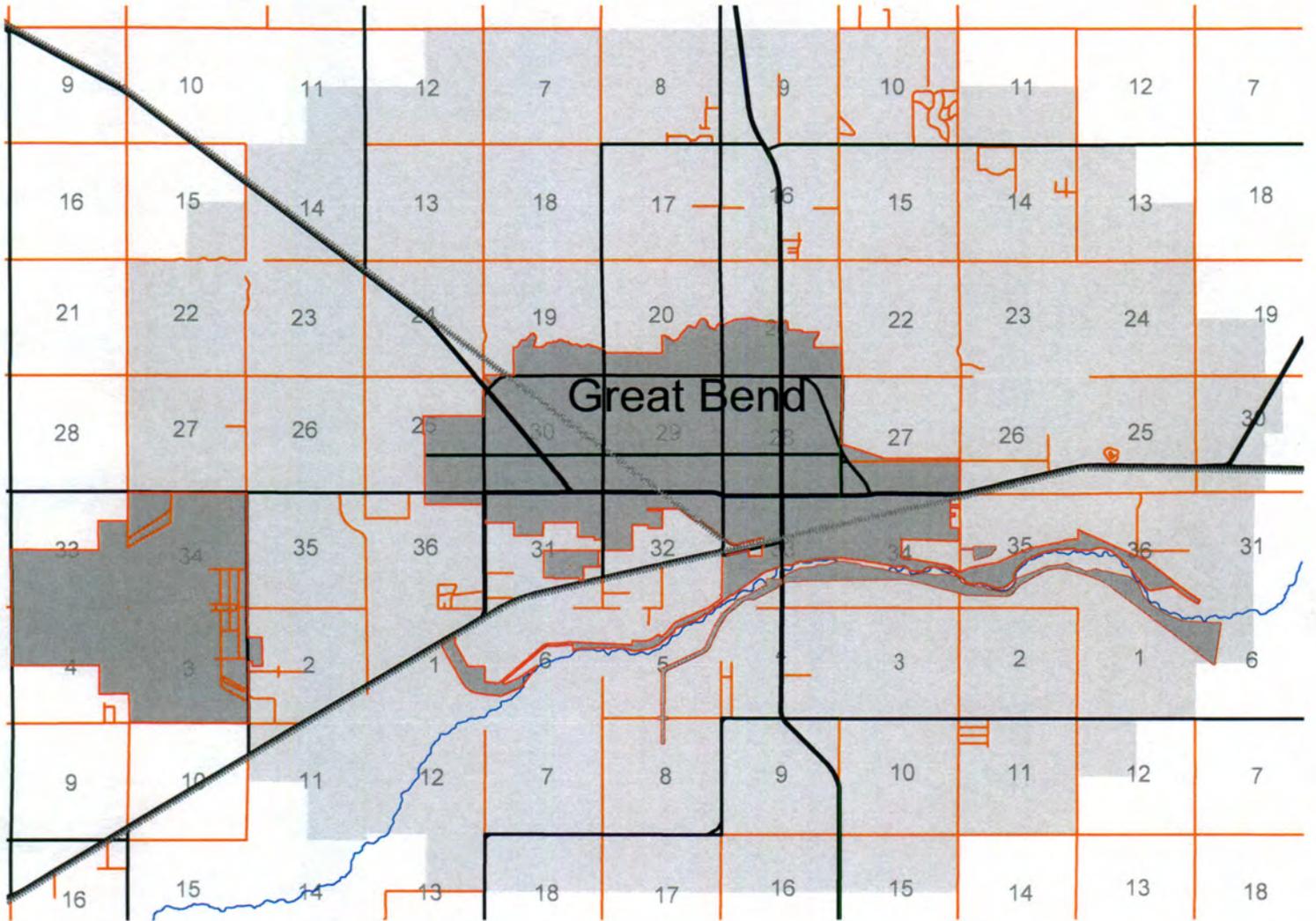
Appendix Maps

See attached Documents



Ellinwood





Hoisington

