

Box Butte County Comprehensive Plan

2001

Prepared by the
Panhandle Area Development District

Box Butte County Commissioners

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INTRODUCTION

Purpose of the Comprehensive Plan

The primary purpose for the development of a comprehensive plan is to provide basic guidelines and policies for use by public officials and the private sector whose decisions may affect existing and/or future uses of the land and resources within the planning area. This document is intended to promote orderly growth and development within Box Butte County, as well as to provide guidelines for directing physical growth and change.

Scope of the Comprehensive Plan

The intended scope of the plan is to provide a general analysis of the needs of Box Butte County and its residents, particularly as they relate to existing and future uses of the land. In doing so, the plan evaluates past trends in several subject areas and attempts to project in what manner changes will occur several years into the future. Primary emphasis is placed upon how these trends might impact physical growth and development within the county and the identification of policies needed to direct that change.

Although this study is a comprehensive plan dealing primarily with issues in the unincorporated areas of Box Butte County, it recognizes that both existing and future activities within the Village of Hemingford and City of Alliance will directly, or indirectly, cause change to occur within rural areas of the county. The conclusions drawn in this study attempt to incorporate these potential impacts and reflect the need for intergovernmental cooperation.

The Legal Role

Nebraska counties are required to adopt a comprehensive plan if they intend to utilize zoning or subdivision regulations to control physical development within the county. This requirement is based upon the premise that land use decisions should not be arbitrary, but follow a planned land development concept.

At a minimum this land development concept, according to state statutes, must include:

- A land use element which designates the proposed general distributions and location for uses of land for agriculture, housing commerce, industry, recreation, education, and public buildings and land.
- The general location, character and extent of existing and proposed major roads, streets, highways, and air and other transportation facilities.
- The general location, type, capacity and area of present and projected or needed community facilities including recreation facilities, schools, libraries, other public buildings, and public utilities and services.

The future land development concept must be based upon documented population and economic projections.

THE PLANNING APPROACH

The Planning Approach

During the 2000 legislative session the Nebraska State Legislature approved a new law allowed un-zoned Nebraska counties to adopt the zoning resolution of an adjacent county, or a county within a specified distance. In an effort to implement some form of land use control in Box Butte County the Box Butte County Commissioners adopted the Sioux County Zoning Resolution. As a result of this process and in order for land use regulations to remain in existence in Box Butte County it became necessary for the county to prepare and adopt both a comprehensive plan and zoning resolution of its own prior to July 1, 2001.

Following this development the Panhandle Area Development District (PADD) was contracted in September, 2000 to prepare a comprehensive plan and zoning resolution for Box Butte County. Although this sequence of events provided only a seven month time frame for completion of the documents prior to public hearings and their eventual adoption, this should not be considered an unrealistic time frame given PADD's familiarity with the county and the fact that rural Box Butte County is largely undeveloped.

Several methods were employed during the course of the planning process to generate public involvement. These included:

- the Box Butte County Planning Commission public advertised every regularly scheduled monthly meeting as required by law.
- several bi-monthly meetings were held on different days and at different times to ensure as much public access as possible.
- local media were invited to all Planning Commission meetings and regularly attended to cover progress on the comprehensive plan and zoning resolution.
- Planning Commission members conducted radio talk shows in an attempt to inform the public and encourage their participation in the process.
- several committee's were formed to provide input and to comment on each section of the plan as it was prepared.
- residents attending Planning Commission meetings were directly involved in the process through the use of brainstorming sessions and small group discussions.

Statistical and physical attribute data were collected for inclusion in the plan through a process that included the following:

- Census Bureau, County Business Pattern and Regional Economic Information Systems data reviews.
- Digital orthophotoquads were reviewed for primary land use analysis and all county roads were driven to field verify information.
- Reviews of previous planning documents conducted within Box Butte County.
- A review of the Box Butte County Soil Survey.
- Conversations with, and information obtained from, county department heads.

As each section of the plan was prepared it was distributed to committee members, county department heads and the Planning Commission for review and comment prior to holding the required public hearings.

A list of the Planning Commission members and planning committee members is attached as Appendix A.

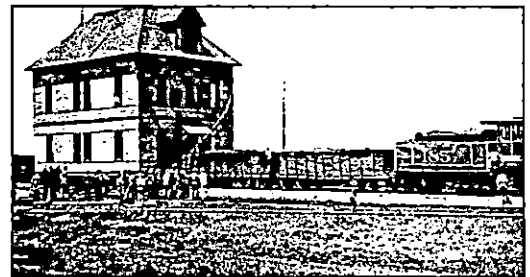
HISTORICAL DEVELOPMENT

The westward expansion of the United States by homesteaders, the railroads and free land were key factors contributing to the development of Box Butte County and its communities. The 1862 Homestead Act allocated 160 acres of land to settlers who were required to work the land for specified period of time. The 1873 Timber Culture Act granted 160 acres of land to settlers who would plant and nurture tree seedlings on barren land. These acts prompted the county's first settler, A.H. McLaughlin, to file a homestead and a tree claim in 1881. However, settlement did not begin in earnest until the mid 1880's. The Kincaid Act, approved by Congress in 1904, allowed a claim of 640 acres of land which further encouraged settlers to locate in the arid Sandhills.

The land occupied by Box Butte County was originally a portion of Dawes County. By 1886, solid growth in the area led residents of the southern half of Dawes County to petition for creation of a new county. By the summer of 1886 three petitions were circulating to divide Box Butte County away from Dawes County. The dividing line chosen by the Dawes County Commissioners favored the north line of township 28 which resulted in the Niobrara River valley remaining in Dawes County and placed Nonpareil at the center of Box Butte County.

On February 8, 1887, Governor John M. Thayer signed a proclamation organizing Box Butte County. Future growth and development in Box Butte County was heavily influenced by development of the Burlington Railroad. The Lincoln Land Company, a Burlington auxiliary, had previously purchased from the state a school section in the extreme southeast corner of the county. The City of Alliance was platted in March, 1888 on this section and adjacent to the small town of Grand Lake, which consisted of tents and a few small frame buildings. Nonpareil, the first county seat community, was bypassed by the railroad and ceased to exist.

Hemingford, the second county seat community, lost its preeminence as more and more railroad activities were directed to Alliance. Following a long legal battle and several elections, the Box Butte County Courthouse was transported by rail from Hemingford to Alliance during June & July of 1899. The engineering skills of E.W. Bell, a bridge foreman with the Chicago, Burlington, and Quincy Railroad made this feat possible.



Descriptions of the event were published in Harper's Magazine and Scientific America. Alliance became a center for home-steaders and ranchers needing materials and a distribution hub for shipping grain and cattle to Omaha and other markets.

Several of Box Butte County's old settlements and places of historic interest are described below using excerpts from the 1975 Box Butte County Comprehensive Plan.

Berea. This village was named after Berea, Ohio, by some of the early settlers. The name derives from the ancient city in Macedonia.

Birdsell. The place in Boyd precinct, was named for an official of the Chicago, Burlington and Quincy Railroad, J.C. Birdsell.

Bronco Lake. Bronco Lake was two miles southwest of Alliance. Now dry, Bronco Lake was camp site used by Native Americans and in later years a recreation area used for

HISTORICAL DEVELOPMENT

swimming, boating, hunting and ice skating depending upon the season. In 1953, the lake began to lose its water and was dry by 1955.

Burbank. This inland place was located in Snake Creek precinct. It was named after the local postmaster.

Burns. Also located in Snake Creek precinct and after the local postmaster.

Carpenter. Located near the southern boundary of Box Butte County in Wright precinct and named after the local postmaster.

Girard. A station on the Chicago, Burlington and Quincy Railroad in Dorsey precinct. This is also the site of Nonpareil.

Hashman. Named after C.L. Hashman, the postmaster.

Hemingford. Named by Joseph Hare after his former home in Hemmingford, Canada, spelling the name however with only one "m".

Letan. A station on the Chicago, Burlington and Quincy Railroad near the southern boundary of Box Butte County in Wright precinct and named by the railroad.

Marple. This post office was originally located in Box Butte County where a skinning station had been established. The head of this enterprise was a man by the name of Marple, in whose honor the post office was named. Later the station was discontinued and the office moved to Sheridan County.

Nonpareil. The first county seat in Box Butte County was reportedly given its name by Eugene Heath who started the newspaper called The Grip and selected the name Nonpareil from the name of a very small or six-point size of type.

Nye. A station on the Chicago, Burlington and Quincy Railroad near the northern boundary of Box Butte County in Lawn precinct and named by the railroad.

Sidney-Deadwood Trail. A major thoroughfare crossing Box Butte County in the 1870's and 1880's. The discovery of gold in the Black Hills in 1874 prompted establishment of the trail. Private and commercial freight haulers moved an estimated twenty-five million pounds of freight over the trail in five years. The southern end of the trail in Box Butte County is about six miles East of the southwest corner of the county. It extended northerly across the county to the Niobrara River. The southern station on Snake Creek was near the old Hart Ranch headquarters. About halfway to the Niobrara River another station was established. Old records identify two station names as Apple Orchard and Halfway Hollow. At the Halfway Hollow site an Indian attack took place and on another occasion two bandits were hanged from upended wagon tongues following a failed stage robbery attempt. The northernmost station was called Running Water.

Yale. A name given by railroad officials to the next station north of Alliance on the Chicago, Burlington and Quincy Railroad.

Wiley. A former inland post office in Snake Creek precinct named after the local postmaster.

Global politics has also influenced the development of Box Butte County. The First World War created a demand for potash. Exploitation of deposits near Antioch, twelve miles east of Alliance, resulted in additional growth. This boom, was however, short lived. The Alliance Air Base was established in 1942 at the location of the present municipal airport. Population increased dramatically during this time period as construction workers and troops located in the county.

Several significant historic and archaeological sites are located in Box Butte County. Ever increasing awareness of the need to protect historic and archaeological sites from development prompts the inclusion of the following rural sites in this plan. These include:

Robert Ball Anderson Homestead. Located eight miles east and two miles north of Hemingford this homestead of a prominent early black settler includes a log cabin, which may have been built by Anderson.

HISTORICAL DEVELOPMENT

Carpenter Sod House. Located in southwest of Alliance in Section 28, T24N,R40W this sod house was purportedly built in the 1890's and served as both a dwelling and post office.

Running Water Stage Station. A stage station site along the Sidney-Deadwood Trail located on the north side of the Niobrara River in Section 1, T28N, R52W near Marsland. No buildings survive.

Seven rural sections in the county have been identified as containing archeological sites and/or documented historic resources. These sites are generally located near the Bronco Lake, Snake Creek and Niobrara River areas.

Box Butte County also contains several old cemeteries and grave yards. These include:

Box Butte Graveyard. Located in the northwest corner of the SW1/4, Sec. 32, T28, R47.

Running Water Graveyard. Located in the southwest corner of Sec.12, T28, R48.

Bohemian Cemetery. Located in the southwest corner of the SW1/4, Sec.22, T27, R52.

St. Wenceslaus (Lawn) Cemetery. Located in the NW1/4 of Sec.17, T27, R51.

Ball Cemetery. Located in the SW1/4 of Sec.2, T27, R51.

Fairview Cemetery. Located in the southeast corner of Sec.10, T26, R47. The cemetery contains the grave of John Sylvester, a nearby Sheridan County homesteader who was shot to death in range war. Ron Coker, Medal of Honor winner in Vietnam is also buried here.

Additional significant sites and geographic features were mentioned during issue and visioning discussions attended by the Planning Commission and members of the general public. These sites included the Alliance Army Air Base, sod houses and old homesteads in various areas of the county, Kilpatrick Dam, Wild Horse Butte, Box Butte, rural school houses, the Berea store and church, Westside Hall, Point of Rocks, and an old bottling plant/creamery.

Previous Planning Efforts

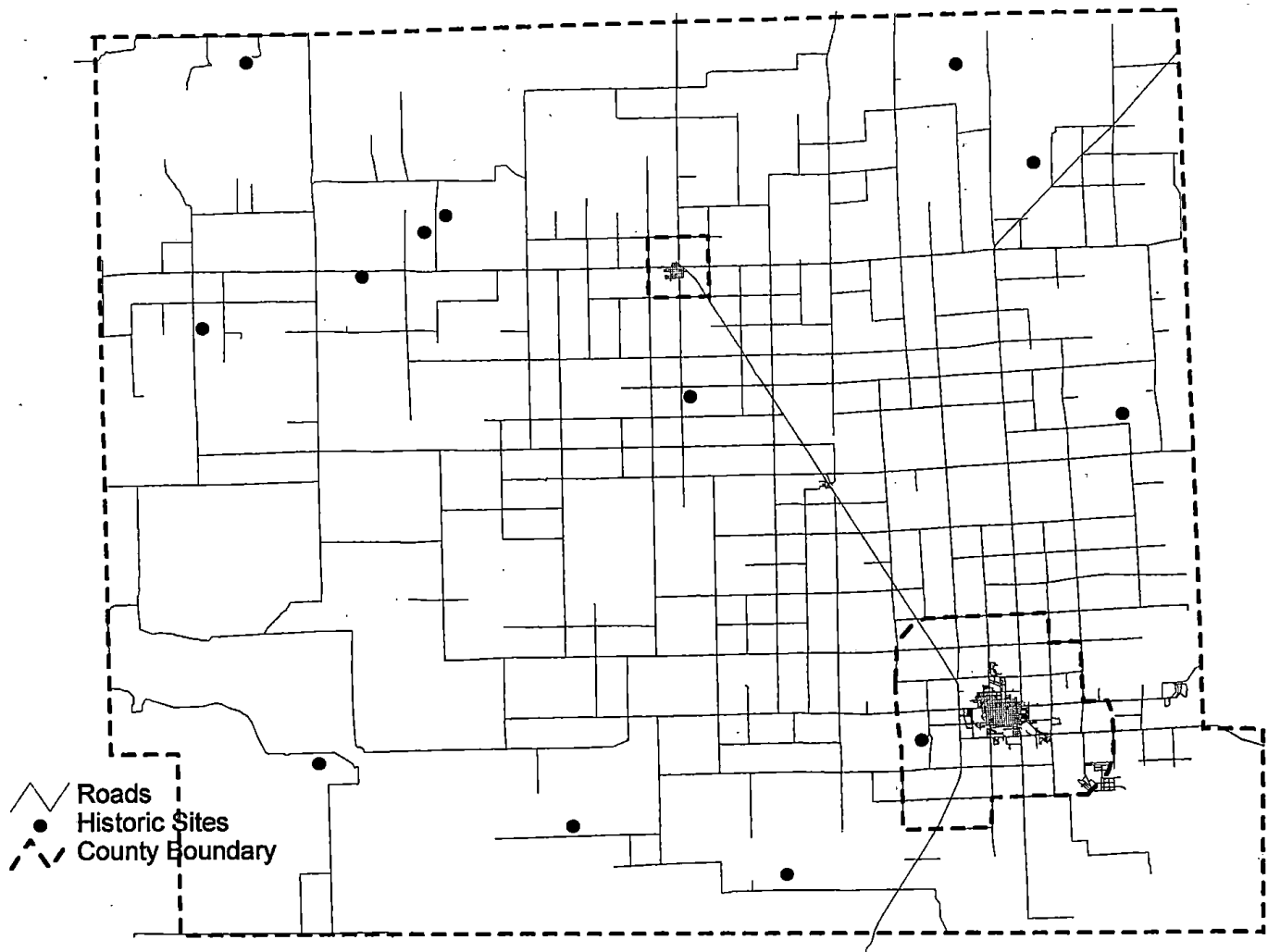
Comprehensive Planning:

Box Butte County prepared its first comprehensive plan and zoning regulations in 1942. These zoning regulations impacted only areas around the Alliance Army Air Base. A second comprehensive plan and zoning regulations were developed in 1975. These regulations were never adopted. In 1983, the county again completed a comprehensive plan and zoning resolution update. However, no signed resolution has been found and the regulations were not enforced. The 1975 document was prepared by the State of Nebraska Office of Planning and Programming. Reminiscent of planning projects conducted during this time period using U.S. Department of Housing and Urban Development (HUD) grant funds the plan provides a detailed inventory and base of information on topics such as environmental features, public facilities and public infrastructure located in both the small communities and rural areas of the county. The 1983 plan was a much simplified version of the 1975 plan. Several development goals, policies and concepts were included in both of these documents that remain valid today. Both the 1975 and 1983 plans base their assumptions for development upon population and economic projections that reflect the early 1970's growth by manufacturing industries and the railroad. Consequently, population projections estimated a 1995 population of approximately 16,500 people. The 1995 Box Butte County population was in reality around 13,000 people.

One & Six Year Street Plan

Box Butte County annual prepares and approves a One & Six Year Street Plan identifying road development and maintenance priorities.

Map 1: Historic Sites (General Location/Area)



HISTORICAL DEVELOPMENT

Planning Issues

Based upon comments by Planning Commission members and the general public in attendance at planning meetings the following issues and goals were derived:

- * Historic sites and places in the county should be protected from development and preserved for future generations.
- * The integrity and accessibility of old cemeteries should be preserved and improved as these sites represent not only the county's history but a tourism resource.
- * The county's historic sites and places should be preserved and promoted as historical attractions.
- * Efforts should be undertaken to develop a railroad museum.
- * The use of historic preservation tax credits should be promoted and utilized when appropriate.

ENVIRONMENT

Introduction

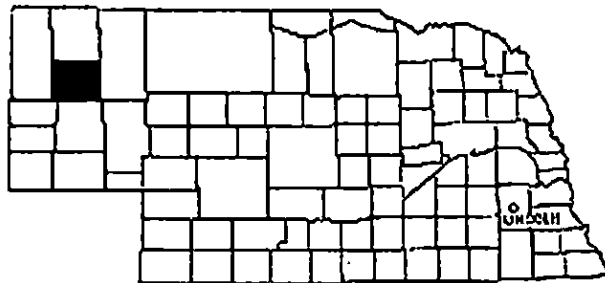
The relationship of the natural environment to land use and future development is an important factor to consider while making decisions concerning potential uses of the land. As an understanding has grown about the complexity of relationships between the human settlement and the natural environment, conflicts between social and economic forces and the capability of the environment to support development have become more apparent. As a preliminary step in addressing these conflicts and to provide guidance for future decision making, this section of the plan provides a brief overview of the County's natural environment.

Geographic Location

Box Butte County is located in western Nebraska in a region generally referred to as the Panhandle. It is bordered by Dawes County to the north, Sheridan County to the East, Morrill County to the south and Sioux County to the west. The county is rectangular in shape extending approximately 36 miles east to west and 30 miles north to south. The county encompasses approximately 681,600 acres or 1,077 square miles.

Denver, the nearest large metropolitan area, is located approximately 291 miles to the southwest. Lincoln and Omaha are 366 and 397 miles to the east, respectively. Rapid City, South Dakota is located approximately 152 miles to the north.

Figure : Box Butte County's Location in Nebraska



Climate

Box Butte County has a semiarid climate as a result of its location near the center of a large continent and effects caused several features of relief. The Rocky Mountains and the Black Hills significantly effect climatic conditions experienced in the county by blocking and redirecting wind patterns and/or precipitation.

Temperature variations during the year are extreme. Mean temperatures range from a low of approximately 26 degrees during the winter months to an average high of approximately 69 degrees during the summer. In winter, periods of cold temperatures alternate with milder intervals that often occur as a result of tepid downslope winds. The mean annual temperature is approximately 47 degrees Fahrenheit. In common with the remainder of the Panhandle, Box Butte County is one of the coldest parts of the State of Nebraska. The relatively low humidity, however, makes the periods of hot, and cold, weather more comfortable than in the eastern sections of the state. The sun shines 75% of the time during the summer months and 60% during the winter months.

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Being sheltered by the Rocky Mountains, total annual precipitation averages at approximately 15 inches. Most of the precipitation, approximately 12 inches, is represented by rainfall between the months of April and September. The average seasonal snowfall is 35 inches.

Topography

Box Butte County is located in the High Plains section of the Great Plains and is comprised of five general types of landforms. These include a high plains table, a rolling plain, an area of steep hills and escarpments, sandhills and stream valleys.

The Box Butte Table dominates the north-central portion of the county and slopes generally to the east and southeast. Rolling plains are located to the west, south and east of this table. The northern part of the county contains rugged escarpments, hills and steep side slopes formed by the Niobrara River and its tributaries. The southern and eastern portions of the county are composed of rolling hills and sand dunes.

Approximately nine percent of the county is in stream valleys. The principle valleys include the Niobrara River and Snake Creek areas. The Niobrara River valley ranges from 1/8 to 1/2 mile in width while the Snake Creek valley ranges from 1/8 mile to 3 miles in width.

The county is drained by four major systems. The Niobrara River and tributaries, Dry Creek and Sand Canyon Creek located in the northern areas of the county drain about 12 percent of the county. The northeastern 15% of the county is drained by Box Butte Creek. A portion of eastern Box Butte county is drained by two intermittent streams, Berea Creek and Hemingford Creek. These two streams also drain about 15% of the county. Approximately 54% of the county is drained by Snake Creek and its tributaries. The remaining four percent of the county is comprised of sand hills. Due the permeability of these hills there is no surface drainage.

Box Butte County has an average elevation of 4,200 feet above sea level with a range of 4,580 to 3,850 feet above sea level.

Geology & Groundwater

Box Butte County's soils are formed from the weathering of Tertiary age rock and from unconsolidated younger deposits of the Quaternary age. The Arikaree group, the oldest exposed geologic formations in the county, consists of the upper part known as the Upper Harrison Formation found in much of the west-central part of the county and the lower part which is exposed in the Niobrara River valley and in the south-western part of the county. Four formations of the Ogallala Group are found in the county. These include the RunningwaterBox Butte, Sheep Creek and Ogallala Formations.

Four main hydrologic units (subdivisions of geologic groups) are presently used for water supply in the county. These include the Arikaree and Upper Harrison units and the Runningwater and Ogallala units. The Arikaree, which underlies most of the county, has a maximum thickness of 500 feet and be over 400 feet below the surface in the eastern part of the county. This formation is a major water resource for the county and contains approximately 115 million acre-feet of saturated rock, of which 23 million acre-feet is water. The Upper Harrison unit, which has a maximum thickness of 200 feet, is exposed in the west-central part of the county is about 250 feet below the surface in the eastern part of the county. The Runningwater unit has a thickness of over 200 feet and contains about 1.2 million acre-feet of water. The Oglala unit is under most of the southern and south-eastern

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parts of the county. The maximum thickness is 200 feet and it contains about 3.7 million acre-feet of water.

From 1938 to 1975 approximately 700,000 to 800,000 acre-feet of water was removed from groundwater storage, representing just 2% of the total storage volume. Water levels north of Alliance have gone down approximately 40 feet since 1938. At the present time no area of the county has severely depleted its groundwater supply.

Soils

Soils in Box Butte County are grouped into eleven general soil associations depicted on Map #2 and include the following:

Alliance-Rosebud-Keith Association: This association is found on upland landscapes consisting of broad flats and ridge tops and side slopes along drainageways. This association covers about 38% of the county, or 258,000 acres. Farming on these soils includes both cash-grain crops and livestock grazing. Wheat is the principle dryland crop while several irrigated crops such as corn and sugar beets are also grown. Blowing soil and water erosion are the primary hazards in these areas. A declining groundwater level is a concern where crops are irrigated.

Alliance-Hemingford-Satanta Association: This association consists of deep, nearly level to strongly sloping, well drained loamy soils on uplands. It covers about 5%, or 32,000 acres, of the county. This association is used for dryland wheat and irrigated crops in level areas and for grazing on steeper slopes. Blowing soil and water erosion are the primary hazards. A declining groundwater level is a concern where crops are irrigated.

Norrest-Canyon-Creighton Association: These soils are found on uplands in the Dry Creek Watershed. These are primarily strongly sloping to steep soils that cover about 16,000 acres or 2.3 percent of the county. These lands are primarily used for grazing. Water erosion is the principle hazard.

Creighton-Oglala-Canyon Association: This association, covering about 82,000 acres or 12 percent of the county, is found on uplands consisting of narrow ridge tops, tablelands and smooth side slopes. Dryland and irrigated cash-grain crops and cattle grazing are the primary farm operations in these areas. Blowing soil and water erosion are the primary hazards in these areas.

Busher-Valent-Tassel Association: This is an upland association consisting of breaks, hummocks, ridges and side slopes adjacent to drainageways. Most of this association borders the Niobrara River and its tributaries. It represents approximately 8% of the county or about 57,000 acres. This association is mostly native grassland used for grazing. Water erosion is the principle hazard in rangeland areas with blowing soil the primary hazard in tilled areas.

Sarben-Busher Association: This association consists of long, smooth side slopes, low ridges and short side slopes near drainageways. It covers about 7% of the county, or 48,000 acres. Most of this land is used for cattle grazing. Soil blowing is the primary hazard.

Satanta-Jayem-Busher Association: This association, consisting of broad flats, low ridges and smooth side slopes, covers about 58,000 acres, or 8.5% of the county. Farming operations on these soils include cash-grain crops and livestock. Soil blowing is the

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principle hazard. Water erosion is also hazard on the steeper slopes. A declining groundwater level is a concern where crops are irrigated.

Valent-Dailey Association: This association is on sandhills and occupies about 61,000 acres, or 8.8% of the county. Most of these areas are used for cow-calf operations, although some of the less sloping soils are irrigated and cultivated. Soil blowing is the primary hazard. Wells provide sufficient water for livestock and domestic use.

Valentine Association: The landscape in this association consists primarily of hummocks and dunelike hills. This association covers about 3.7%, or 26,000 acres, of the county. Ranches in these areas are primarily cow-calf operations with limited alfalfa production. Soil blowing is the primary hazard. Wells provide sufficient water for livestock and domestic use. However, most ranchers live outside this association.

Las Animas-Lisco Association: This association covers about 1,728 acres of the county and is found in the Niobrara River Valley. These soils are somewhat poorly drained and wetness is the primary limitation. The association is used mainly for ranching.

Janise-Lisco Association: This association is found primarily on bottom lands in the Snake Creek Valley. It covers about 42,000 acres, or 6.2% of the county. Most of this land is in native grass and is used for grazing or mowed for hay. However, some areas are cultivated. Production is limited by alkalinity. Soil blowing is a hazard in unprotected areas. Wells provide sufficient water for livestock and domestic use.

Prime Farm Lands

Prime farmlands in Box Butte County exist only on certain soil types that are irrigated. Thirty-three soil types can be considered prime farmland in Box Butte County if they are irrigated. Soils that could potentially be considered prime farmland represent about 33%, or 224,000 acres, of the county's total land acreage. Soils meeting these criteria are listed on page 152 of the 1980 issue of the Soil Survey of Box Butte County.

Endangered Species

Three endangered species can be found in Box Butte County. These include the Swift Fox, Black-Footed Ferret and the American Peregrine Falcon.

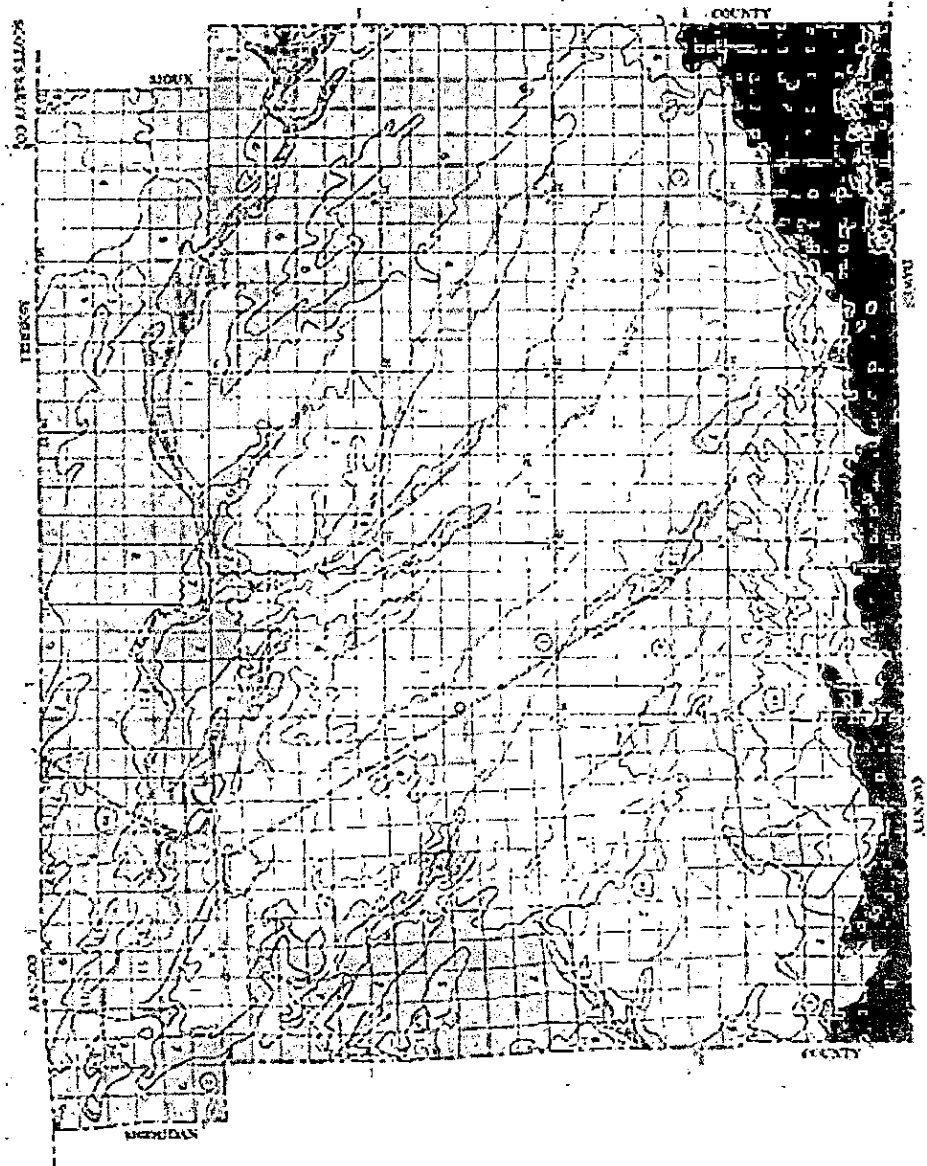
Floodplains

Flood Insurance Rate Maps are not currently available for rural Box Butte County. At the present time a Flood Hazard Boundary Map has been issued identifying areas of the county that will be listed as 100 year flood plains in the event Box Butte County participates in the Flood Insurance program. These areas are generally depicted on Map #3.

Building and Development

Table 12 of the Box Butte County Soil Survey contains several pages of information beginning on page 185 that describe restrictive soil features that could necessitate alternative construction methods for building placement on specific soils types. Parties interested in developing structures in Box Butte County are encouraged to consult this information.

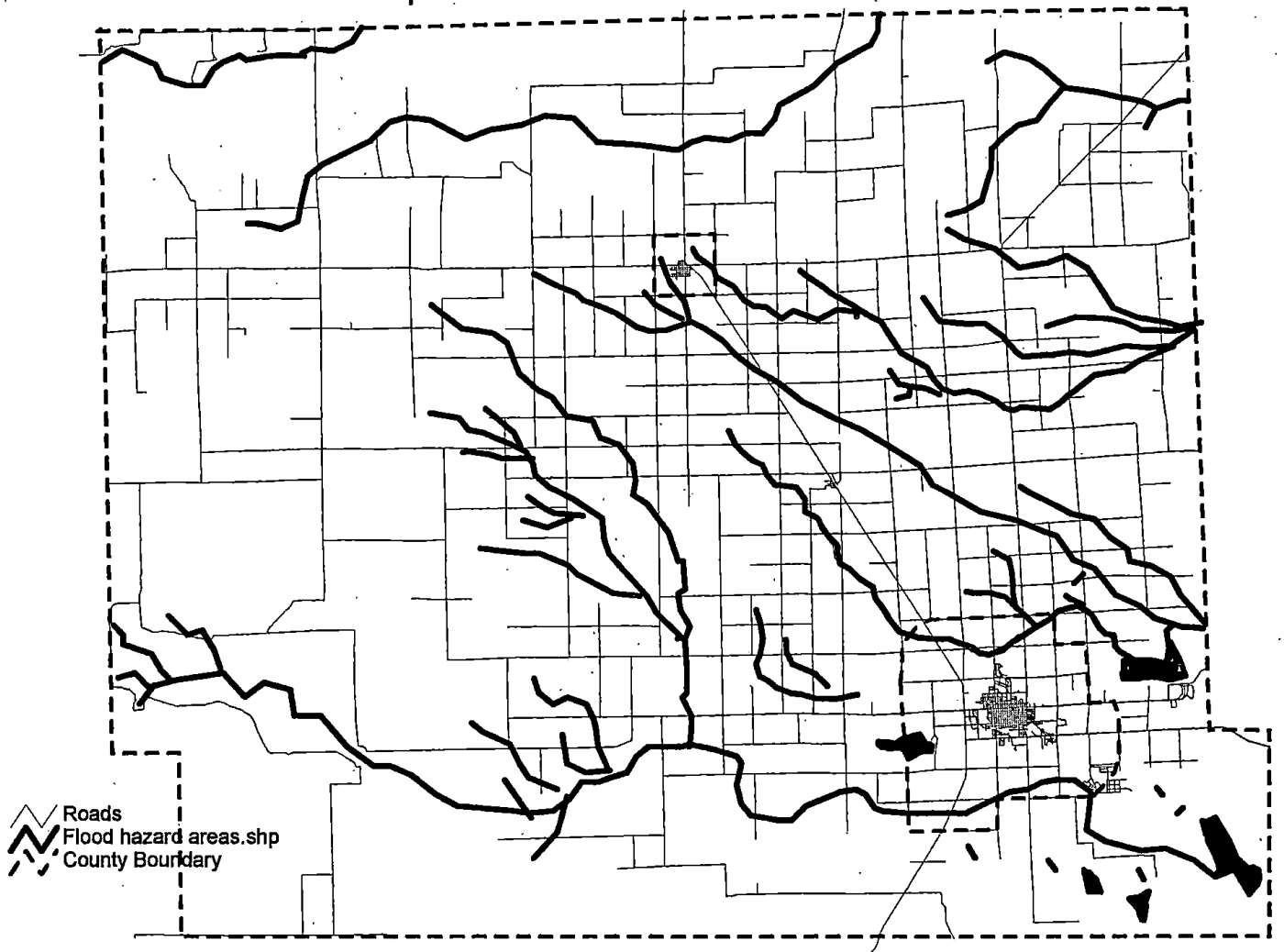
Map #2



Soil Associations

- 1 Alluvial-Forested Xeric
- 2 Alluvial-Hemiphotic Scrub
- 3 North-Capricorn-Cryptic
- 4 Cryptic-Ozark-Cryptic
- 5 Eastern-Midwest-Tussock
- 6 Sandhills
- 7 Sandhills-Open Scrub
- 8 Sandhills-Open Scrub
- 9 Sandhills-Open Scrub
- 10 Low-Midwest-Tussock
- 11 Sandhills

Map 3: Flood Hazard Areas



ENVIRONMENT

Planning Issues

- * Development in flood prone areas should be discouraged.
- * Future development policy for the county should encourage in-filling within existing platted subdivisions and communities to minimize the conversion of prime farmland to more intense uses.
- * In general terms, soils in the county present few problems for future growth. However, special design considerations may be required for foundations and septic tank systems in some areas of the county.
- * Future development policy should strive to preserve high quality natural and scenic areas of the county.
- * Existing water resources are adequate to accommodate projected future growth.
- * Existing and future developments should be monitored by appropriate authorities, such as the Department of Environmental Quality or the Upper Niobrara White Natural Resources District, to ensure the county's ground water quality is protected.
- * Urban, rural and agricultural land uses should be developed to minimize and/or eliminate the runoff of contaminants into the county's drainageways and surface water resources.
- * The county's semi-arid climate and moderate winters provide an opportunity to attract future population growth.
- * Much of the county's land area, due to soil types, is subject to moderate to severe wind and water erosion potential. The establishment of windbreaks and shelterbelts should be encouraged, as should the incorporation of adequate ground cover techniques.
- * The county should consider the establishment of additional wildlife habitat and public outdoor recreation areas and establish distance separation buffers to eliminate or minimize encroaching incompatible land uses.

DEMOGRAPHICS

Population

Introduction

The dynamics of population change is one of the most important variables to consider in the comprehensive planning process. The County's physical environment has, and will continue to be, developed or preserved to meet the demands of a changing population. Growth or decline in total population, as well as structural changes within the population, can have a profound impact on future uses of the land and the provision of necessary public services and infrastructure.

Change in the total population is measured in two ways. The first of these is called natural change, or the number of births versus the number of deaths experienced. The second is net migration, or the number of persons moving into the area versus the number leaving the area. Both of these factors have had a tremendous influence on population change in Box Butte County.

This section of the plan provides an overview of historical population change, the components of change, change in age group structure, gender and race, and closes with a population projection that will be used to assist with the establishment of future planning goals and policies.

Historical Population Change

Box Butte County's total population has changed dramatically over the past several decades. The total population has experienced periods of substantial growth, stability and significant decline. Many factors including the health of the local economy, changes in social structure, migration and natural change have influenced these changes.

From 1960 to 1998 the county's population grew by 1,144 residents, or approximately a 10% increase. Unlike total population change in the United States which grew steadily over this time period, Box Butte County's population experienced both sharp increases and decreases in total population. From 1960 to 1970 the county decreased in size by 1,594 residents, a 13.6% decline. During the 1970's the county's population increased 35.7%, a change of 3,602 residents. Since 1980 the county's population has experienced a fairly steady rate of decline.

Population change within the county's rural and urban areas has also occurred sporadically. From 1940 to 1970 the rural, or unincorporated area, of the county experienced continual decline. During the 1970's the rural area of the county grew slightly (+255 residents) resulting from a strong economy and business expansions. Since 1980, however, the rural area of the county has continued its general decline in population.

Alliance and Hemingford both grew from 1940 to 1950 before beginning a period of decline that lasted until the 1970's. This early growth can be attributed to a stronger post war economy and an emerging demographic phenomenon called the "baby boom". The sharp decline that followed during the 1960's can be attributed to a nation-wide trend of movement from rural to urban areas for employment opportunities and greater numbers of youth leaving to attend college.

DEMOGRAPHICS

Figure 1: Comparative Population Change

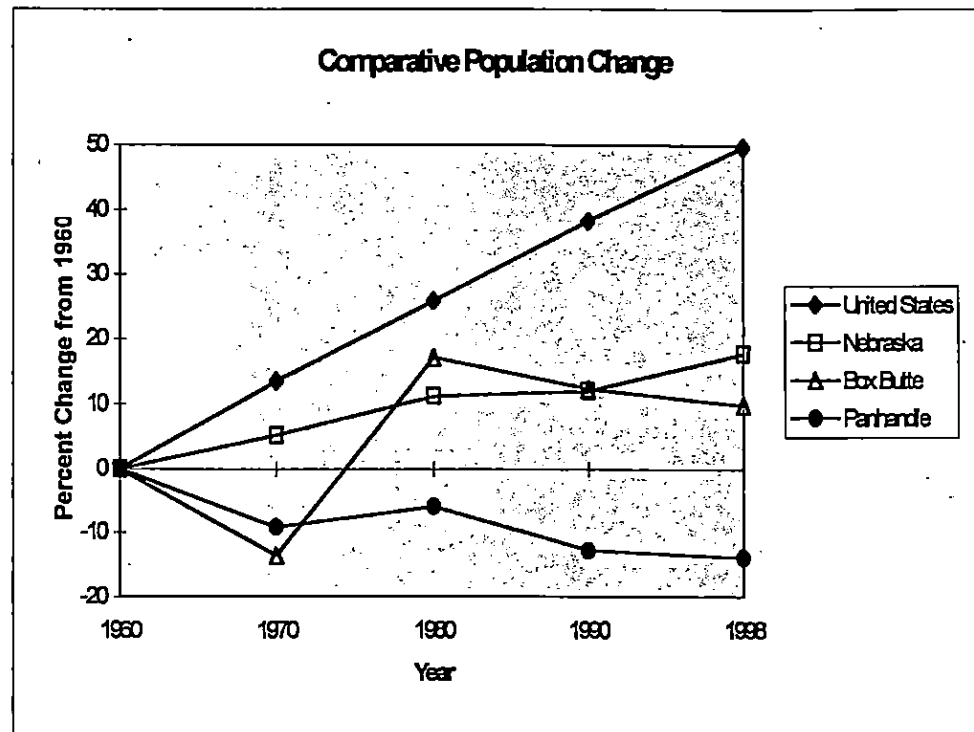
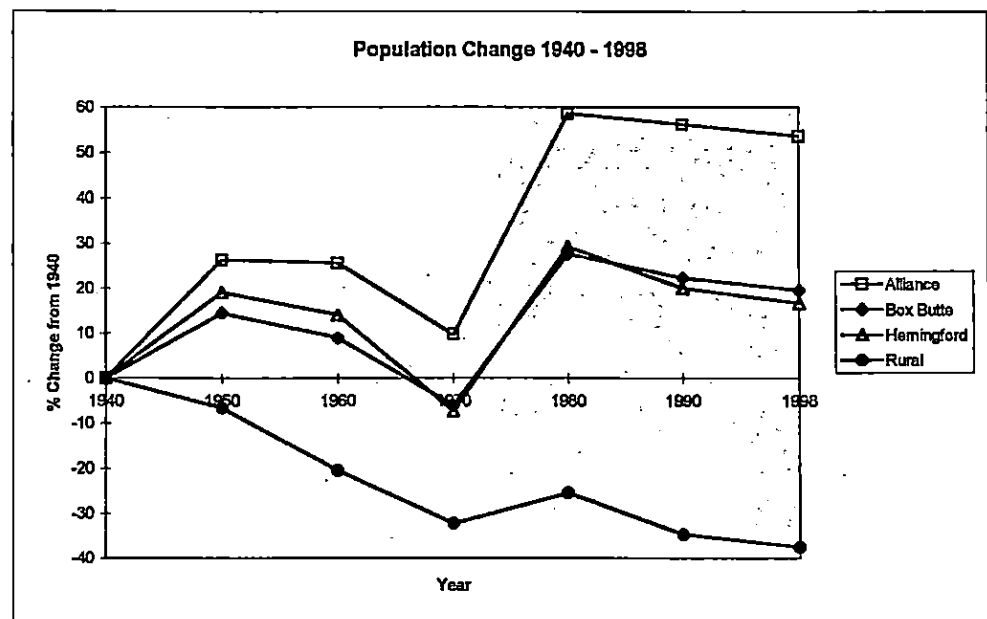


Figure 2: Population Change by Decade, 1940 - 1998



DEMOGRAPHICS

During the 1970's the City of Alliance's population grew by 44.6%, or 3,058 residents. The Village of Hemingford also experienced a large population increase of 39.4%, or 289 new residents. The dramatic population change in the 1970's is the result of growth in several industries in the county. Changes in U.S. environmental legislation led to an increasing demand for Wyoming coal which in-turn resulted in a substantial investment by the railroad on Alliance. However, a downsizing of train crews, the agricultural recession of the 1980's and the age composition of the county's residents resulted in a period of out-migration during the following decades as many residents left to seek higher education and employment opportunities elsewhere.

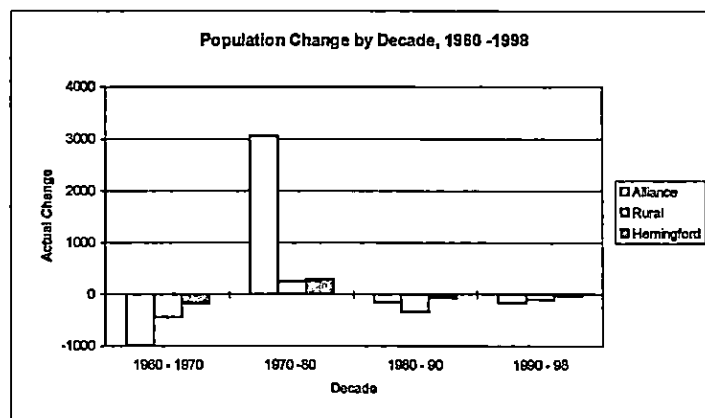
Table 1: Population by Decade, 1940 - 1998

	1940	1950	1960	1970	1980	1990	1998
Box Butte	10736	12279	11688	10094	13696	13130	12832
Alliance	6253	7891	7845	6862	9920	9765	9602
Rural	3691	3442	2939	2498	2753	2412	2306
Hemingford	792	946	904	734	1023	953	924

The following bar graph clearly illustrates the impact of the 1970's economy on population change in various areas of the county. The graph demonstrates the majority of the growth occurred in Alliance, the most urban area of the county. Alliance's population grew by over 3,000 residents while Hemingford and the rural portion of the county grew by just a few hundred each. This impact may have occurred in this manner for several reasons including the following:

- * During the 1970's the United States as a whole was experiencing a rural to urban population shift, some of which was due to society's demands for public services and other opportunities offered by a more urban lifestyle.
- * The City of Alliance invested heavily in infrastructure and land improvements to accommodate the growing population.
- * Excess infrastructure and development capacity may have been present in Alliance to accommodate some of the early change.
- * The majority of the new employment opportunities being created were in Alliance thereby providing convenience for new residents.

Figure 3: Population Change by Decade, 1960 - 1998



DEMOGRAPHICS

Components of Population Change

As previously mentioned, a population increases or decreases as a result of two factors. The first is natural change, or the difference between births and deaths. The second factor is net migration, or the difference between the number of people moving into and out of a given area. Natural change and net migration determine what the population will be at any given point in time. However, natural change and migration are driven by social, political and economic factors.

Natural change and migration have been contributed heavily to the dramatic changes occurring in Box Butte County's population. For example from 1960 to 1970 the county suffered from high levels of out-migration. Natural change was not able to offset out-migration and the county declined by 1,594 residents.

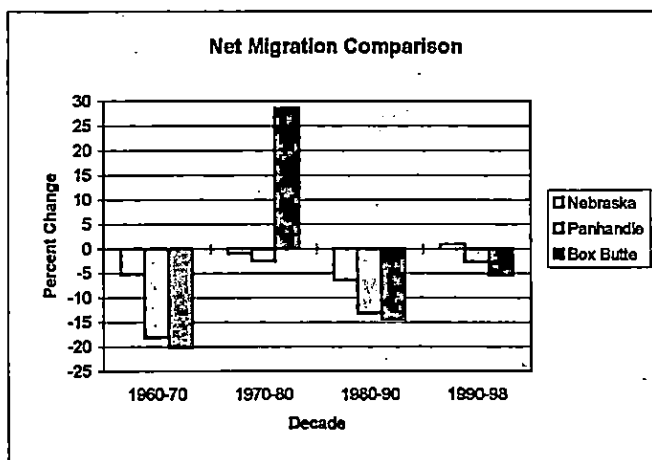
During the 1970's a strong economy resulted in a net in-migration of 2,880 persons. It is important to note that even though the county's population grew by 2,880 as a result of migration this figure does not indicate the number of new residents moving to the county. Migration data provided by the U.S. Bureau of the Census indicate that in 1975 to 1980 alone 4,077 new residents entered Box Butte County and 2,031 residents migrated out. This increase coupled with the county's natural increase resulted in 3,602 new residents inhabiting the county.

Table 2: Box Butte County, Components of Population Change

	1960 - 70	1970 - 80	1980 - 90	1990 - 98
Population Change	-1594	3602	-566	-298
Natural Change	761	722	1401	416
Net Migration	-2355	2880	-1967	-714

The large migration to the county during the 1970's also resulted in a large increase in natural change during the 1980's. This increase suggests that many of the county's 1970's in-migrants were young adults in the prime child bearing ages. During the 1980's migration also began to return to a substantial trend of movement out of the county.

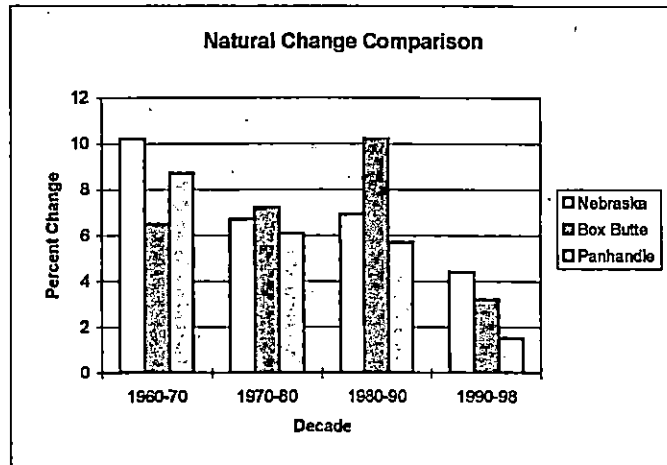
Figure 4: Net Migration Comparison



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In comparison to the State of Nebraska and the Panhandle, Box Butte County has typically experienced higher levels of net out-migration. The exception to this is found during the 1970's when extremely high levels of economic growth were encountered. The following bar graph also demonstrates the impact of young in-migrants on natural change trends in the county. During the 1960's Box Butte County trailed both Nebraska and the Panhandle in natural increase. During the 1970's and the 1980's Box Butte County exceeded state and regional rates of natural increase.

Figure 5: Natural Change Comparison



Population Composition

Age Groups

Another important planning consideration is the distribution of the population by age and gender. Trends and projections based upon the age and gender of the population can assist in identifying future needs in areas such as employment, housing, education and recreation. To evaluate changes in age group structure, the county's population was divided into six age group categories as follows: pre-school (0-4 years old); school age (5-19); young adult (20-39), middle age (40-59); elderly (60-79) and (80 and over).

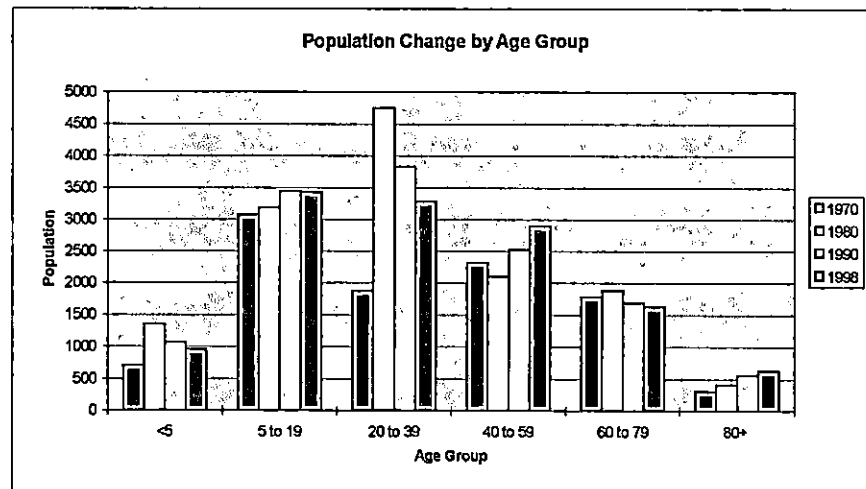
The following graph clearly identifies the age of in-migrants during the 1970's. The slight increase in 5 to 19 year olds and the huge increase in 20 to 39 year olds account for the in-migration. This migration trend and change in age group structure has affected, and continues to affect, the local school systems, the provision of public services and private business.

The pre-school age population also increased during the 1970's. This is most likely attributed to migration. Viewing changes in the school age group suggests that school enrollments began to decrease in the 1990's and may continue to do so in following decades.

This graph also indicates the number of middle age (40-59 year olds) persons will grow as will the number of persons over age 80. Trends over the last three decades also suggest that some out-migration may be taking place among the retiring age group consisting of 60 to 79 year olds.

DEMOGRAPHICS

Figure 6: Population Change by Age Group, 1970 - 1998



By viewing the population of the county in five year age cohorts and tracking the change in those age groups over time it is possible to more accurately determine the age groups represented by the 1970's in-migration and the resulting impacts of this population group in future decades. The following table indicates the majority of the in-migration from 1970 to 1980 occurred among the 20 to 24 year old age cohort (590 new residents) and the 15 to 19 year old age cohort (525 new residents). Large increases were also noted in the 10 to 14 and 25 to 29 year old age groups. These changes can be seen by viewing the number of, for example, 15 to 19 year olds in 1970 and then these same persons who would be 25 to 29 year olds in 1980. This example shows an increase of 525 persons, all due to migration.

Table 3: Population by Age Group, 1970- 1990

	1970	1980	1990
<5	711	1354	1066
5 to 9	956	1166	1309
10 to 14	1148	929	1223
15 to 19	977	1085	917
20 to 24	429	1483	518
25 to 29	478	1502	797
30 to 34	470	1019	1324
35 to 39	506	744	1195
40 to 44	605	536	900
45 to 49	593	453	648
50 to 54	589	567	491
55 to 59	538	552	482
60 to 64	560	590	502
65 to 69	479	505	456
70 to 74	446	438	429
75 to 79	300	357	309
80 to 84	181	241	267
85+	128	175	297
Total	10094	13696	13130

DEMOGRAPHICS

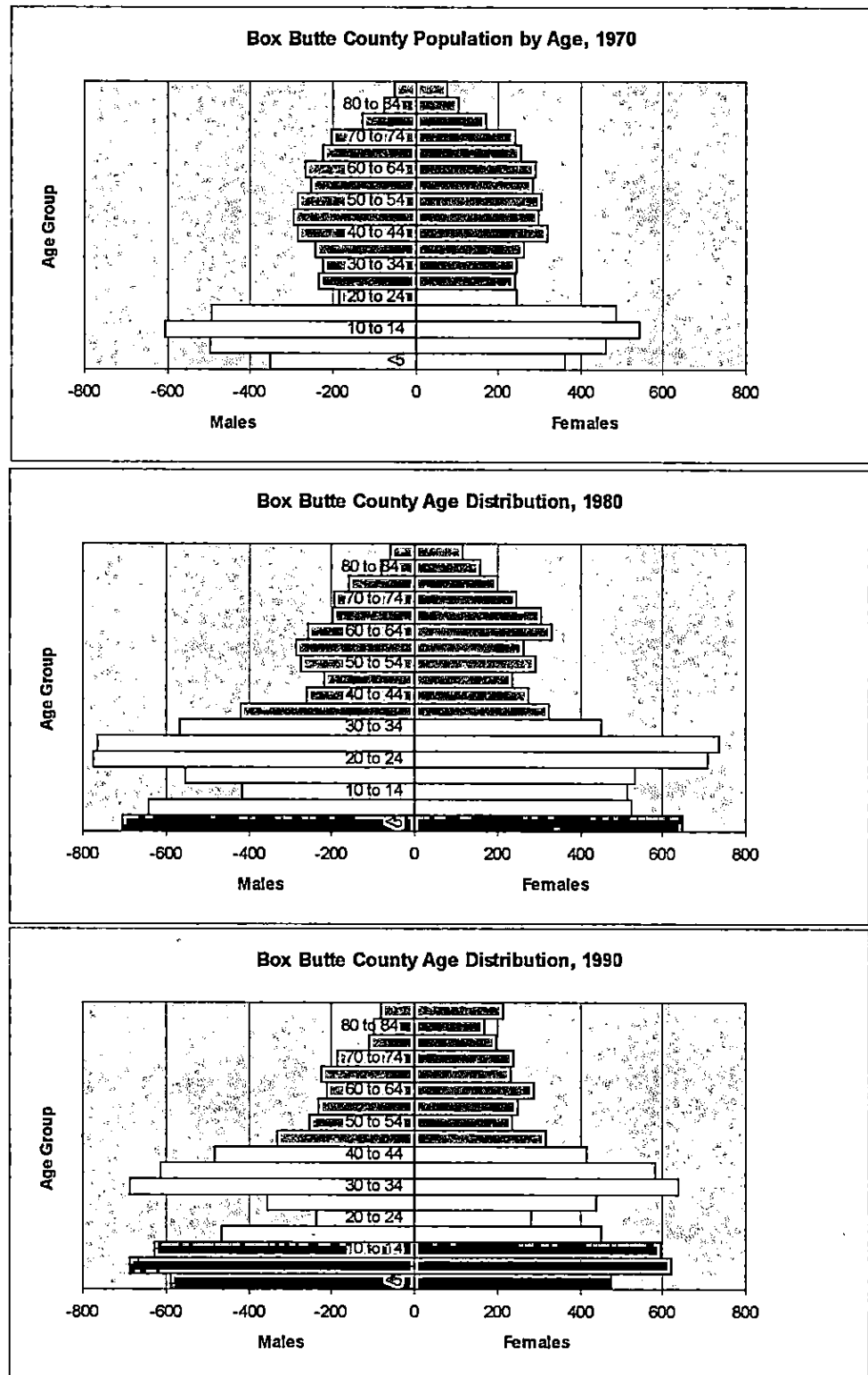
The impact of the in-migration of young adults is also clearly present in the increased number of children born during subsequent decades. Youth out-migration that occurred during the 1980's, and continues today, can also be seen.

Population changes in Box Butte County have been impacted by social phenomenon as well. For example, the "baby boom" which occurred following World War II had a tremendous impact upon the total population, school systems and the types of services and businesses that developed. When these high births rates began to subside a population group called "generation X" emerged. This group was in turn followed by the "echo boom", or children of the baby boomers. The baby boom and echo boom generations are visible as waves in the population pyramids on the following page. Generation X is the trough between the waves.

Population pyramids provide some indications of how the population may change in future years and how this may impact the need for both public and private services. For example, future increases and decreases in school age youth can be clearly seen (provided nothing occurs in the economy that would cause an extreme change). In addition, growing numbers of elderly females and changes in the size of the middle age and youth age groups require new services and products, which in turn affects changes in the private business community and the ability of local governments to provide services or pass bond issues for public improvements.

DEMOGRAPHICS

Figure 7: Box Butte County Change in Population by Age



DEMOGRAPHICS

Additional trends, both current and projected, are clearly visible. These include the out-migration of youth. For example in 1980 the county had 929 youth in the 10 to 14 year old age group. In 1990, these youth would be to 20 to 24 year olds. However, in 1990 the county had only 518 persons in this age cohort. This indicates that 411 youth, or 44% of this age group, migrated out of the county during the ten year time period. This rate of migration will fluctuate up or down somewhat depending upon the job opportunities available in the county. However, long term trends have shown that a large percentage of youth will leave to attend college or seek employment elsewhere even if jobs are available locally. For example, large numbers of people continued to migrate out of Box Butte County during the 1970's, even though the local economy and job opportunities were growing rapidly.

Gender

The composition of Box Butte County's population is also changing in terms of the percentage of males and females represented. The percentage of females has been increasing slightly since 1980. This increase can be largely attributed to the fact that women tend to live longer than men. The percentage of females in Box Butte County is somewhat lower than most rural counties and, in addition, actually experienced a decrease during the 1970's. This is due primarily to the in-migration and presence of a large number of railroad employees which is a male dominated industry.

Table 4: Box Butte County Male/Female Population

	1970	1980	1990	1998
Male	4900	6829	6478	6325
Female	5194	6867	6652	6507
Total	10094	13696	13130	12832
Male %	48.5	49.9	49.3	49.3
Female %	51.5	50.1	50.7	50.7

Race

Although Box Butte County has experienced a slight gain in minority populations, the county remains predominately white as 91% of its residents are Caucasian. The county has seen a significant increase in persons of Hispanic Origin as this race now comprises 5.5% of the population compared to 3.8% in 1980. The native American population has risen slightly and now consists of approximately 2.3% of the total population.

Table 5: Box Butte County, Population by Race

	1980	1990
White	13,058	12,501
Black	47	49
Indian	227	302
Other	46	278

DEMOGRAPHICS

Table 6: Box Butte County, Persons of Hispanic Origin

	1980	1990
Hispanic Origin	514	722
White Hispanics	185	479

Population Projection

Projected growth or decline in the population is one of the most important factors to consider while planning for the future. A change in total population and growth or decline within age groups of the population can impact the county in a variety of ways.

As previously mentioned, population change is measured in terms of natural change and net migration. The effects of natural change are measured by applying birth and survival rates to 5-year age cohorts. For the purposes of this plan a Cohort-Survival Projection model incorporating national birth and survival rates adjusted to more closely reflect State trends was used. In addition, birth rates in the model were further adjusted to more closely reflect trends in Box Butte County. Migration rates for 5-year age cohorts were developed by reviewing historical migration trends with consideration given to current economic activity in the county.

By running a natural change projection, or projecting the county's 1990 population forward to the year 2000 with no migration effect, it can be estimated that the county's population could grow by a total of 640 persons during the decade, and by 1,559 persons if this trend continued to the year 2010. When a migration factor is included the county's total population is projected to decrease by approximately 850 persons by the year 2000. It is expected the population may stabilize somewhat from 2000 to 2010. This projection stability assumes the economy will remain strong with no major employment changes, that youth will continue to migrate out of the county for college and employment, that the percentage of the population comprised of elderly residents will continue to increase resulting in larger decreases due to natural change, and that young families will continue to migrate into the county occupying employment opportunities in the county's transportation and manufacturing industries.

An alternative projection is provided below that assumes the county will experience continued out-migration and lower birth rates. In this instance the county's total population could decrease by an additional 1100 persons by the year 2010.

Regardless of the projection used Box Butte County can expect the number of persons age 40 to 64 and 65+ to continue to increase. This result of the aging babyboom generations will substantially increase the percentage of the county's population that would normally be considered "rooted" in the community. The percentage of the county comprised of youth and young adults who are more mobile and more likely to take risks will decrease.

Even though the county will experience out-migration, this does not suggest that few new families will be moving into the city. Historical trends suggest that young adults will continue to migrate out of the county for college and in search of employment. To compensate for this loss and maintain a relatively stable population base new residents and households will continue to move into the county.

DEMOGRAPHICS

Table 7: Population Projection by Age Groups, 1990 - 2010

Age Group	Description	1990		2000		2010	
		#	%	#	%	#	%
0 - 4	Pre-School	1066	8.1	700	5.7	700	6.3
5 - 19	School	3449	26.3	3109	25.3	2091	18.7
20 - 39	Young Adult	3834	29.2	2338	19.0	2195	19.7
40 - 64	Working	3023	23.0	4413	35.9	4369	39.1
65+	Retired	1758	13.4	1725	14.1	1812	16.2
Total		13130		12285		11167	

Note: With the release of Census 2000 population age group data expected within just a few months of this writing, population projections for the county will be updated and provided in greater detail to the year 2020 in the near future.

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Planning Issues:

- * Historically, Box Butte County's population has been susceptible to dramatic fluctuations due to its dependence upon a limited number of base industries. Box Butte County's population dynamics are continuing to change as a result of growth in the railroad industry.
- * Factors such as declining birth rates, an aging population structure and youth out-migration are, and will continue to, impact the county's population.
- * As the county's baby boom, generation X and the echo boom generations grow older the structure of the county's population will change dramatically. Decreases in the number of school age residents will occur. Significant reductions in young adult age groups (20-39) will occur while large increases in the number of more established residents (40-64 years of age) will occur.
- * The number of retirement age individuals will begin to increase rapidly during the next two decades. New and different demands for housing and services will result from this increase in elderly residents.
- * High out-migration rates for young adults are expected to continue as they move away for college and more diverse employment opportunities.
- * Based upon the distribution of the population by age slight decreases in household size can be expected.
- * The burden upon the primary education system should decrease, in terms of space requirements, as the number of youth decline.

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Introduction

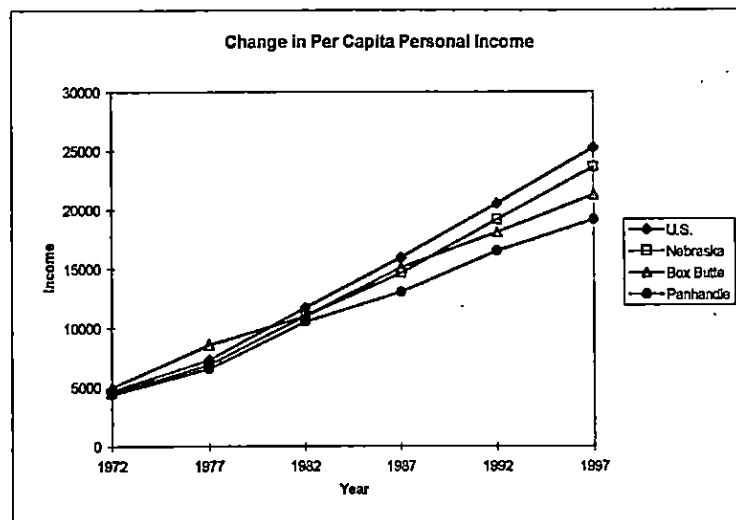
The future of any county is directly related to the economic well-being of the primary, or base, industries that employ its residents. The economic base of a county can be composed of a variety of industries that produce a product from raw material, add value to a product or provide a service which can be exported. Base industries may include manufacturing, agriculture, health care, tourism, retail and service industries. The money received from exports by these industries is distributed throughout the county in the form of wages, benefits, taxes, purchased services, etc. and forms the base upon which the local economy is built.

A detailed analysis of the county's base industries is beyond the scope of this plan. However, a general understanding of the health of the county's economy can be obtained by evaluating trends in income, poverty, employment, unemployment and other factors. This type of analysis can provide useful background information to guide future decisions concerning both public and private investment in local development activities.

Income

Income data is generally used to compare the relative economic well-being between areas. Census data indicates that the county's per capita personal income (PCPI or total income divided by the total population) has risen dramatically since 1972, from \$4,976 to \$21,274. The county's PCPI, however, has improved at a slower rate than that of Nebraska and the United States. In 1972 the county's PCPI exceeded the Nebraska and United States PCPI. Due to the difference in rate of income growth, by 1997 Box Butte County's PCPI represented just 84% of the United States and 92% of Nebraska's.

Figure 8: Per Capita Personal Income, PCPI



Per capita personal income includes both earned and transfer income. Earned income includes earnings from work, interest and dividends. Transfer payments include governmental payments such as supplemental security income, family assistance, food stamps and other government payments.

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In 1972, 89% of the county's total income was earned income. By 1997 only 85% of the county's PCPI was acquired as earnings. Although the percentage of income derived from earnings has decreased in Box Butte County, the earned income rate for Box Butte County equals the United States rate and slightly exceeds the earnings rate for Nebraska.

Table 8: Per Capita Personal Income, 1972 - 1997

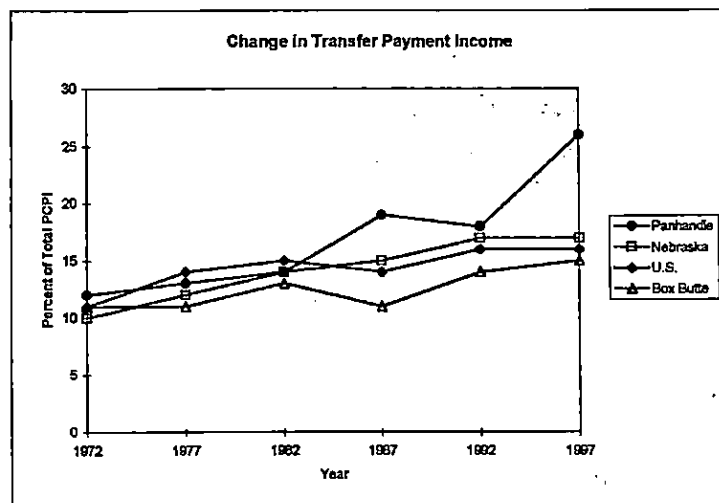
Total Income						
	1972	1977	1982	1987	1992	1997
U.S.	4699	7334	11715	15945	20547	25288
Nebraska	4515	6915	11029	14634	19157	23618
Box Butte	4976	8615	11027	15079	18076	21274
Panhandle	4417	6617	10565	13056	16533	19181

Earned Income						
	1972	1977	1982	1987	1992	1997
Box Butte	4433	7691	9593	13411	15559	18128
Panhandle	3954	5755	9049	10970	13504	15228
Nebraska	4073	6082	9534	12686	16422	20112
U.S.	4164	6315	9951	13703	17182	21141

Transfer Income						
	1972	1977	1982	1987	1992	1997
Box Butte	543	924	1434	1668	2517	3146
Panhandle	463	862	1516	2086	3029	3953
Nebraska	442	833	1495	1948	2735	3506
U.S.	535	1019	1764	2242	3365	4147

The portion of income in Box Butte County obtained through transfer payments has been increasing faster than the national and state average since 1987. This is primarily due to the County experiencing an aging population, or an increasing percentage of the population comprised of elderly and retired residents.

Figure 9: Transfer Payment Income



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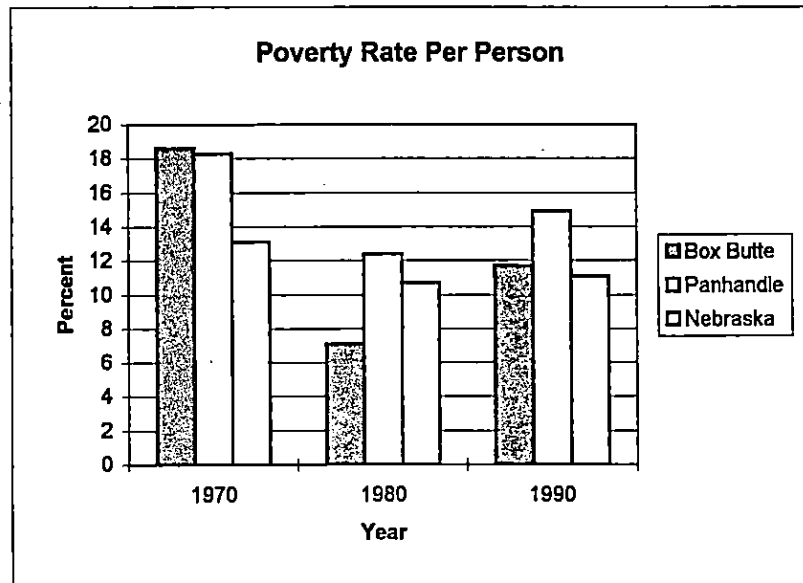
Poverty

Changes in poverty rates over time provide insight into the health of the local economy and the standard of living of area residents. Box Butte County's poverty rate exceeded both the Panhandle and State of Nebraska rates in 1970. By 1980, following a period of substantial job creation and economic growth, the county's poverty rate decreased dramatically. However, by 1990 the county poverty rate had once again grown higher than the State of Nebraska rate but remained lower than the Panhandle's.

Table 9: Change in Poverty Rates Per Person, 1970 to 1990

	# Below	% Below	# Below	% Below	# Below	% Below
Place	1970	1970	1980	1980	1990	1990
Box Butte	1862	18.6	1000	7.1	1515	11.7
Panhandle	15001	18.3	11900	12.4	13302	14.9
Nebraska	188235	13.1	163300	10.7	170616	11.1

Figure 10: Poverty Rates



Education

The nation's economy is expected to continue a general shift which places more emphasis on service industries and high technology. As this trend progresses, educational attainment and skill levels of the county's labor force will play an increasingly important role in the county's ability to stabilize its economy and population base.

The percentage of the county's population age 25 & over with at least a high school education has increased dramatically since 1970 and exceeds the state-wide average. However, despite increases over the past two decades, the percentage of county's population age 25 & over with four years of college education remains lower than the State-wide average. This is due to the high out-migration rate for young adults and a shortage of employment opportunities for persons with a college education.

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Table 10 : Educational Attainment, 1970-1990

	1970		1980		1990	
	12 yrs +	16 yrs +	12 yrs +	16 yrs +	12 yrs +	16 yrs +
Box Butte	40.7	7.2	76.1	12.6	84.0	13.0
Panhandle	35.4	8.2	69.8	12.5	77.1	14.7
Nebraska	37.2	5.7	73.4	15.5	81.8	18.9

Labor Force & Unemployment

The size and composition of the area labor force is an important factor to consider relative to the county's ability to foster new economic growth. The labor force is defined as all persons age 16 and above who are either employed, unemployed or available for employment. For the purposes of this plan, civilian labor force figures were used which excludes area residents who are on active military duty. The size of Box Butte County's civilian labor force increased dramatically from 1970 to 1980 indicating a large in-migration of new workers. From 1980 to 1990 the civilian labor force decreased slightly in size but increased again by 1998. The fluctuations in labor force size are the result of both migration patterns and the aging of certain population age cohorts.

Total employment also increased substantially during the 1970's. Although employment has fluctuated in the county, the total number of persons employed has remained reasonably stable. Unemployment rates have been very low during the 1970's and 1980's. By 1990 the unemployment rate had exceeded 5% and remained at that level throughout 1998.

Table 11: Labor Force

	1970	1980	1990	1998
Civilian Labor Force	3759	6494	6219	6561
Total Employment	3666	6310	5869	6231
Unemployed	93	184	350	330
% Unemployment	2.5	2.8	5.6	5.0

Employment

Evaluating how employment is distributed among, and has changed within, the primary sectors of the economy provides an indication of the overall performance of each sector. This information also indicates the level of economic diversification within the community and identifies which industries the area is most dependent upon. A healthy economy includes a range of industries to help sustain it during periods when individual industry sectors may be experiencing decline.

Total Employment

Total employment growth in Box Butte County increased 61.4% from 1972 to 1997. This rate of increase exceeded the Nebraska growth rate of 53.3%, but was slightly lower than the United States growth rate of 65.8%.

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Table 12 : Change in Total Employment

Total Employment						
	1972	1977	1982	1987	1992	1997
Box Butte	5043	6735	7361	7194	7146	8141
Panhandle	45438	51026	51258	50571	51620	55821
Nebraska	747676	831022	863304	929424	1006167	1145953

Employment grew dramatically during the 1970's as a result of expansions in the railroad and manufacturing sectors of the local economy. The agricultural recession and other factors, such as consolidation in the retail trade sector, caused a slight decrease in total employment during the 1980's. Employment increased substantially during the early 1990's due to increases in several sectors of the economy; including services, manufacturing, transportation and retail trade.

Figure 10: Change in Total Employment

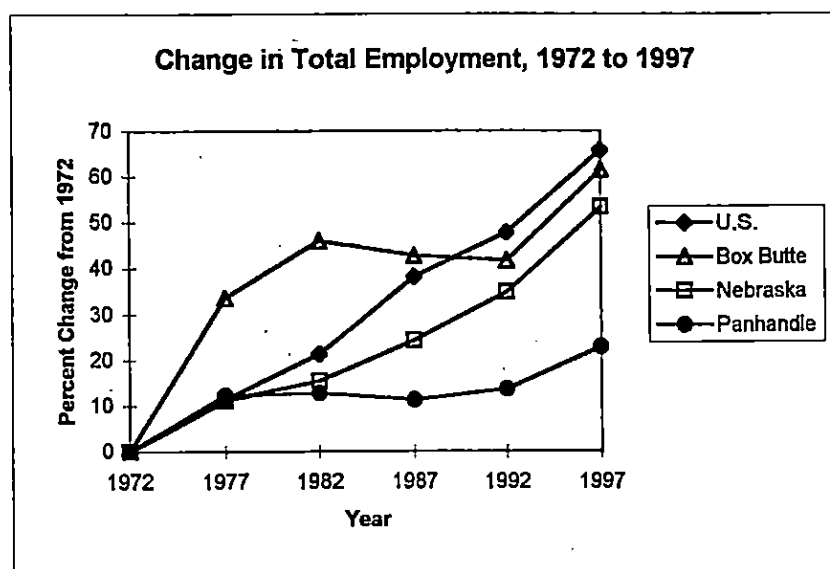


Table 13: Percent Change in Total Employment

% Change from base Year						
	1972	1977	1982	1987	1992	1997
U.S.	0	11.4	21.4	38.2	47.8	65.8
Box Butte	0	33.6	46	42.7	41.7	61.4
Nebraska	0	11.1	15.5	24.3	34.8	53.3
Panhandle	0	12.3	12.8	11.3	13.6	22.9

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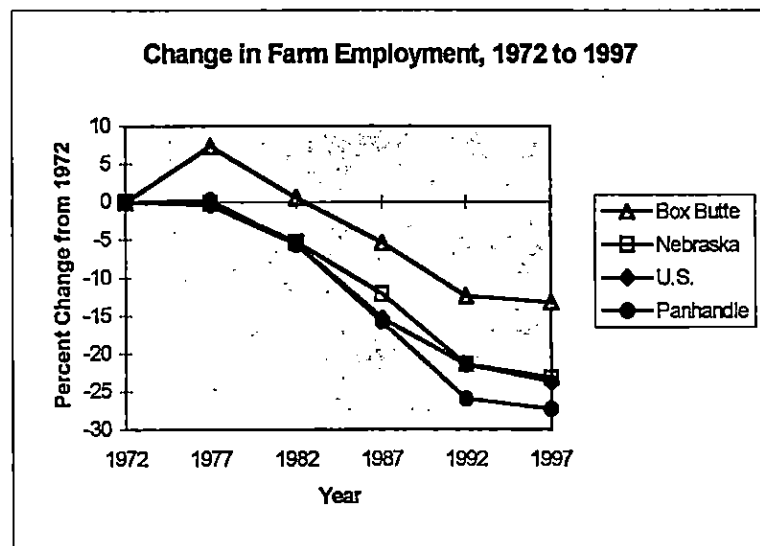
Farm & Non-Farm Employment

Employment in the farming sector of the economy has been gradually declining in Box Butte County just as it has across Nebraska and the United States. However, the rate of decrease in farm employment in Box Butte County has not been as great as in the Panhandle, Nebraska or the United States. Primary causes of employment decreases in this sector include farm consolidation, agricultural policy and growing competition in the production of bulk commodity products in the world market.

Table 14: Change in Farm Employment

Farm Employment						
	1972	1977	1982	1987	1992	1997
Box Butte	892	958	897	844	781	774
Panhandle	8977	8997	8478	7560	6640	6522
Nebraska	88377	88252	83725	77723	69421	67866

Figure 11: Change in Farm Employment



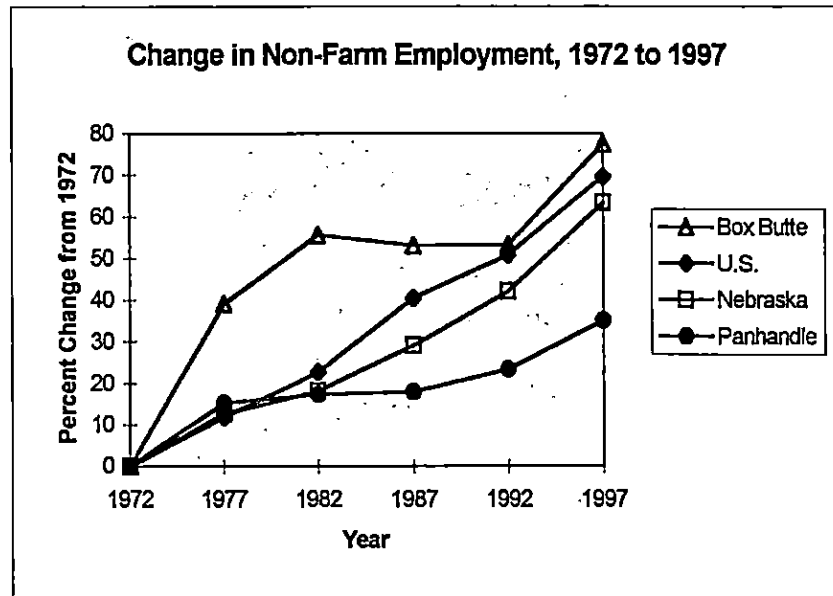
Growth rates in non-farm employment in Box Butte County during the 1970's and the 1990's exceeded state and national averages. Non-farm employment grew over 77% from 1972 to 1997 in the county. However, the county did experience a slight decline in non-farm employment during the 1980's agricultural recession.

Table 15: Change in Non-farm Employment

Non-farm Employment						
	1972	1977	1982	1987	1992	1997
Box Butte	4151	5777	6464	6350	6365	7367
Panhandle	36461	42029	42780	43011	44980	49299
Nebraska	659299	742770	779579	851701	936746	1078087

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Figure 12: Change in Non-Farm Employment



Employment by Industry

A comparison of employment by industry between Box Butte County and the State suggests that employment in Box Butte County needs to be more diversified. The enormous growth in employment experienced during the 1970's immediately followed by a decrease in employment the following decade suggests county's economy is overly dependent upon a limited number of base industries. In Box Butte County this dependence is largely upon agriculture and the transportation sectors of the economy.

Considerable employment change has occurred within the major economic sectors of the county from 1972 to 1997. The farming sector has declined in both employment and number of farm operators while the largest employment gains have occurred in the TCPU (Transportation, Communications, & Public Utilities), Services and Manufacturing sectors of the economy.

Farms & Farm Operators

In addition to farm employment decreases in Box Butte County the number of farms has also decreased significantly. In 1982 there were 543 farms in the county. An increase in farms was noted in the Census of Agriculture from 1982 to 1987. However, the effects of the agricultural recession caused a decline in farms from 1987 to 1997. By 1997 there were only 508 farms in the county.

Table 16: Change in Number of Farms

Number of Farms				
	1982	1987	1992	1997
Box Butte	543	556	516	508
Panhandle	5453	5458	4927	4991
Nebraska	60243	60502	52923	51454

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The average size of farms has, however, grown during this time period as well as the amount of land in farms. The average farm size in Box Butte County in 1997 was 1,371 acres.

Figure 13: Change in Average Farm Size

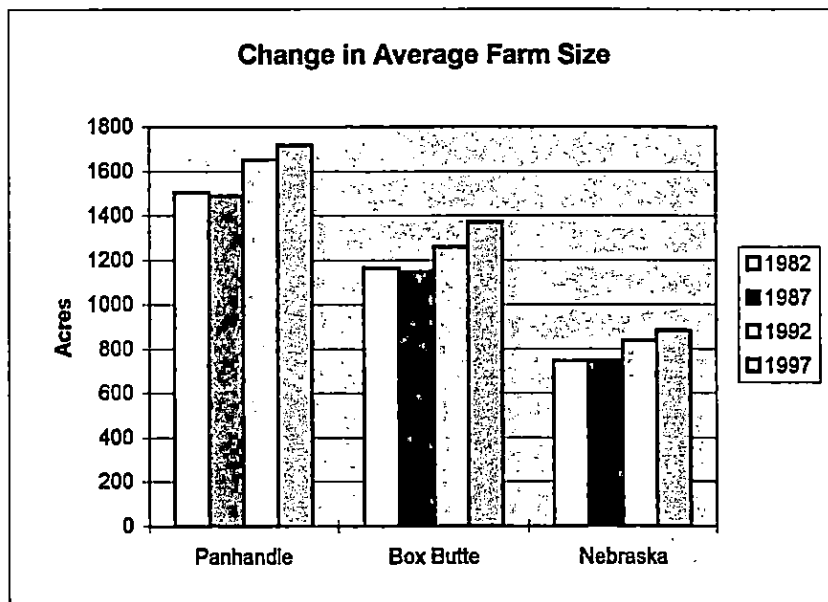


Table 17: Change in Land in Farms

Land in Farms (acres)				
	1982	1987	1992	1997
Box Butte	632991	638811	649612	696502

The number of farm operators has decreased in accordance with the number of farms from 543 operators in 1982 to 508 operators in 1997.

Table 18: Change in Number of Farm Operators

# Operators				
	1982	1987	1992	1997
Box Butte	543	556	516	508
Panhandle	5453	5458	4927	4991

A more alarming figure pointing to the lagging agricultural economy is the number of farmers working off-the-farm (holding second jobs) and the number of days worked off the farm. In 1997, 135 Box Butte County farmers (nearly 27% of all farm operators) considered some other means of employment to be their principal occupation. In addition, 107 farmers reported working 200 or more days off the farm in 1997.

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Table 19: Principal Occupation of Farm Operators

Principal Occupation								
	Farm				Other			
	1982	1987	1992	1997	1982	1987	1992	1997
Box Butte	438	417	388	373	105	139	126	135
Panhandle	4335	4029	3690	3516	1118	1429	1235	1475

Table 20: Number of Days Worked Off the Farm

Days Worked Off Farm								
	Any				200+			
	1982	1987	1992	1997	1982	1987	1992	1997
Box Butte	187	228	186	187	94	127	108	107
Panhandle	2029	2336	2017	2159	912	1191	1021	1146

The average age of farmer operators in Box Butte County is also a cause for concern. The average age of farm operators has been continually increasing and in 1997 was 54.8 years old.

Table 21: Change in Average Age of Farm Operators

Average Age				
	1982	1987	1992	1997
Box Butte	48.5	49.7	52.1	54.8

Total Non-Farm Employment

Since 1972 employment growth in Box Butte County has been largely concentrated in non-farm industry sectors of the economy. The sector of the economy experiencing fastest overall growth rate from 1972 to 1997 was the manufacturing sector. Employment growth in this sector increased by 254% and accounted for 10.7% of all new employment growth. The largest employment increase was in the TCPU sector followed closely by the Services sector. These two sectors accounted for over 54% of all new employment growth in the county, creating 1,747 new jobs. The mining sector was the only non-farm economic sector to decrease in employment.

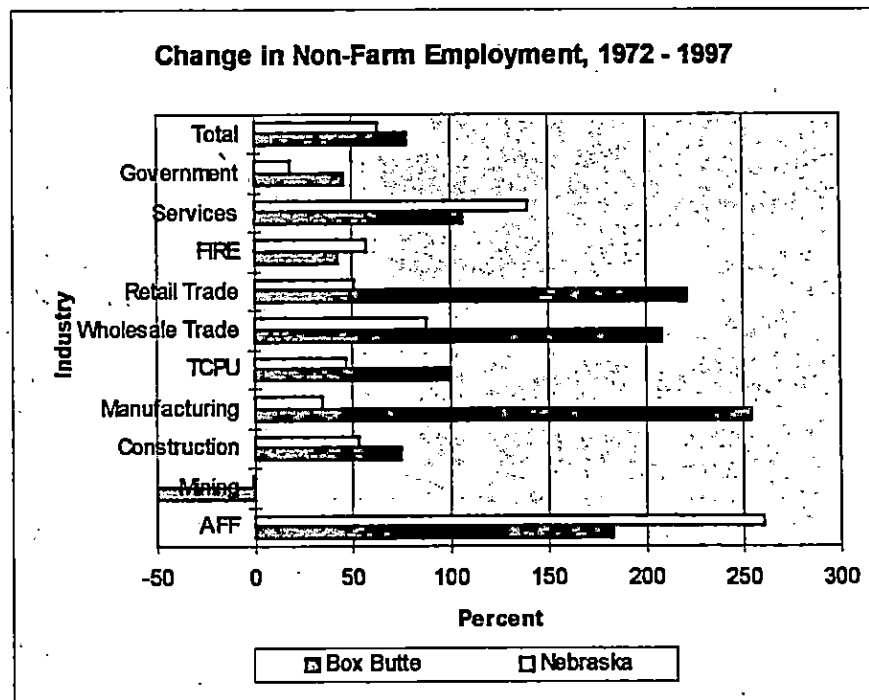
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Table 22: Change in Non-Farm Employment

Box Butte	(Non - Farm Employment)			
	1972	1997	# Increase	% of new employment
AFF	63	178	115	3.6
Mining	6	3	-3	n/a
Construction	159	277	118	3.7
Manufacturing	135	478	343	10.7
TCPU	881	1761	880	27.4
Wholesale Trade	115	354	239	7.4
Retail Trade	1014	1238	224	6.9
FIRE	231	331	100	3.1
Services	816	1683	867	27.0
Government	731	1064	333	10.2
Total	4151	7367	3216	100

Employment growth from 1972 to 1997 in Box Butte County increased faster than for the State of Nebraska as a whole. Employment growth rates in Nebraska exceeded Box Butte County rates only in the AFF (Agriculture, Forestry & Fisheries), FIRE (Finance, Insurance & Real Estate), and Services sectors.

Figure 14: Change in Non-farm Employment



ECONOMY

Table 23: Box Butte County/Nebraska Employment Growth Rate Comparison

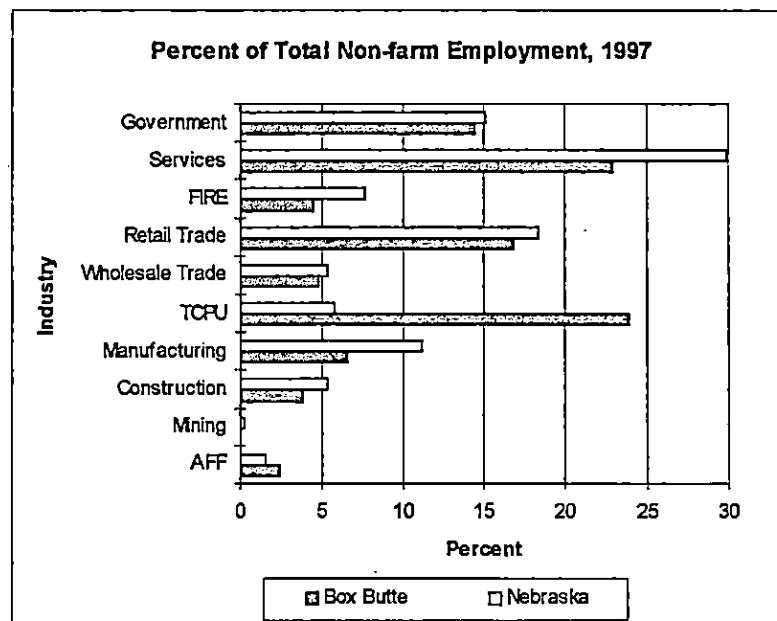
1972 - 1997 % Change		
	Box Butte	Nebraska
AFF	183	260
Mining	-50	-1
Construction	74	53.5
Manufacturing	254	34.8
TCPU	100	46.6
Wholesale Trade	208	88
Retail Trade	221	51.1
FIRE	43	57.2
Services	106	139.5
Government	46	18.5
Total	78	63.5

Diversification

The level of economic diversification, or distribution of employment among various sectors of the economy, is important in terms of maintaining economic stability. Economies largely dependent upon a limited number of base industry sectors can be subject to dramatic fluctuations (up or down) if too dependent upon a limited number of industry types. Box Butte County experienced this during the 1970's railroad expansion.

The following graph clearly demonstrates Box Butte County's reliance upon the railroad industry. Sectors in which the county should promote growth to become more diversified include the Manufacturing, Services and Fire sectors.

Figure 15: Distribution of Employment Industry Sector



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Table 24: Distribution of Employment by Industry Sector

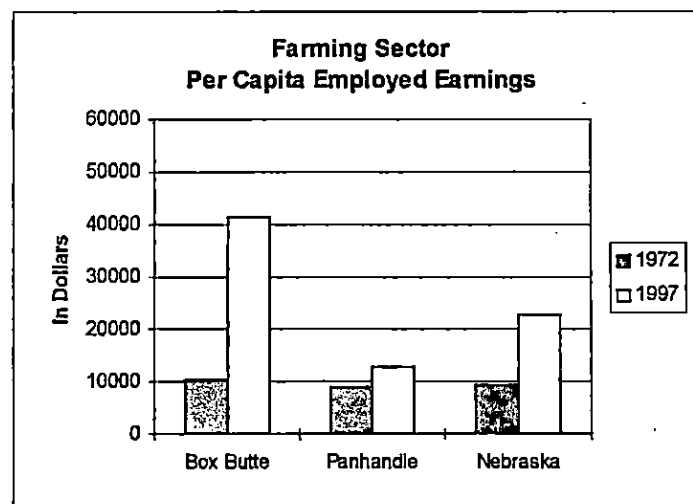
Industry Sector % of Total Employment	Box Butte	Nebraska
AFF	2.4	1.5
Mining	0.04	0.2
Construction	3.8	5.3
Manufacturing	6.5	11.1
TCPU	23.9	5.8
Wholesale Trade	4.8	5.3
Retail Trade	16.8	18.3
FIRE	4.5	7.6
Services	22.9	29.9
Government	14.4	15

Strength of the County Economy

As previously mentioned, the local economy is composed of a number of base industries. These industries may include manufacturing, transportation, agriculture, services, etc. In addition to considering employment growth or decline to determine how well the economy is performing, earnings of employed persons within major industry sectors should be considered as well as sales within industry sectors. The following several graphs depict the change in per capita employed earnings within the major economic sectors of the county's economy. County earnings are compared to the Panhandle and Nebraska.

In 1997, per capita employed earnings in farming were exceeded only by earnings in the TCPU sector. However, earnings in farming experienced the 5th fastest earnings growth rate of all sectors. It should also be noted here that farm earnings can fluctuate dramatically from year to year as opposed to per capita employed earnings in other industry sectors. Farm earnings in 1997 exceeded Panhandle and Nebraska earnings significantly.

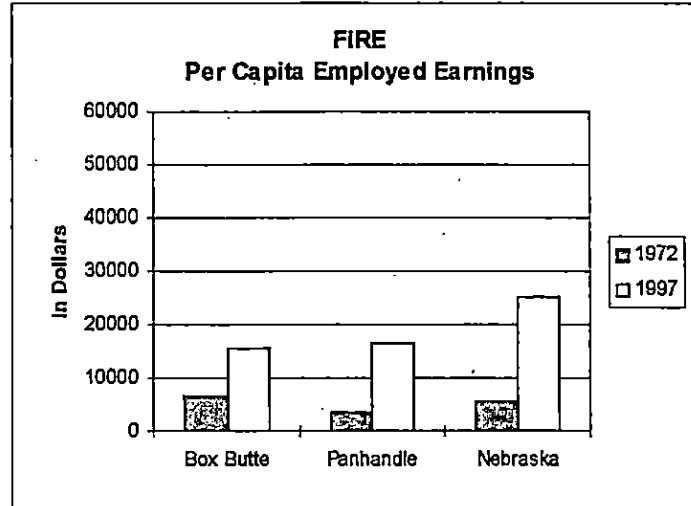
Figure 16: Change in Farm Employment Earnings



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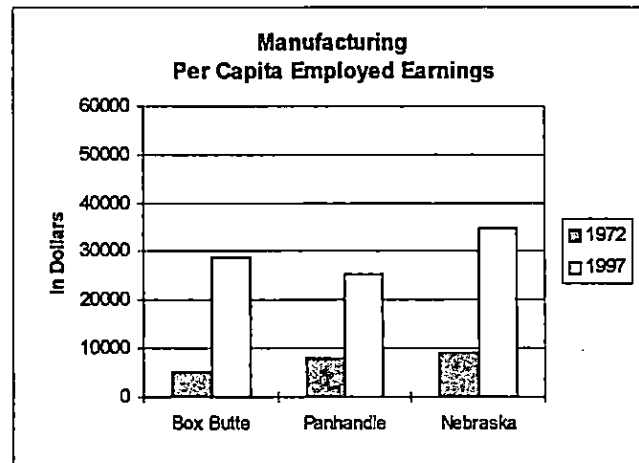
The FIRE industry sector is the second lowest industry sector in terms of per capita employed earnings and experienced the lowest rate of earnings increase from 1972 to 1997.

Figure 17: Change in FIRE Employment Earnings



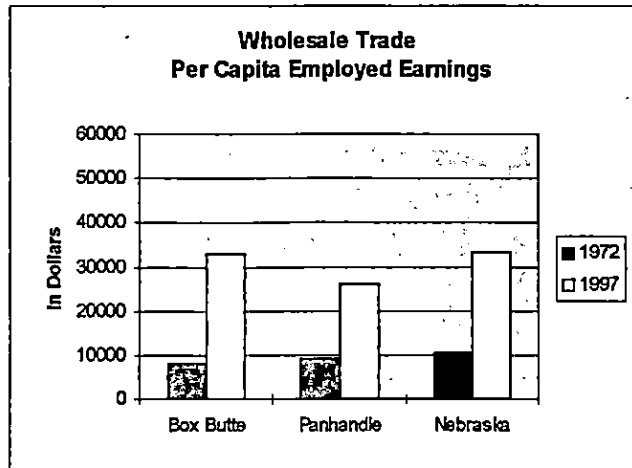
The manufacturing industry sector is the fourth highest industry sector in terms of per capita employed earnings and experienced the highest rate of earnings increase from 1972 to 1997.

Figure 18: Change in Manufacturing Employment Earnings



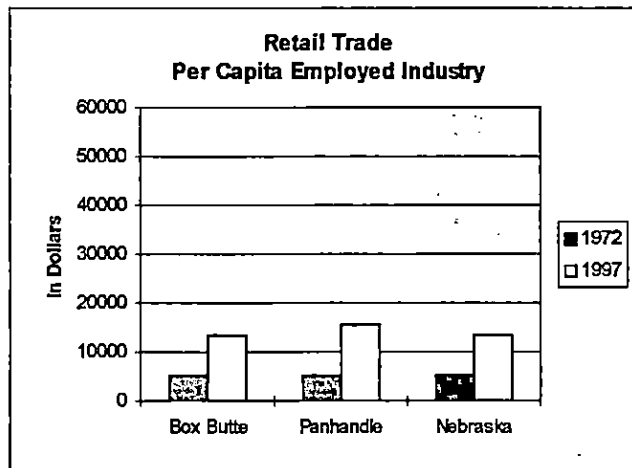
The wholesale trade industry sector is the third highest industry sector in terms of per capita employed earnings and experienced the fourth highest rate of earnings increase from 1972 to 1997. This is one of the few Box Butte County industries keeping up with State per capita employed earnings.

Figure 19: Change in Wholesale Trade Employment Earnings



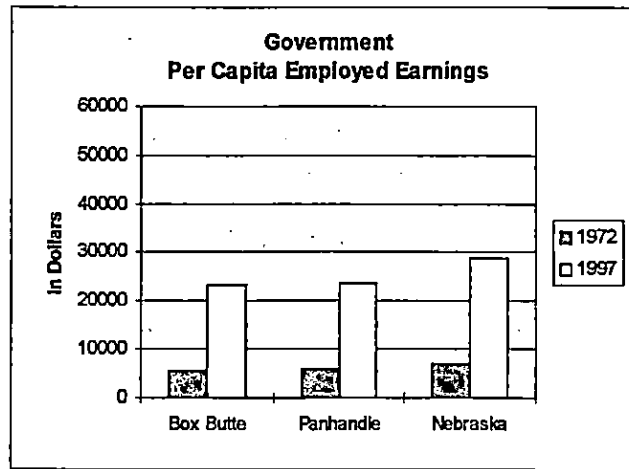
The retail trade industry sector is the lowest industry sector in terms of per capita employed earnings and experienced the second lowest rate of earnings increase from 1972 to 1997. Earnings in the retail trade sector are low across the State. This is due in part to the high percentage of part-time employees in this sector.

Figure 20: Change in Retail Trade Employment Earnings



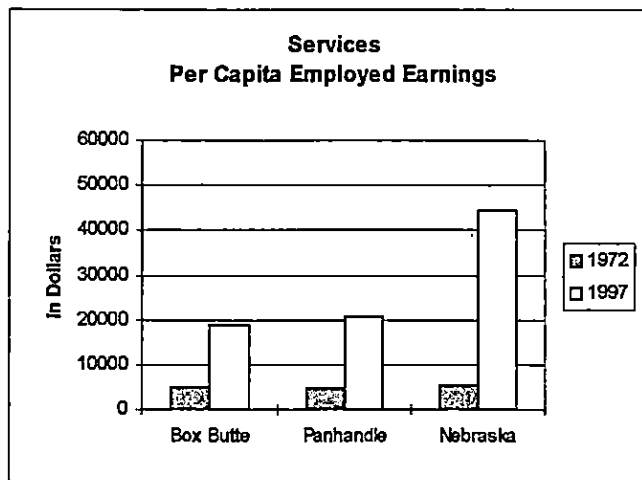
The government employment sector is the fourth lowest industry sector in terms of per capita employed earnings but experienced the third fastest rate of earnings increase from 1972 to 1997. Earnings in this sector in Box Butte County are considerably lower than the State average.

Figure 21: Change in Government Employment Earnings



The services industry sector is the third lowest industry sector in terms of per capita employed earnings and experienced the third lowest rate of earnings increase from 1972 to 1997. Earnings in this sector are considerably lower than the State average.

Figure 22: Change in Services Employment Earnings



The TCPU industry sector is the highest industry sector in terms of per capita employed earnings and experienced the second highest rate of earnings increase from 1972 to 1997. Earnings in this sector are considerably higher than the State average TCPU earnings, and are substantially higher than earnings in any other industry sector of the county.

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Figure 23: Change in TCPU Employment Earnings

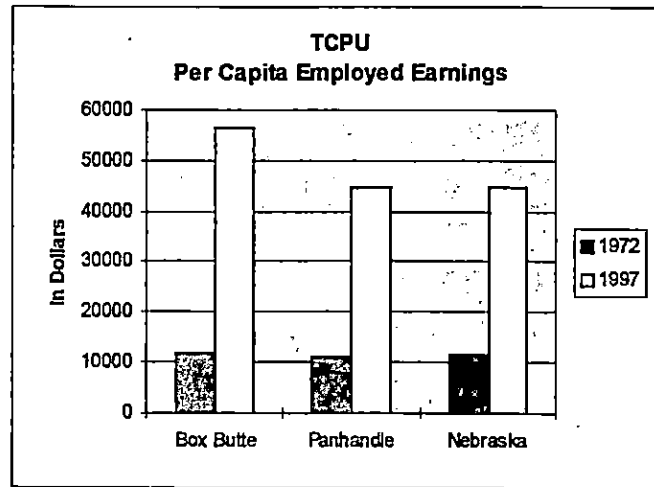


Table 25: Change in Per Capita Employed Earnings by Industry Sector

Per Capita Employed Earnings						
	Services		TCPU		Government	
	1972	1997	1972	1997	1972	1997
Box Butte	5034	18691	11652	56493	5523	23235
Panhandle	4766	20460	11060	44764	5998	23557
Nebraska	5476	44240	11300	44773	6855	28671
	Retail		FIRE		Wholesale	
	1972	1997	1972	1997	1972	1997
Box Butte	5230	13552	6602	15350	8070	32752
Panhandle	5201	15657	3498	16432	9253	26163
Nebraska	5080	13416	5687	25150	10265	33309
	Manufacturing		Non-Farm		Farm	
	1972	1997	1972	1997	1972	1997
Box Butte	5074	28939	6864	26911	10367	41212
Panhandle	7813	25477	6514	21081	8827	12757
Nebraska	8956	34610	7077	25383	9223	22795

Inflation Adjusted Sales

To present a true picture of the economy during this time period, 1982 sales figures were adjusted forward for inflation to reflect what the identical value of sales would have been in 1992. Gross Domestic Product Implicit Price Deflators were used to make the adjustment. The adjustment to 1997 was not made as complete data was not yet available through the economic census and changes in business classifications have created by comparability problems. However, the comparison from 1982 to 1992 does provide a snapshot of economic performance and trends that occurred during the agricultural recession.

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Retail Trade

When 1982 dollars are adjusted to equal 1992 dollars, the county's retail sales show a decrease of 12.9% from 1982 to 1992. During the same time period, the state's inflation adjusted retail sales increased by 14% and the Panhandle's increased 12.1%.

Table 26 : Inflation Adjusted Retail Sales, 1982 - 1992

Place	Net Gain/Loss	% Gain/Loss
Box Butte County	-10,347,070	-13.5%
Panhandle	+84,392,245	+12.1%
Nebraska	+1,413,346,510	+14.0%

Alliance serves as a regional retail trade center. Alliance, however, does not capture all of its retail sales potential. To present an estimate on the amount of retail sales captured by Alliance, the portion of Effective Buying Income (approximately 54%) a household typically spends on retail consumer goods is compared to total retail sales. In 1992, the portion of Alliance's median household EBI spent on retail purchases was estimated at \$13,893. This figure multiplied by the city's estimated 3,685 households indicates that retail purchases by Alliance residents can be estimated at \$51,195,705. When compared to the total retail sales in 1992 (\$63,531,000) it indicates that Alliance's retail trade surplus is at least \$12,195,295.

However, when the same formula is applied to the Box Butte County it shows retail sales leakage is occurring. When Box Butte County's median household EBI spent on retail purchases (\$14,526) is multiplied by the county's 4,898 households, retail purchases by county residents can be estimated at \$71,148,348. When this figure is compared to the county's \$66,420,000 in retail sales it suggests that at least \$4,728,348 in retail sales left the county.

Wholesale Trade

After adjusting for inflation the county suffered a loss of 1.7% wholesale trade sales from 1982 to 1992. The Panhandle saw a decrease of 46% after inflation while Nebraska experienced a statewide increase of 29.2%.

Table 27: Inflation Adjusted Wholesale Trade, 1982 - 1992

Place	Net Gain/Loss	% Gain/Loss
Box Butte Co	-1,298,175	-1.7%
Panhandle	-264,427,495	-46.0%
Nebraska	+7,332,791,240	+29.2%

Manufacturing

From 1982 to 1992, Box Butte County increased its value of manufacturing shipments by 32%. After adjusting for inflation the county experienced a decrease of 12.5% in manufacturing shipments. The state and panhandle, by comparison, decreased their value of manufacturing shipments by 0.3% and 6.9% respectively.

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Table 28: Inflation Adjusted Manufacturing Shipments, 1982 - 1992

Place	Net Gain/Loss	% Gain/Loss
Box Butte County	-2,567,000	-12.5%
Panhandle	-28,638,000	-6.9%
Nebraska	-70,824,000	-0.3%

Services

Inflation adjusted services delivered increased by 10.2% in Box Butte County from 1982 to 1992. However, this increase was below the state and regional increases of 80.9% and 27.5%, respectively.

Table 29: Inflation Adjusted Service Receipts, 1982 - 1992

Place	Net Gain/Loss	% Gain/Loss
Box Butte County	+1,513,870	+10.2%
Panhandle	+33,357,635	+27.5%
Nebraska	+2,606,545,295	+80.9%

Agriculture

Agriculture statistics for this study have been broken down into two categories; crop sales and livestock sales. Although the entire state and region experienced a steep reduction in its inflation adjusted crop sales from 1982 to 1992, Box Butte County actually experienced an increase in inflation adjusted crop sales. Box Butte County's crop sales increased by 51.7% over this time period and after adjusting for inflation the county experienced an increase of 5% while the region and state suffered decreases of 29.2% and 22.9%, respectively.

Livestock sales increased dramatically in Box Butte County from 1982 to 1992. The County's livestock sales increased by 137% from 1982 to 1992, and after adjusting for inflation the county's livestock sales still increased by 63.7%.

Table 30: Inflation Adjusted Crop Sales, 1982 - 1992

Place	Net Gain/Loss	% Gain/Loss
Box Butte County	+2,538,985	+5.0%
Panhandle	-92,299,895	-29.2%
Nebraska	-787,342,895	-22.9%

Table 31: Inflation Adjusted Livestock Sales, 1982 - 1992

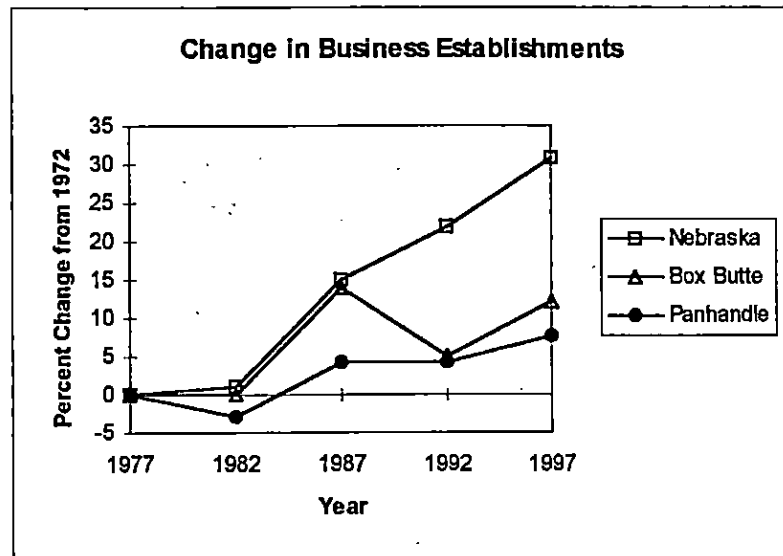
Place	Net Gain/Loss	% Gain/Loss
Box Butte Co	+29,733,495	+63.7%
Panhandle	-1,231,565	-0.2%
Nebraska	-577,162,295	-9.4%

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Business Establishments

Change in the number of business establishments is also used as a measure of economic growth or decline. From 1977 to 1997 the number of establishments in Box Butte County increased by 40, a change of 12%. This change exceeded the 7.6% growth rate for the Panhandle but trailed the State increase of 30.9%.

Figure 24: Change in Number of Business Establishments



Employment by Occupation

Employment by occupation data for 1990 indicate that Box Butte County trails the State in the employment of professional, management and technical positions. Production, labor and AFF (agriculture, forestry and fisheries) employment exceeds state averages. This clearly points out the rural nature of Box Butte County's economy and suggests the need for higher levels of non-agricultural related employment.

Table 32: Occupational Employment Ratios, 1990

Occupation	Box Butte	Nebraska
Prof/Manage	14.9%	23.1%
Tech/Cler	15.4%	18.9%
Service/Sales	23.0%	26.2%
AGFF	10.5%	7.5%
Production	18.6%	16.0%
Labor	17.7%	8.3%

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Planning Issues

- * Incomes in Box Butte County lag behind State and National averages. In addition the disparity in income is beginning to increase. Although this is due in part to an increasing percentage of elderly persons, efforts should continue to attract higher paying employment opportunities.
- * Unemployment and poverty are not viewed as a critical issue in Box Butte County although levels have increased somewhat in recent years.
- * The county produces a high percentage of high school graduates but loses these individuals and college educated youth to industries located outside the area. This diminishes the size and quality of the potential local labor pool.
- * An adequate labor pool exists to accommodate moderately sized business attractions and/ or growth. However, continued training and retraining of the labor force will be needed to attract new industry, supply existing industry needs and to diversify the economy.
- * The county's economy is overly dependent upon agricultural and transportation. Efforts should continue, and be increased, to diversify the economic base.
- * Several of the county's base industry sectors have performed well since the early 1970's. However, employment growth is not expected to continue to increase at these same rates. Gradual increases are likely to occur unless additional new industries are attracted to the county.
- * Farm consolidation and the age of farm operators is a cause for concern. Maintaining and creating secondary employment opportunities for farm operators is critical to the future of the agricultural industry, as are finding new markets for agricultural products and diversified product opportunities.
- * Strategies should continue to be developed and employed to decrease retail leakage.
- * Opportunities to create economic growth will be severely hampered without the creation of additional funding resources for economic development activities.

HOUSING

Introduction

The availability of affordable, quality housing is an important factor to consider in determining the future housing needs of the county, as well as the physical space that may be needed to accommodate new housing construction. Three factors that should be considered in a housing evaluation include the quantity, quality and affordability of available housing units. Housing, a basic need for all people, should be made available for the disadvantaged, first time home buyers, persons wishing to assimilate upward within the housing market and persons wishing to relocate or retire within the community.

Quality

The quality and condition of housing units in the community can be surmised by evaluating the age of housing units. Approximately 33% of the county's total 1990 housing stock was constructed prior to WWII compared to 30.7% state-wide. Only 27.7% of Alliance housing stock was constructed prior to 1940. However, housing stock in the remainder of the county is much older as 46.4% of Hemingford's homes were built prior to 1940 and 47.7% of the rural homes were constructed prior to 1940.

Most of the new housing construction in Box Butte County in the last 25 years has been occurring in Alliance. Of the 2,373 housing units built in the county between 1970 and 1990, 77.8% (1,868) of the units were built in Alliance. The remainder of the homes built during this time frame were built in Hemingford (180) or in the rural areas (328).

Table 33: Age of Housing Units

Year Built	Box Butte	%
Before 1940	1,807	32.7
1940-59	1,047	18.9
1960-69	307	5.5
1970-79	1,616	29.2
1980-90	757	13.7
Total	5,534	100.0

Ninety-two additional housing units were constructed in Box Butte County from 1991 to 1998.

A windshield survey of housing conditions conducted in Alliance in 1994 indicated that 1.5% of all units should be demolished, 9.6% of all units needed substantial rehabilitation and 38.6% of all units required moderate rehabilitation. Applying these same percentages to all housing units in the county suggests that at least 83 units should be demolished, 531 units require substantial rehabilitation, and 2,136 units require moderate rehabilitation.

Quantity

A housing unit is defined as any living space that provides separate kitchen and bathroom facilities, ie: an apartment, townhouse or single family home. According to the U.S. Census, in 1990 the county contained 5,534 housing units. Nearly three-quarters (74.2%) of these units were located in Alliance. The remainder of the housing units were either located in Hemingford (403) or in the country (1,023). According to the Census 11.4% of all housing units in 1990 were vacant.

HOUSING

Vacant Lot Inventory

Assessing the number of lots available for housing development within the county can not be accurately gauged by simply counting the number of vacant lots. Vacant lots in a mature neighborhood are often too small for development or simply not available. Many other lots in their current condition are considered undesirable to prospective developers either because of their poor location or lack of infrastructure.

It is estimated that Alliance has over 300 vacant lots. However, not all of these lots are available for development. Many of these lots are located in the Homestead Addition which has legal issues that must be cleared prior to their availability. In addition, several other lots in Alliance are subject to deed restrictions which limits the type of housing that can be constructed. It was also been reported that there are no lots available for development in Hemingford.

Affordability

The value of the majority of Box Butte County's owner-occupied housing units is lower than state-wide and Panhandle averages. In 1990, 92.2% of the county's homes were valued at under \$75,000 compared to 91.6% in the Panhandle and 80.4% state-wide. Housing values, however, have increased significantly during the 1990's.

Likewise, the majority of the county's rental units fall in the low cost rent category. Nearly 41% of the county's rental units had a 1990 rental rate of less than \$250, a rate substantially higher than the state average of 23.7%. Over sixty-eight percent of Hemingford's rental units had a 1990 rental rate of less than \$250.

Table 34: Dollar Value of Owner Occupied Homes, 1990

Dollar Value	Box Butte County		Panhandle	Nebraska
	Units	Percent	Percent	Percent
Less than \$25,000	337	14.0	25.3	16.3
\$25,000 to 49,999	1203	50.1	46.3	33.7
\$50,000 to 74,999	674	28.1	20	30.4
\$75,000 to 99,999	141	5.9	5.5	11.4
\$100,000 to 124,999	20	0.8	1.7	3.8
\$125,000 to 149,999	20	0.8	0.7	1.9
\$150,000 to 199,999	5	0.3	0.4	1.5
\$200,000+	0	0.0	0.2	1

Table 35: Contract Rent in Dollars, 1990

Rents	Box Butte County		Panhandle	Nebraska
	Units	Percent	Percent	Percent
Less than \$200	321	22.1	45	14
\$200 to 249	273	18.8	20.3	9.7
\$250 to 299	259	17.8	16.5	12.9
\$300 to 349	103	7.1	8	13.9
\$350 to 399	127	8.7	5.2	11.5
\$400 to 449	148	10.2	2.2	8.2
\$450+	224	15.3	2.8	16.2

HOUSING

Even though a large percentage of the county's housing units can be purchased or rented at a lower cost in comparison to state-wide percentages, this does not necessarily imply that the county's housing units are more affordable than in other areas of the state. To make this determination housing costs must be compared to the incomes of local residents.

A comparison of owner-occupied housing costs as a percentage of household income in Box Butte County versus Nebraska indicates that Box Butte County residents pay a somewhat lower cost of housing to income ratio. For example the table below indicates that only 68.8% of Box Butte County residents spend less than 20% of their income on housing compared to 63% for Nebraska.

Table36: Cost of Owner Occupied Housing as a % of Household Income

% of Household Income	Box Butte County		Nebraska
	Households	Percentage	Percentage
35 or more	197	8.2	8.8
30 to 34	47	2.0	4.7
25 to 29	216	9.0	8.8
20 to 24	286	12.0	14.6
Less than 20%	1646	68.8	63

Rental rates in Box Butte County are also somewhat lower on relative household income/cost of housing basis. Just over 43% of Box Butte County renters pay less than 20% of their household income for rent compared to 38% statewide.

Table 37: Cost of Renter Occupied Housing as a % of Household Income

% of Household Income	Box Butte County		Nebraska
	Households	Percentage	Percentage
35 or more	299	21.9	25.9
30 to 34	97	7.1	7.9
25 to 29	136	10	12.2
20 to 24	240	17.6	16.1
Less than 20%	592	43.4	38

The following tables compare ranges of household incomes to what might be considered affordable housing ranges. This affordability scenario assumes a 20% down payment, 30 year mortgage, a 9.9% annual interest rate, and that debt retirement will not exceed 25% of household income. The cost of the lot is included in the payment. Real estate taxes and insurance (\$100 to \$120/month) were deducted from the payment amount to arrive at an affordable debt retirement housing cost. Affordable ranges are shown as a monthly gross rent.

HOUSING

Table 38: Affordable Housing Costs (1990)

Household Income	Households	Affordable Range of Owner Units	Number of Owner Units	Affordable Range of Rental Units	Number of Rental Units	Total # of Affordable Units	Surplus or Deficit of Units
\$0 - 4,999	826	\$0 - 19,149	252	\$0 to 199	321	573	253
10,000 - 14,999	455	to 35,907	643	200 to 299	532	1175	77
15,000 - 24,999	1017	to 66,552	1170	300 to 499	431	1601	548
25,000 - 34,999	872	to 100,070	290	500 to 699	171	461	-411
35,000 to 49,999	888	to 150,346	40	700 to 999	0	40	-848
50,000+	876	150,347+	5	1,000+	0	0	-871

This information suggests that surpluses of housing valued at less than \$66,500 exist as well as rental units with gross rents at less than \$500 per month. Housing units priced over these amounts are in short supply. This data also indicates a potential unwillingness of residents to assimilate upward in the housing market, an unwillingness of elderly residents to move into alternative forms of housing and/or an unwillingness of local contractors and investors to construct speculative housing.

Tenure

The 1990 Census indicates that Box Butte County closely mirrors Nebraska averages in terms of owner or renter occupancy by age groups. Box Butte County does, however, have a slightly higher percentage of homeowners than does Nebraska.

Table 39: Homeowners and Renters by Age, 1990

Age	Box Butte County				Nebraska	
	Own	%	Rent	%	Own %	Rent %
Less than 34	582	17.5	740	47.1	16.2	51.1
35 to 44	829	24.9	385	24.5	22.2	18.6
45 to 54	625	18.8	112	7.1	16.3	8.6
55 to 64	437	13.1	113	7.2	16.3	6.5
65 to 74	505	15.2	75	4.8	15.8	6.6
75 & older	348	10.5	147	9.3	13.2	8.6

Household Size

From 1980 to 1990 the number of single person households increased by 83 in the county. The number of one person household renters, however, only increased by twelve in the county. The reason for this may be that there are a large number of single elderly persons living in owner occupied homes. It may also reveal that there is either a lack of elderly housing throughout the county or there is not enough quality elderly housing units which these persons would be willing to move into.

Another trend which has occurred from 1980 to 1990 is a tendency for three, four, five, and six person households to rent housing units instead of owning. This problem is compounded by the number of elderly persons occupying single family homes which reduces the supply side of the housing market.

HOUSING

Table 40: Household Size, 1980 - 1990

Household Size				
Persons	1980		1990	
1	1221	24.2	1304	26.6
2	1571	31.2	1465	29.9
3	832	16.5	707	14.4
4	842	16.7	831	17.0
5	369	7.3	425	8.7
6+	203	4	166	3.4

The number of persons per household has also been decreasing in Box Butte County. In 1970 the Box Butte County had 2.99 persons per household. By 1990 this had reduced to 2.64 persons per household. Although this may not seem like a large difference it can have a tremendous impact on the number of housing units needed to accommodate a given population.

Table 41: Persons Per Household (PPH)

Year	Household Population	PPH	Households
1970	10109	2.99	3381
1980	13703	2.72	5038
1990	12931	2.64	4898

Vacancy Rates

According to the US Census, vacancy rates for the county indicate that there is a shortage of single family housing units. The 1990 US Census indicates the opposite for the rental housing market as vacancy rates indicate a large number of rental vacancy's. However, an Apartment Occupancy Survey undertaken in March 1996 in Alliance indicated the rental market in was actually very tight. The overall vacancy rate in 1990 was 11.4% according to the Census.

Table 42: Vacancy Status

Housing Type	Box Butte County	
	Owner	Renter
Occupied	3,326	1,572
Vacant for sale or rent	51	275
Total	3,377	1,848
Vacancy Rate	1.5	14.9

HOUSING

Ten and Twenty-year Housing Needs

Population, household, and vacancy information can be used to estimate the number of new housing units that will be required for Box Butte County over a ten year period. The forecasts can then be compared to current development activity and available land for future development to set priorities for the types and locations of housing development that should occur.

Table 43: Projected Housing Needs, 1990 -2010

Projected Housing Needs to Meet Projected Population, 2000 to 2010				
	1990	2000	2010 (with net out-migration)	2010 (with stable migration)
Total Population	13130	12285	11167	12285
Household Population	12931	12099	10998	12099
Persons Per Household	2.64	2.4	2.30	2.35
Household Demand	4898	5041	4782	5149
Vacancy Rate	3%	3%	3%	3%
Total Unit Needs	5045	5192	4926	5303
Units in Base Year	5100	5100	5100	5100
Units Lost	50	100	150	150
Available Units	5050	5000	4950	4950
Cumulative Need	-5	192	-24	353

The housing projection described above indicates that by the year 2000, 192 additional housing units would be needed to accommodate the projected population and maintain a 3% vacancy rate. In reality approximately 120 new housing units were constructed during the ten year period. The 3% vacancy rate in the year 2000 would place approximately 150 homes on the market county-wide.

Two possible scenarios are provided for a year 2010 housing projection. The first assumes the county will continue to experience a net out-migration pattern similar to that which occurred from 1980 to 2000. If this happens the county would have a sufficient number of housing units available provided the year 2000 need is met.

The second alternative assumes a stable rate of migration. It is expected that, due to the nature of employment opportunities in Box Butte County and the fact that much of the out-migration occurring from 1980 to 2000 was a direct result of the large in-migration occurring in the 1970's, the rate of net out-migration should slow significantly from 2000 to 2010. If this occurs and the county is able to maintain a stable population base approximately 350 new housing units would be required in the 1990 to 2010 time period.

HOUSING

Assuming the county's population stabilizes somewhat by the year 2010 the following types of housing units would be needed:

Table 44: Projected Housing Needs; 1990 - 2010

Housing Type	Number of Units Needed
Single Family	242
Duplex	9
Multi-Family (3-9 units/structure)	27
Multi-Family (10+ units per structure)	31
Mobile Homes	41
Total	350

At the present time there are no lots available in Hemingford which may require land to be annexed for a new subdivision. In addition, the existing lots in Alliance would not accommodate all of the projected housing needs due to differing tastes of potential homeowners/renters and the presence of subdivision with deed restrictions limiting development. It is estimated that a minimum of 78 acres of land would be needed to accommodate the projected housing need.

HOUSING

Planning Issues

- * The county's housing stock is aging with relatively few new housing units having been constructed during the 1990's.
- * The age of the county's housing stock and windshield surveys to identify housing conditions indicate a need for housing replacement and rehabilitation programs.
- * There is a need for additional building lots in Hemingford and Alliance to accommodate projected housing needs.
- * Although most new housing construction should be directed toward communities with the necessary infrastructure, there remains a need to provide the full range of housing alternatives in order to attract new residents. This includes rural estates. However, the conversion of prime farmland to urban uses should be discouraged and the impact on gravel/dirt county roads limited.
- * Housing values and rents remain depressed in the county. This impacts the ability of contractors and investors to produce speculative housing and also affects appraisals and financing.
- * The majority of the county's housing shortages, in terms of affordability, lie in the middle to upper income housing ranges.
- * Household sizes are expected to decrease significantly during the next twenty years due to the growing percentage of elderly and the out-migration young adults.

PUBLIC FACILITIES & SERVICES

Introduction

Publicly owned facilities that pertain to Box Butte County include local school facilities, the county courthouse, administrative offices and road department buildings, public cemeteries, the County Sheriff's Department & Jail, rural fire department and rescue services, and the Box Butte County Hospital. This section of the plan provides a brief description of these facilities.

Additional facilities are operated by the City of Alliance and the Village of Hemingford, such as water and waste water treatment facilities, landfills, police and fire protection, libraries, etc. Brief descriptions are included in this document. In-depth information on these subjects can be found in the Alliance and Hemingford comprehensive plans.

Education Facilities

A community's educational systems play an invaluable role in creating the potential for future growth and development. A high quality primary education system is essential, as is access to a secondary education system. An educational systems contributions to the future of a community include not only the provision of a well educated labor force, but also a marketing tool for the attraction of new residents and businesses. In addition, the public infrastructure provided through the school system can be an asset to the community in terms of the provision of recreation, meeting and community event space.

Educational resources available in Box Butte County include preschool services; the public primary education system consisting of eight elementary schools (one in Hemingford, three in Alliance and four rural schools), two middle schools and two high schools (one each in Hemingford and Alliance); secondary education services provided by Western Nebraska Community College and Chadron State College; Adult Basic Education; School-to-Work; and St. Agnes Academy.

Primary Education Facilities (Public)

Primary education in Alliance is provided through a system of elementary schools (kindergarten through fifth grade), a middle school (grades six through eight), and a senior high school (grades nine through twelve).

Central Elementary School, located at 7th Street and Box Butte, was constructed in 1913 with wood frame and masonry construction. The school contains approximately 31,000 square feet of floor area in three stories. Building additions were constructed in 1953 and 1959. Classrooms are generally limited in space and the age and design of the building does not lend itself to redesign as modern functional facility. In addition, the school site is just over two acres in size leaving limited space for future additions. Enrollment in 1997/98 was 313 students with capacity considered to be 300 students.

Emerson Elementary School, located at 7th Street and Black Hills Avenue, was constructed in 1948. An addition to the facility was completed in 1953 which houses dressing rooms, administrative offices, and classrooms. The two-story building contains nearly 25,000 square feet of space and is composed of brick and poured concrete construction. The school is situated on approximately four acres of land which leaves ample space for future additions. In 1997/98, the school housed 312 students.

PUBLIC FACILITIES & SERVICES

Grandview Elementary School is located at 6th Street and Potash Avenue. This two story facility was constructed in 1922 with additions following in 1930 and 1953. The school is located on two acres of land leaving limited space for future additions. Classroom space is also limited. Enrollment in 1997/98 was 294 students which exceeded the buildings design capacity of 273 students.

The Alliance Middle School was constructed in 1922 with additions in 1938 and 1987. The building is approximately 71,600 square feet and is brick and masonry construction. Enrollment in 1997/98 was 516 students. The school is located on approximately nine acres of land and is adjacent to 26.7 acres of athletic field.

The Alliance High School was constructed in 1954 as a junior high school facility. An auditorium was added in 1962. Additions followed in 1967, 1974 and 1986. The building is of brick and concrete construction. The High School site provides the space needed for future additions. Enrollment in 1997/98 was 798 students.

In 1990 the present administration unit was constructed near the Alliance Senior High School site. This facility houses the central office, school board/city council meeting room, community education and warehouse facilities. The 10,196 square foot building is constructed of brick and concrete block. The armory building on Black Hills Avenue in Alliance was recently purchased for future use by the Alliance school system.

Table : School Enrollment

School Year	Total Enrollment	
	Alliance	Hemingford
1993/94	2275	
1994/95	2265	
1995/96	2276	
1996/97	2205	
1997/98	2216	
1998/99	2178	
1999/2000	1960	
2000/2001	1917	

The Village of Hemingford operates a K-12 school system. The school facilities are housed in several structures at one location in the community. The facilities are reportedly in good condition. No new expansions are planned or being considered at this time. However, it was indicated that additional classroom space would be a benefit.

PUBLIC FACILITIES & SERVICES

Four rural schools continue to operate in Box Butte County. These include District 25 located approximately five miles east of Alliance, District 39 located in Berea, District 42 located approximately four miles north of Alliance, and District 44 located approximately five miles west of Alliance. (See Map #4).

District 25 has a current enrollment of 40 students. The facility is of wood frame construction and is reported to be in fair condition. District 39 and 42 each have enrollments of 25 students. District 44 has a current enrollment of 12 students but is expected to increase enrollment to 22 students in the 2001/2002 school year due to students opting-in from city locations. District 39, 42 and 44 are brick buildings and are reported to be in good condition. Although enrollments fluctuate at the schools there has been no appreciable change in recent years.

Primary Education Facilities (Private)

Saint Agnes Academy is a coeducational school operated by the local Catholic Parish. The school offers instruction to students in the kindergarten through eighth grades. The curriculum is approved by the State of Nebraska. The school is located at 12th Street and Cheyenne Avenue. A large site allows adequate space for expansion of this newly renovated, three story school. Recent improvements have included a new gymnasium and lunch room facility.

Secondary Education

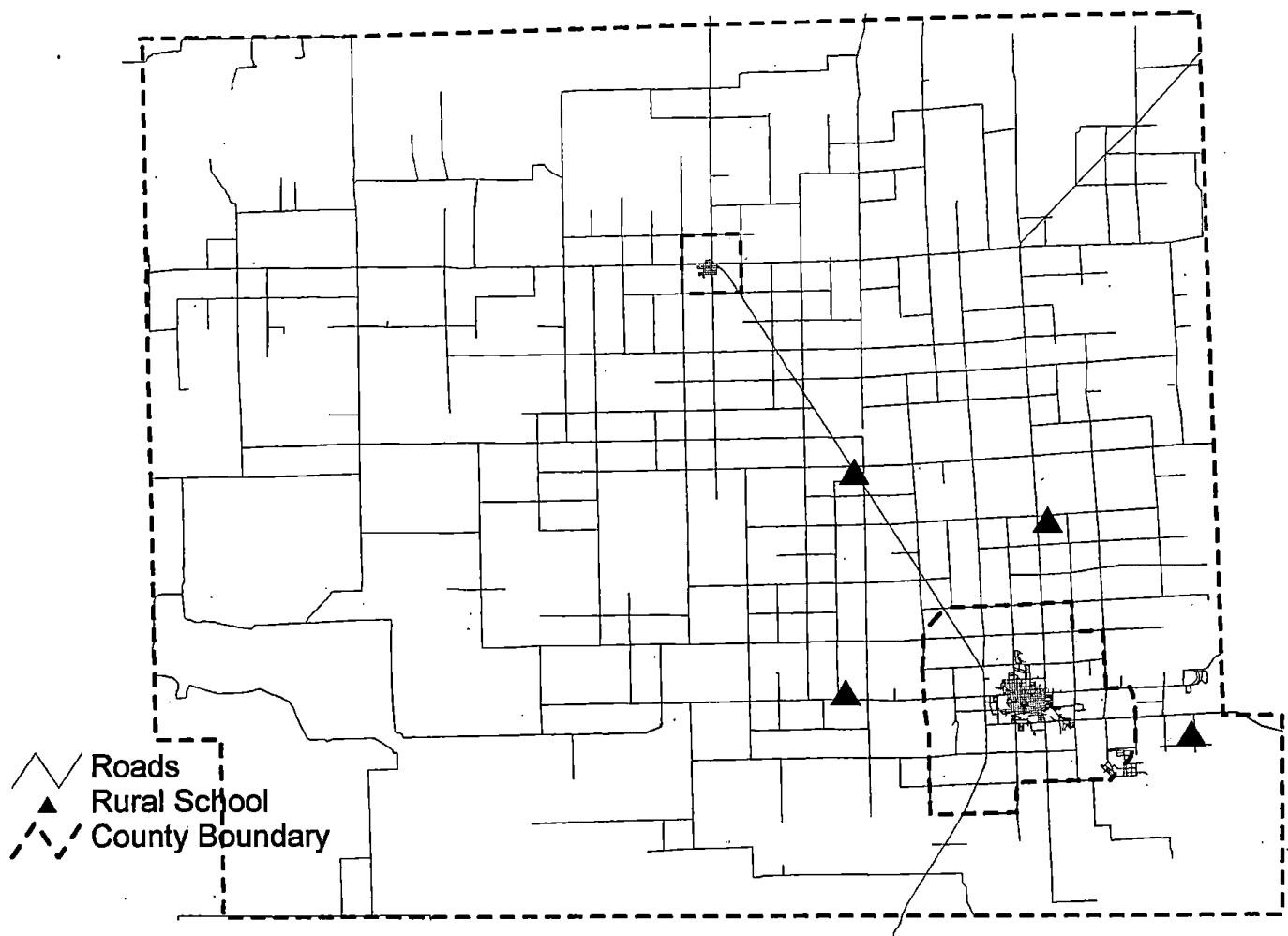
Secondary educational opportunities are provided in Alliance through Western Nebraska Community College (WNCC) and Chadron State College (CSC). WNCC began offering a nursing program at the Alliance Hospital 1957. In the 1980's it became the Alliance Practical Nursing Program. During the 1970's general credit courses were offered in Alliance. WNCC now offers 70-75 courses and sixteen complete degree programs in Alliance. Most classes are held in the new Alliance Public Library/Learning Center during the evenings and weekends.

Chadron State College programs were initially offered in Alliance during the 1940's. A teacher training program was offered to teachers holding a two year degree which allowed them to obtain a four year degree. Continuing education credits for teachers are offered. During the early 1980's a partnership developed between WNCC and CSC wherein WNCC would provide the initial two years coursework and CSC the final two years course work for degree programs. Chadron State College classes are currently offered at the Alliance High School during day and evening sessions. Classes are offered through the colleges Distance Learning program.

Other Educational Opportunities

Adult Basic Education is provided through Alliance Public Schools. These courses, which are free of charge, are offered to anyone age sixteen or above. Services provided include General Education Diploma (GED), English as a second language, preparation for United States Citizenship, occupational workshops, basic skills improvement, college preparation, SAT and ASFAF preparation, and computer literacy for GED students.

Map 4: Rural School Locations



PUBLIC FACILITIES & SERVICES

Pre-school opportunities are provided through Saint Johns Lutheran and Saint Agnes churches, the Head Start program and Honey Bear. These opportunities consist of a more structured child care surrounding than a full fledged pre-school.

Box Butte County Extension, located at 415 Black Hills Avenue, also provides educational programming to adults and youth. Services provided include pesticide education, home extension, master gardeners, 4-H and rural health.

The City of Alliance recently constructed a new Library/Learning Center. The center is located on a 2.91 acre site near the High School and contains 34,653 square feet of finished space and 17,000 square feet of unfinished space. The center houses the community library, college administrative offices, student services and classrooms, science labs, business training rooms, computer technology labs with Internet access, community meeting rooms with videoconferencing capabilities, and common use areas. Both Chadron State College and Western Nebraska Community College will offer educational programming through this new facility.

County Courthouse

The Box Butte County Courthouse was constructed in 1914. The facility is a three story stone structure and was reported to be in good condition. The facility is handicap accessible and provides an interior elevator. The original structure houses the following public offices: Distinct Court, County Assessor, County Clerk, County Treasurer, County Commissioners, Register of Deeds the safety coordinator and zoning administrator.

In 1976 a new law enforcement center was added to the east side of the courthouse. This facility houses the County Sheriff's Department, emergency response & communications systems, the county jail and the Alliance Police Department. The facility is somewhat over crowded and is in need of additional office space and evidence vault space.

Juvenile detention facilities are located in the City of Gering. The Sheriff's department is concerned with the expense associated with transporting and housing juveniles in Gering and has expressed an interest in investigating the cost of development a local detention center.

County Administrative Offices

In 1999, the county purchased and remodeled the Slagle Building located across Box Butte Avenue to the west of the courthouse. This facility houses the Road Department offices, County Attorney, Veterans Administration, Drivers License Examiner and a Wellness Center.

Road Department Facilities

The county maintains three road department shops. These facilities are located in Alliance, Hemingford and Berea. All three facilities require updating and additional space to allow indoor equipment storage.

PUBLIC FACILITIES & SERVICES

Other County Facilities

Box Butte County also provides office space for the Department of Health and Human Services and Extension offices. Both of these facilities are located in Alliance.

Box Butte County Health Systems

Health care delivery systems in Box Butte County are composed of a variety of services provided through Box Butte General Hospital, physicians clinics, gerontology centers, home health services, dental and eye care services, chiropractic services and pharmaceutical services.

Box Butte General Hospital was organized in 1976. This non-profit, hospital is accredited by the Joint Commission on Accreditation of Healthcare (JCAHO) and is licensed for 44 acute care beds. Services provided by the hospital include the following:

- 24-hour emergency room
- Complete laboratory and x-ray services including CAT scan, FDA and ACR approved mammography, ultrasound, diagnostic radiography, MRI, nuclear medicine, and a full-time radiologist.
- Labor and delivery post partum suites
- Respiratory therapy
- Rehabilitation services including physical therapy, occupation therapy, speech therapy, and athletic training.
- Hospice
- Swing bed program
- Fitness center
- Relief Care program
- Lamaze and Prenatal classes
- Immunization Clinic
- Support groups
- Lifeline Program
- Volunteer Auxillary

Multi-specialty clinics provided at the hospital include: Surgery, Allergy/Pulmonology, Ear/Nose & Throat, Ophthalmology, Counseling, Oncology, Plastic Surgery, Orthopedics, Cardiology, Podiatry, Dermatology, Psychiatry and Audiology. Convenient care is also provided seven days a week through a staffed clinic including a physician, physician assistant or nurse practitioner.

Five medical clinics are currently operating in Alliance. These include the following:

- Alliance Medical Center, a family practice service with one physician and two physician assistants.
- Copsey Clinic, a family practice service with one physician.
- Sandhills Family Center, providing obstetrics, internal medicine and pediatric services, with three physicians, one physician assistant and one nurse practitioner.
- Cody Medical Clinic, providing internal medicine services with one physician and one physician assistant.
- Convenient Care Clinic which operates at the hospital with one physician and one nurse practitioner.

PUBLIC FACILITIES & SERVICES

Two gerontology centers are also located in Alliance. These are the Alliance Good Samaritan Village and Highland Park Care Center. The Alliance Good Samaritan Village is a Medicaid, Medicare and V.A. approved 92 bed licensed Skilled Nursing Facility. The Village also has a 16 bed Alzheimer's Unit. Services provided by the Village include one, two and three bedroom ground level garden apartments; a seventy-two unit one bedroom apartment complex; a restorative program; physical, occupational and speech therapy; Wandergaurd protection; spiritual ministries; social services; activity services; therapeutic diets; hair salon; appointment and activity transportation; and physician visitation.

Highland Park Care Center is Medicaid and Medicare approved 58 bed licensed Skilled Nursing Facility. The Care Center offers a restorative program; physical, occupational and speech therapy services; Wandergaurd protection; pastoral care; social services and activity programs; special diet needs; hair salon; appointment and activity transportation; respite care; adult day care; Meals-on-Wheels; and physician visitation.

Alliance Home Health Services is accredited by JCAHO and provides skilled nursing services to any person referred by physician. Physical, occupational and speech therapy and hospice services are also provided. This service is certified by Medicare and the State of Nebraska. A Registered Nurse is on call 24 hours a day, seven days a week.

Other health care services provided in Alliance include three pharmacies, five dentists, one orthodontist, two chiropractors and three optometrists.

Medical services in Hemingford include a health clinic and gerontology center. The Village also has one dentist and a pharmacist.

The Hemingford Community Care Center provides nursing home to the elderly. The center has 37 rooms, including a seven room addition completed in 2001. The center is Medicaid and Medicare approved and is licensed for 31 beds.

Safety Systems

Law enforcement in the county is provided by the County Sheriff's Department which consists of the Sheriff and five deputy's, the Hemingford Police Department which has two full-time officers, and the Alliance Police Department which has 27 officers.

Fire and rescue services are provided by the Alliance and Hemingford Fire Departments. The Alliance Fire Department has 4 full-time and 56 volunteer fire department personnel. The Hemingford Fire Department has 29 volunteer fire department personnel. Rural fire services are coordinated through the Alliance Fire Department. Alliance covers roughly those areas from Berea to south while Hemingford provides service to the remainder of the county.

Emergency management services are coordinated through the Region 23 Emergency Management Agency.

PUBLIC FACILITIES & SERVICES

Cemeteries

Public cemeteries are operated by the City of Alliance and the Village of Hemingford. Several small rural cemeteries are also located in the county. These are identified on Map #5.

Electrical Service

The City of Alliance operates both an urban and rural distribution system. The service area covers portions of rural Box Butte and Morrill counties. Electrical power is currently purchased from the Western Power Administration (WAPA) and the Municipal Energy Agency of Nebraska (MEAN).

The Village of Hemingford electrical system is managed and power supplied by Nebraska Public Power District.

Rural electrical service is provided the majority of the county by the Panhandle Rural Electric Membership Association (PREMA) and by the City of Alliance. Small areas located in the the northwest and southwest corners of the county are served by the Northwest Regional Public Power District and the Chimney Rock Public Power District, respectively.

Approximate electrical service boundaries are shown on Map #6.

Natural Gas

Natural gas is provided to Alliance and Hemingford by KN Energy. Natural gas service is not available in the unincorporated areas of the county.

Cable Television

Cable Television service is provided by Charter Communications in Alliance and Hemingford.

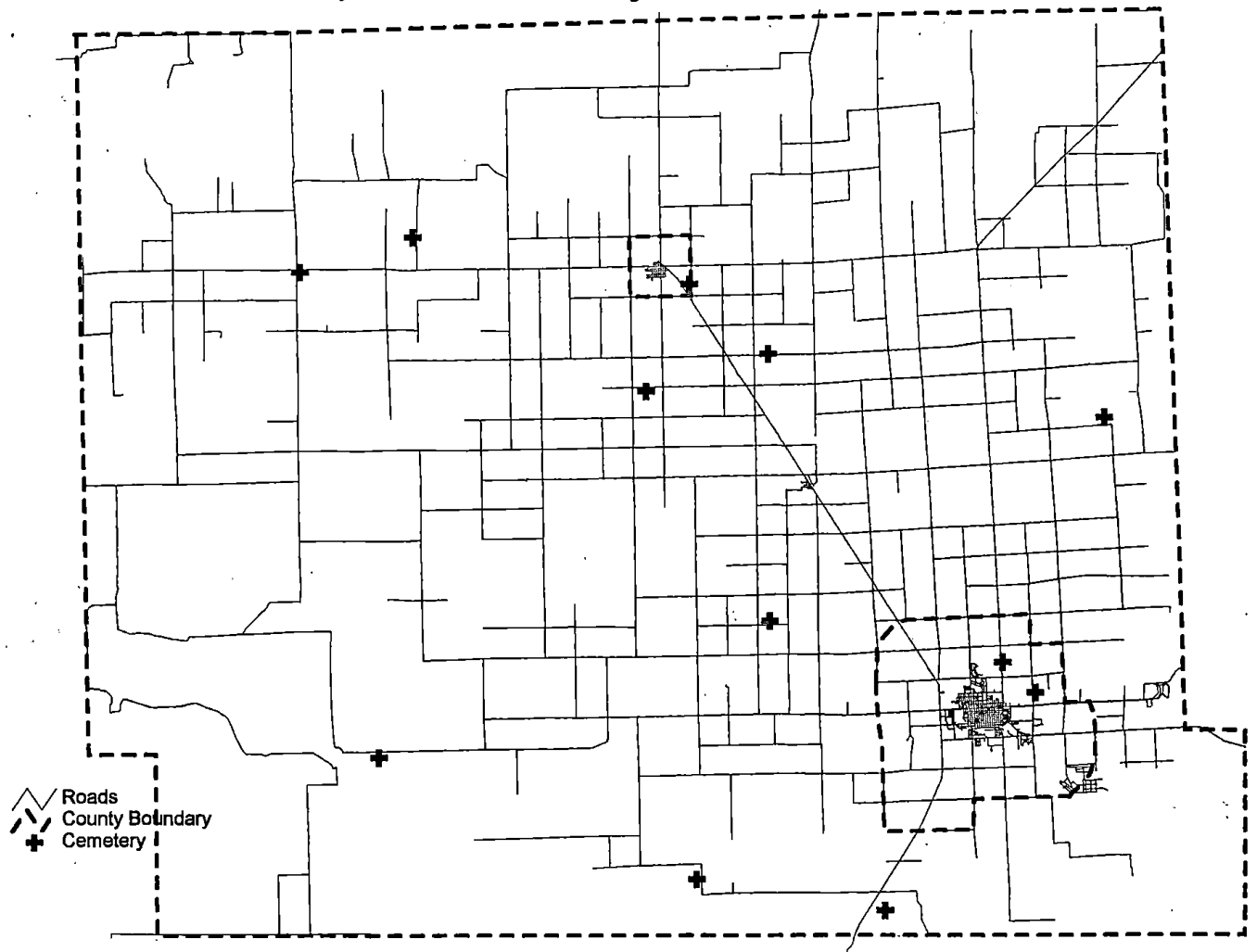
Water

Municipal water systems are operated by both Alliance and Hemingford. The Alliance system includes 12 wells. Four new wells were added in the late 1990's as well as a new 1 million gallon storage tank giving the City 1.5 million gallons of storage. The Heminford system includes five wells and 210,000 gallons of storage capacity. Both systems have the capability to accommodate future community growth.

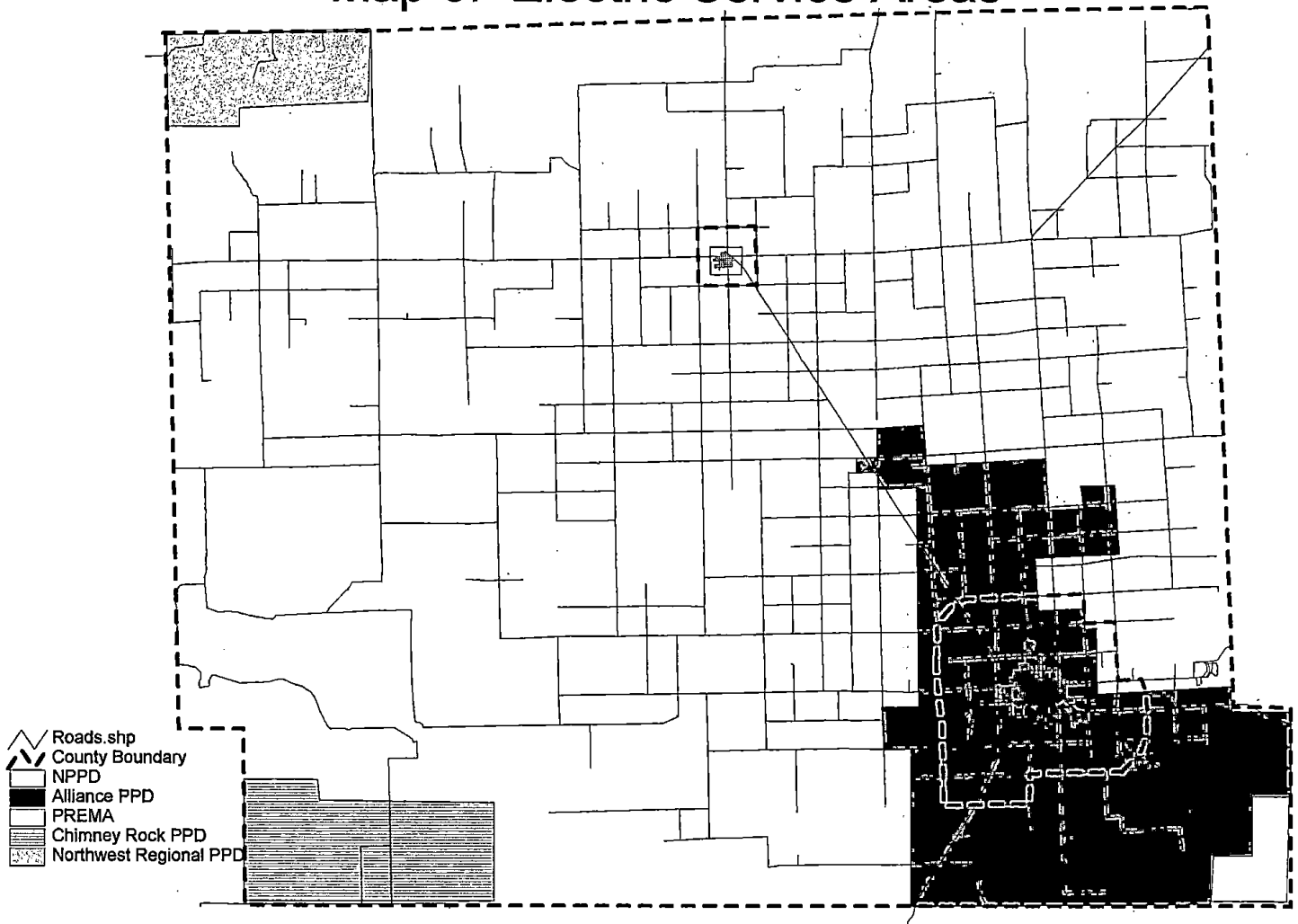
Waste Treatment

Waste water treatment facilities are operated by both Alliance and Hemingford. The City of Alliance operates an irrigation reuse system and the Village of Hemingford operates an outfall lagoon system. Both municipal systems have some development capacity available. Small, but densely developed pockets of residential structures exist in Box Butte County that currently rely upon individual septic tank systems. These areas include Berea, Rainbow Acres and area referred to as Berea Heights. Lots Berea Heights are generally large enough to accommodate septic systems and water wells. However, lots in Berea and Rainbow Acres may not be adequately sized which could result in water well, groundwater and surface contamination.

Map 5: Cemetery Locations



Map 6: Electric Service Areas



PUBLIC FACILITIES & SERVICES

Solid Waste

The Alliance Municipal Landfill serves Box Butte County residents. The landfill is located adjacent to Kansas Street on the southeast quadrant of Alliance. The landfill was constructed in 1992 and incorporates three cells, divided into modules by interior berms. The landfill incorporates a clay liner, leachate systems and groundwater monitoring wells. The Phase I cell constructed in 1992 is estimated to have an approximate life of 11 to 14 years. The life of the Phase II and III cells are projected to be 15 to 20 years, and 12 to 16 years, respectively. These cells will be constructed as needed. Approximately 21 tons per day of waste is generated by landfill customers. The Solid Waste Agency of Northwest Nebraska (SWANN) serves a small portion of the county.

Recreation Facilities

Recreation facilities in the county include tennis courts, swimming pools, parks, public golf courses and ball diamonds located in both Alliance and Hemingford. Alliance also provides a softball complex, YMCA, raquetball courts and jogging trails. No public recreational facilities or lands are located in the rural area of the county.

PUBLIC FACILITIES & SERVICES

Planning Issues:

- * Concentrated developments allowed in the rural areas of the county should create sanitary improvement districts to properly handle waste or ensure that lots sizes are adequately sized.
- * The county's public entities should continue efforts to coordinate and share services and equipment to avoid unnecessary duplication.
- * The county should consider improving road department shop facilities to allow for indoor equipment storage.
- * No public recreational lands exist outside the corporate boundaries of the cities. The county should consider providing facilities or space for outdoor recreation activities such as hunting and horseback riding.
- * The need for additional space at the Law Enforcement Center should be investigated.

TRANSPORTATION

Introduction

The movement of people and goods to, from, or within a given area has a tremendous impact upon the manner in which an area will develop, both physically and economically. In a physical sense the local transportation system influences the location of different types of development and surrounding land use activity. The transportation system connecting the community to the rest of the world also influences the types of economic activity that are able to occur. Transportation systems have played a major role in the development of Box Butte County and will continue to impact physical growth and change in the future.

Rail Transportation

Rail service in Box Butte County is provided by the Burlington-Northern-Santa Fe Railroad. A functional piggy back ramp and other rail loading facilities are available. Rail passenger transportation services are not, however, available.

Rail transportation has heavily influenced development of the county and its communities. The transport of Wyoming coal to eastern locations has resulted in a dramatic increase in rail traffic. In 1997, rail traffic consisted of 55 to 60 trains per day. Projections indicate that rail traffic could increase to 90 trains per day by the year 2005. Train lengths are also projected to increase from the current 115-119 cars per train to 135 cars per train. The increasing number of trains and increased train length have resulted in more frequently rail crossing delays in the county.

Air Transportation

Air transportation is provided to the Alliance Municipal Airport by Great Lakes Aviation of Spencer, Iowa using a 19 passenger 1900 Beechcraft. Average passenger boardings are 76 per month. Eighteen round trip connections per week are provided to Denver. Great Lakes Aviation receives an annual Essential Air Service subsidy to assist in maintaining service to the county.

The Alliance Municipal Airport has three runways. The primary runway is 150' x 9,203'. The secondary runway is 75' x 6,200'. The third runway is 75' x 6,311'. All three runways are paved. The primary and secondary runways were recently overlaid and new lighting was installed. Additional airport infrastructure includes a terminal building, four T-hangers, and FBO facility and 19 rental buildings. Aircraft directional systems include an Automated Surface Observation System, Vhf Omni Range, a Visual Approach Slope Indicator, and runway and taxi lighting systems.

Highways and County Roads

County roads and State or U.S. Highways are classified according to function in Box Butte County. These classifications include the following and are shown on Map #7:

Expressways - provide higher speed limited access service for long distance travelers. The Heartland Expressway (Highway #385 corridor) is the only expressway designation in Box Butte County.

Major Arterials - provide continuous service through the county for long distance travelers. In Box Butte County these roads include State Highways #2, 71, 87, 97 and S7a.

TRANSPORTATION

Other Arterials - provide a higher level of access to other geographic areas of the county not service by major arterials.

Collectors - distribute traffic to the arterial system from local roads.

Local Roads - provide access to abutting properties not served by other roads.

Highways # 2 and 385 in Box Butte County have been designated by the State of Nebraska as Scenic Byways. These byways will be highlighted on future Nebraska Transportation Maps to encourage additional tourist related travel through the county.

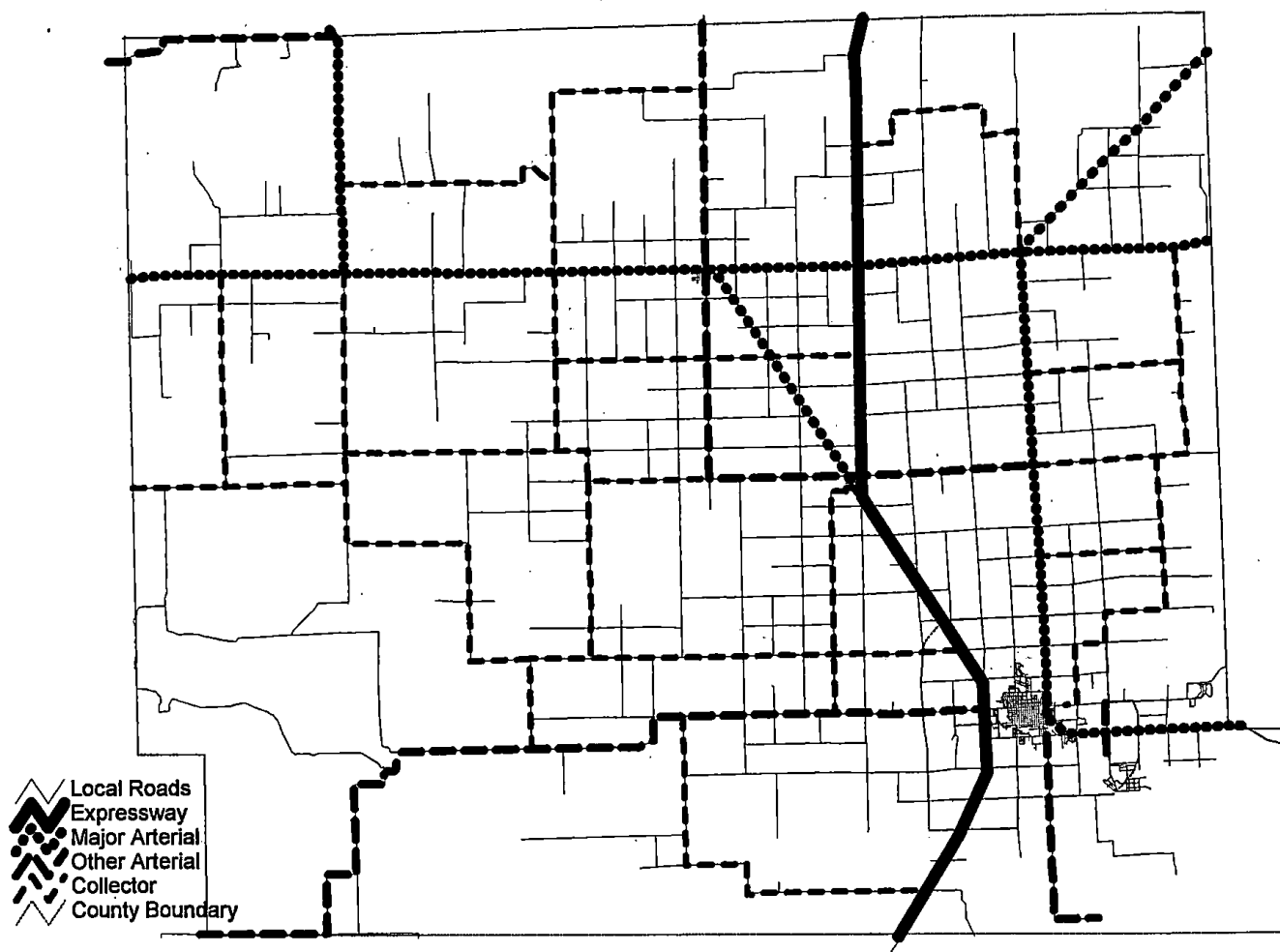
County officials do not project the need for development of new county road systems. However, the county's ability to maintain and upgrade the existing road system is a concern. Unfunded mandates, property tax lids and local opposition to tax increases have placed financial burdens on the county which hinder its ability to maintain road systems. In addition, commercial and residential developments in rural areas increase the maintenance costs and place additional demands upon gravel roads. The county maintains approximately 1,116 miles of road of which approximately 34 miles is surfaced. The remaining roads consist of graveled surfaces and native soil surfaces.

Other Transportation Services

Passenger transportation services are provided by the Box Butte County Handibus for local service and the Denver Coach for services to Denver International Airport.

A passenger transportation study conducted by the Panhandle Area Development District in 1998 identified overall satisfaction with the county handibus. However, there was an expressed need for more service hours before 8:00 a.m., after 5:00 p.m. and on weekends. In addition, transportation service to medical appointments outside Box Butte County was identified as a need.

Map 7: Box Butte County Road System



TRANSPORTATION

Planning Issues

- * Box Butte County's limited transportation budget does not allow the county road department to adequately maintain gravel/dirt road surfaces, ditches and signage. As a result, travel on many roads can present safety concerns for persons unaccustomed to local road conditions and during periods of wet weather.
- * Sign vandalism and the dumping of garbage on county roads present the county with additional, and unnecessary, maintenance expenses and present safety concerns for all county residents.
- * Randomly installed driveways, the use of county right-of-way for septic system leach fields, overspray from center pivots on county roads, and the farming/plowing of road right-of-way all contribute to transportation safety issues and increase road maintenance costs.
- * The impact of future development proposals, including housing, commercial developments and feedlots, upon road maintenance should be considered prior to rezoning agricultural land for more intense uses.
- * Future rail traffic increases and possible increases in train length will present additional disruptions and delays at rail crossings.
- * The ability of Box Butte County to expand its economy with technology based industries will be limited without improved air service and 4-lane highway access.
- * Expanded public transportation services will become more important as the elderly segment of the population increases.
- * Several intersections in the county provide limited vision, or sight distance, due to previous development patterns and/or farming practices. The county should strive to maintain adequate sight triangles at all intersections.

LAND USE

Introduction

Land use refers to the kind of activity for which any given parcel of land is being utilized. Since existing land use conditions and activities exert a strong influence on the location of future growth development, it is necessary that a detailed land use survey be completed.

A detailed land use inventory of Box Butte County was completed during this planning process. The inventory included utilizing digital aerial photography provided by the Nebraska Natural Resources Commission and field checks in most areas of the county. The county road system was laid over aerial photographs of the county and existing land uses plotted on a county map using ArcView. The 2000 County Abstract of Assessment for Real Property, previously completed county planning documents and the Box Butte County Soil Survey were used to obtain a general understanding of the quantities of land used for various purposes in Box Butte County.

Land Use Classifications & Patterns

For the purposes of this plan, land in Box Butte County has been grouped according to its primary use into several general land use classifications. A general land use map obtained from the Nebraska Resources Commission (Map #8) is included that depicts land used for agricultural purposes in the county. Additional maps are included that depict the locations of other land uses in those areas of the county lying outside the Village of Hemingford and the City of Alliance.

Table 46, below, provides an estimate of the amount of land used for various purposes in Box Butte County. Over 96% of the county's land is used for agricultural purposes such as grassland and cropland, either irrigated or dry. An additional 1.2% of the county's land includes shelterbelts, waste land & trees. Farmsteads and rural residences occupy about 0.5% of the land. The more heavily developed areas, including urban areas and transportation systems, occupy approximately 1.9% of the county's land.

Table 46: 2000 Land Use Estimates

Land Use	Assessment Abstract	% of Land
Total Agricultural Land	657,377	96.4
Irrigated Cropland	136,627	20.0
Dryland Cropland	213,369	31.3
Grassland	307,381	45.1
Urban	3,363	0.5
Farmsteads & Rural Homes	3,121	0.5
Waste & Trees	6,059	0.9
Shelterbelts	2,104	0.3
Roads, Railroads & Misc.	9,704	1.4

LAND USE

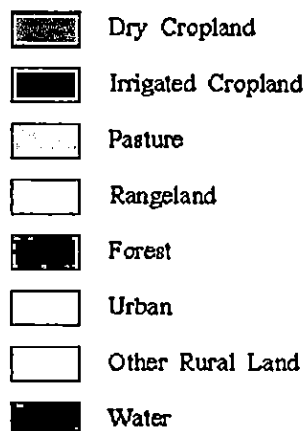
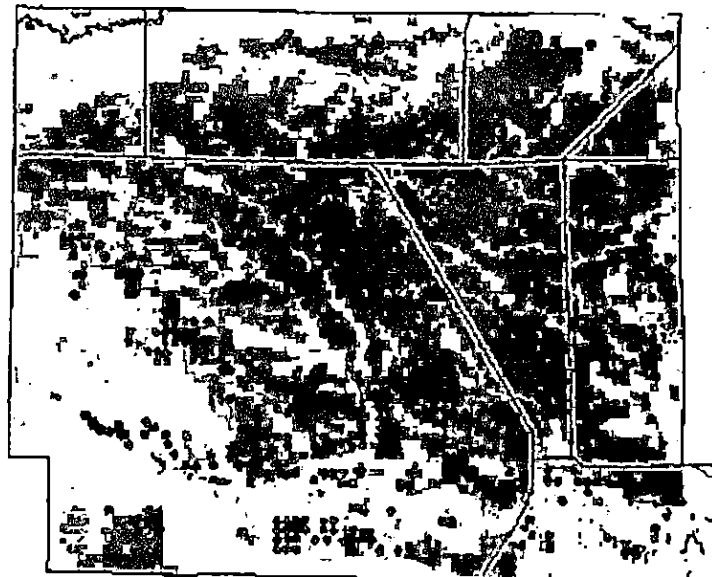
Following are descriptions of various land use classifications in Box Butte County:

Agricultural:

The predominate use of Box Butte County land is for agricultural purposes. Agricultural land includes land used for dryland crop production, irrigated crop production, grassland and other related uses. Also included in the agricultural land uses are that might be deemed as heavy commercial agricultural uses such as feedlots. Generalized land use patterns in Box Butte County are depicted on the following existing land use map, Map #8. This map indicates the majority of the county's available land mass is used for pasture/rangeland, dryland crop production and irrigated crop production. Map #9 depicts the location of agricultural operations that may be feeding livestock throughout the year, or on a periodic basis.

Map #8: Box Butte County Land Use Map

(Source: Nebraska Natural Resources Commission)



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Rural Residences:

There are three basic types of rural residences located in Box Butte County. These include rural subdivisions, rural farm home sites and non-farm rural residences not located within rural residential subdivisions. The county's rural residential subdivisions include Berea, Rainbow Acres, the area commonly referred to Berea Heights, a small subdivision on east Highway #2 near the county line and small subdivisions located west of Alliance on Otoe Road. These subdivisions and other rural residents are depicted on Map #10.

Incorporated Communities:

This category includes the land located within the corporate boundaries of the City of Alliance and the Village of Hemingford. For the purposes of this plan the extraterritorial zoning boundaries of Alliance and Hemingford have been shown on Map #11.

Commercial:

Commercial land use categories include locations and buildings where products or services are sold and exchanged. Included in this category would be traveler services such as motels & gas stations and other forms of retail establishments. Commercial development outside the zoning jurisdictions of Alliance and Hemingford is limited. Commercial ventures that do exist in the rural portions of the county primarily include small businesses operated in the home or as part of farm diversification effort, businesses located at or adjacent to the Alliance Airport, and small businesses located in Berea. Commercial land uses are identified on Map #12.

Industrial or Heavy Commercial:

This category includes land and buildings where uses involve the application of labor and materials to produce a product that is normally not sold to the ultimate consumer on the premises. This category also includes types of businesses that may create offensive odor, noise, dust, visual aesthetics, etc. Included in this category are rail car repair facilities, junk yards, salvage yards, appliance waste dumps, grain elevators, etc. Industrial land uses are identified on Map #12.

Land Use Conflicts

Land use conflicts occur when mixed land use classifications are allowed to develop without adequate consideration being given to the potential impacts that may take place. These conflicts arise due to the location of a particular types of land use in relationship to both the natural and human environments. Potential negative impacts can include health & safety hazards, noise, loss of economic potential, unpleasant odors, excess traffic and potential decreases in property value. Although few land use conflicts are readily apparent in Box Butte County, they do exist as described below:

Farm Land Conflicts:

The primary land use conflicts occurring in rural areas of the county consist of more intense urban land uses such as residential, commercial and industrial facilities occupying farm land. Farm land, and particularly those soil types that qualify as prime farm land, are an important economic resource for the county and should be preserved as much as possible.

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A second potential conflict related to farm land conversion to urban uses is the practice of selling pivot corners for residential development. Although selling unproductive farm ground can be desirable for the land owner and the buyer who wants a more rural lifestyle, some undesirable results can follow. These include potential weed management issues, agricultural over-spraying onto residential properties and safety issues resulting from traffic increases on gravel and dirt roads. There are currently over 1,200 undeveloped pivot corners located adjacent to roadways in Box Butte County. (Map #13)

At third land use conflict relating to farm ground is the practice of cultivating and planting crops in county road right-of-way. Two hazards can arise from this practice. One is the planting of taller crops that restrict vision at road intersections. The second is eliminating or reducing the capacity of ditches to drain the roadbed. This results in: freeze-thaw cycles that reduce the carrying capacity of the road base, restricts the ability of the road surface to shed water, and in some cases results in runoff from adjacent land cutting streams across the roadbed.

Residential Subdivision Conflicts:

Two conflicts arise in rural areas if residential subdivisions are not carefully planned and located. The first conflict can be the addition of substantial traffic on roads not constructed to accommodate this type of traffic volume. Subdivisions constructed in rural areas often times create a situation where the road providing access to the development must be improved by the county to ensure an adequate maintenance level, or to avoid liability issues. The completion of the Rainbow Acres subdivision eventually caused the county to improve the road surface of Otoe Road east of Alliance. At the present time the rural residential subdivisions in Box Butte County are located along paved roads.

The second conflict is environmental in nature. Several instances exist where residential lots may not have been designed with enough land to accommodate both septic systems and water wells. These small lot sizes occur in both Berea and Rainbow Acres. Although these conditions depend upon the draining capacity of the soil and the depth of wells, water well and surface contamination are a concern.

Intensive Agriculture Conflicts:

Land use conflicts also arise from the location of intensive agricultural uses, such as feedlots, when located in close proximity to residential and urban areas, or vice-versa.

Heavy Commercial or Industrial Conflicts:

The primary conflicts in Box Butte County that are of a heavy commercial or industrial nature include salvage yard and junk yard locations in relationship to residential developments and primary transportation corridors. Conflicts arise from these land uses due to physical aesthetics. Salvage/junk yards, located adjacent to primary thoroughfares in the county can present a negative image in terms of marketing the area to prospective new businesses and residents. These same uses located too close to residential subdivisions, or vice-versa, can create nuisance issues related to appearance. Property value decreases and legal issues may also result from the improper location of these land uses.

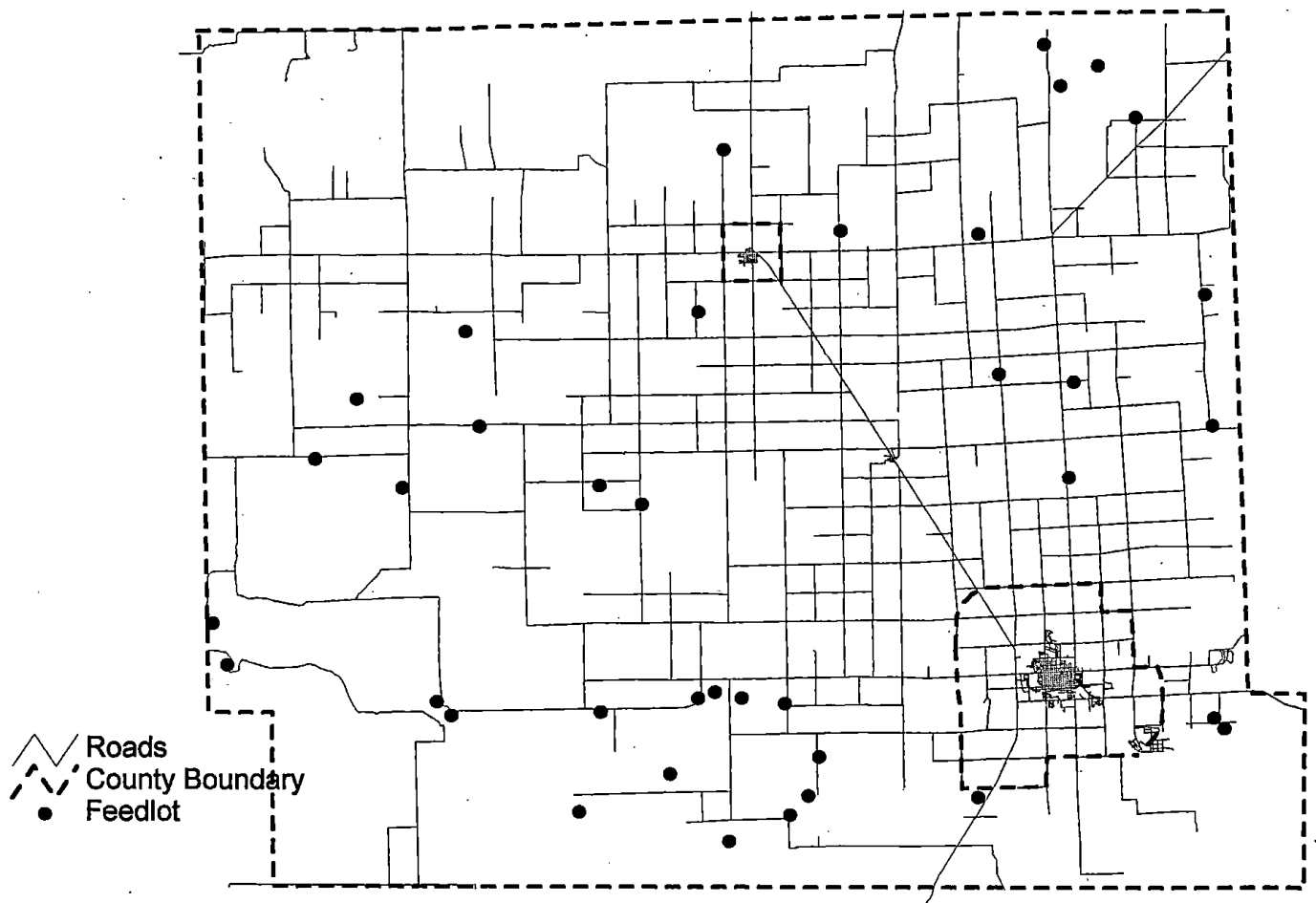
LAND USE

Future Land Development Needs

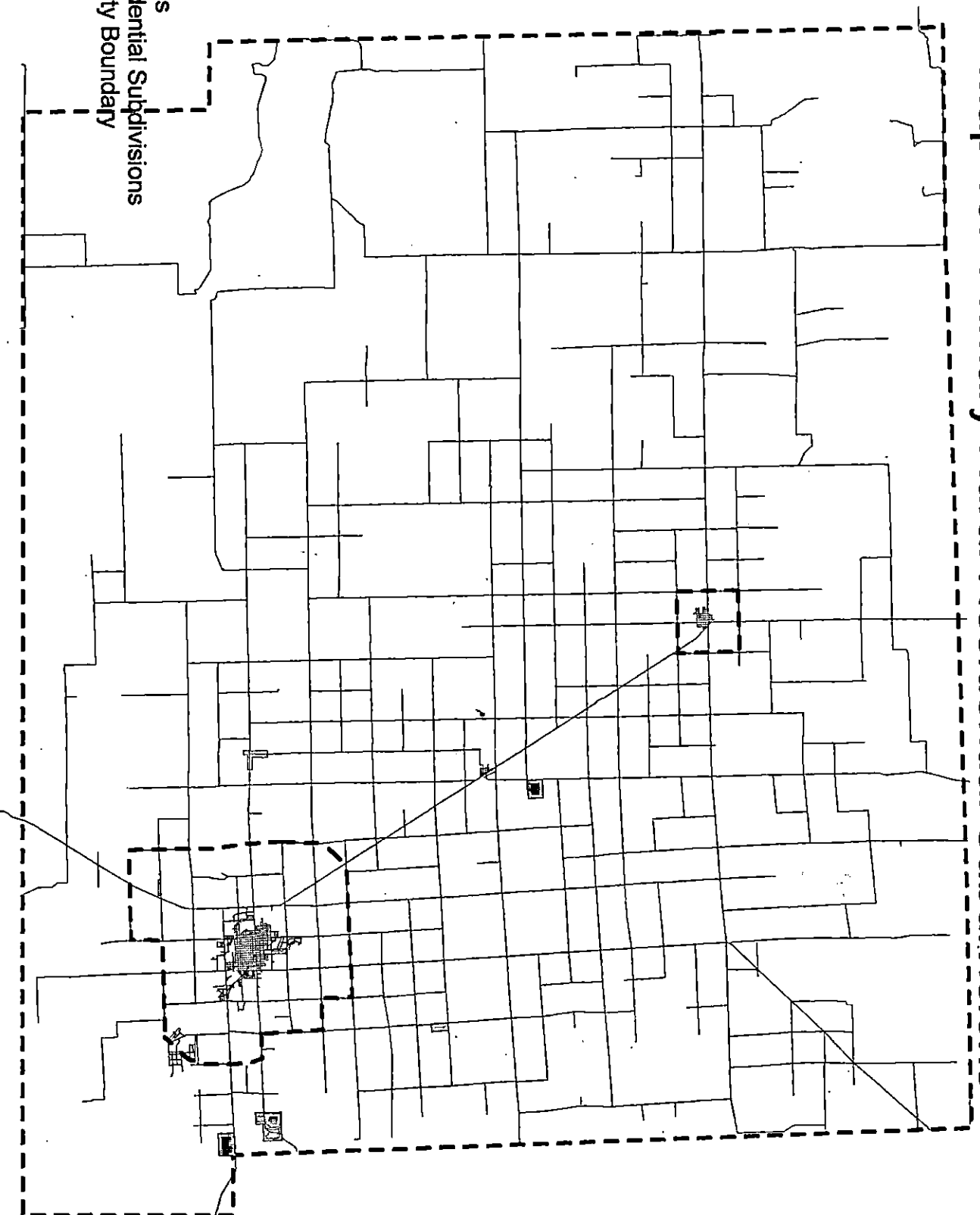
The amount of land needed to accommodate future growth is dependent upon a variety of factors. Population change, health of the area economy, decreasing household sizes, land costs and development policy will all affect future changes in land use. In previous sections of this document several conditions were discussed that will affect the conversion of land to different land uses in the future. These included the following:

- * The protection of historic sites and areas could result in the conversion of this land from private to some form of public ownership, provided land owners willing to sell their property for these purposes can be found.
- * The county does not currently have a public outdoor recreation area or wildlife management area. There is currently an effort underway to develop such an area. Converting 1,000+ acres of land to these uses would still leave Box Butte County far behind other Panhandle counties in terms of public recreation land. The county should urge this type of development to take place through Nebraska Game & Parks as the county would receive payments in lieu of property taxes.
- * The county's population is expected remain fairly stable with some potential for future decreases. However, new households will be formed internally or migrate to the county. This will require new residential development lots. Most future residential growth should be directed to the urban areas. However, to provide for a broad range of housing choices and opportunities the county should ensure that some land is available for rural residential estates and subdivisions in areas that will minimize conflicts with existing land uses and transportation system capacity. Accommodating this demand could result in the need to convert several hundred acres of rural land to residential uses over the next twenty years.
- * The Box Butte County economy has remained fairly strong and continues to create new employment opportunities. However, diversification is needed which means that new business and industry will need to be attracted to the county. The majority of this development should be directed to locate within the corporate boundaries and zoning jurisdictions of the Alliance and Hemingford. However, due to the nature of some types of potential development the county will need to ensure that land is available in appropriate rural locations. Development history in the county suggests that most of these potential developments will be agriculturally related such as feedlots, grain elevators, beet dump stations and other similar uses. The number of acres required to accommodate this growth could vary substantially.
- * The county is not projecting the development of any new county roads. The primary transportation development that could result in conversion of land uses would be the continued development of the Heartland Expressway, or Highway #385.
- * Future public facility, service and utility improvements are projected to occur within the incorporated communities and existing public right-of-way.

Map 9: Existing Feedlots & Livestock Feeding Yards

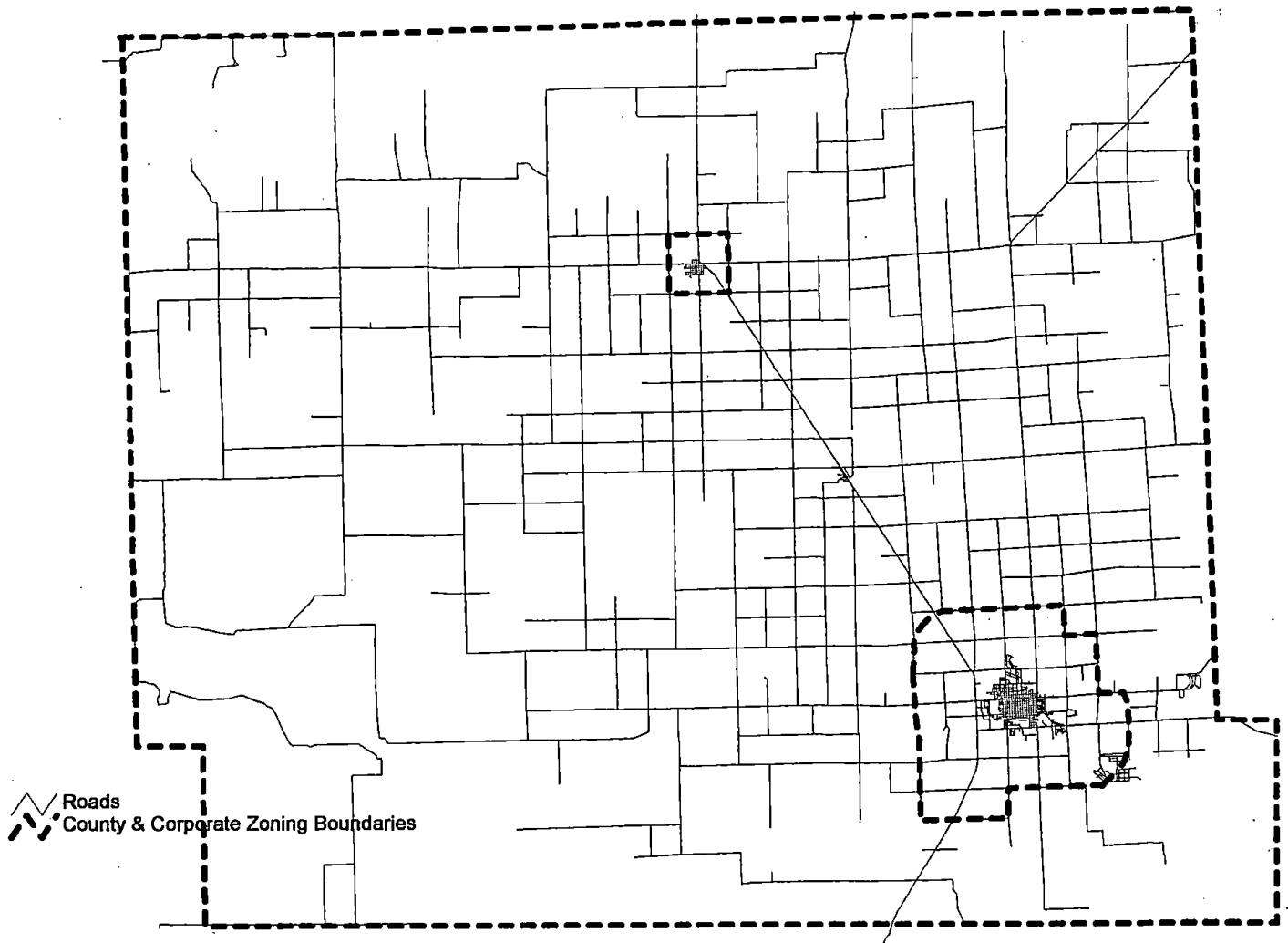


Map 10: Primary Rural Residential Subdivisions

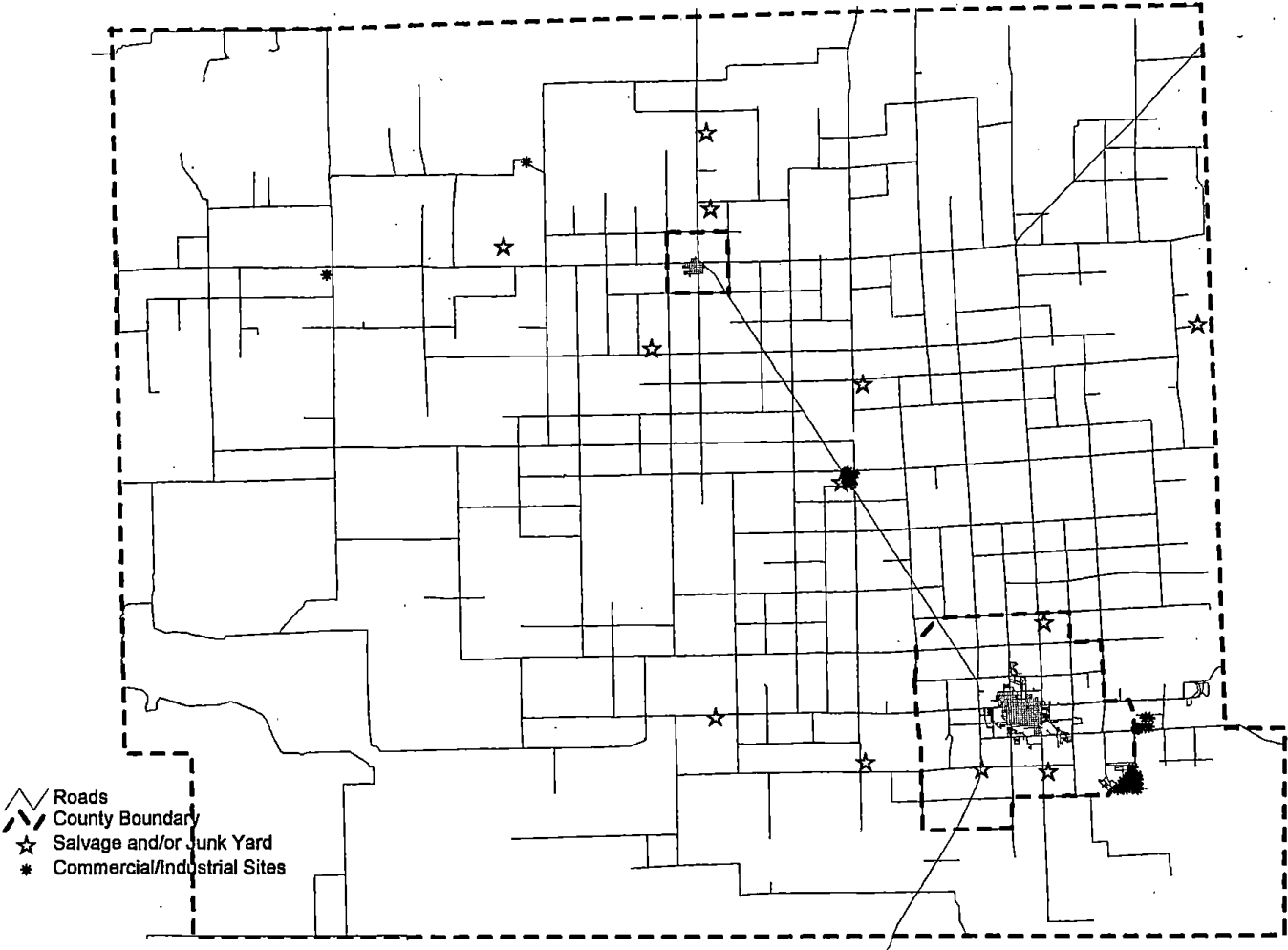


Roads
Residential Subdivisions
County Boundary

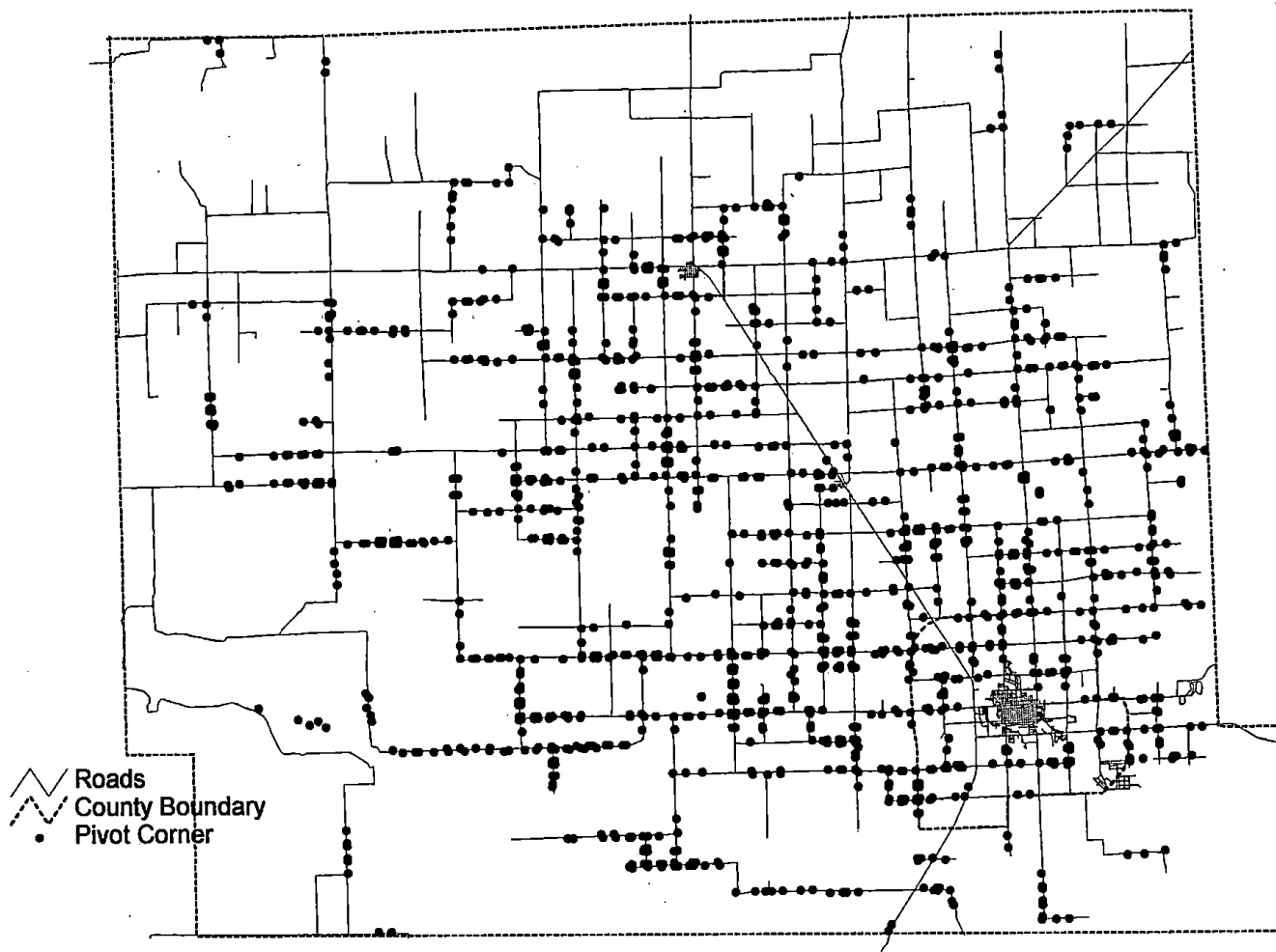
Map 11: County & Corporate Zoning Boundaries



Map 12: Existing Commercial, Industrial and Salvage or Junk Yard Sites



Map 13: Undeveloped Pivot Corners with Road Access



LAND USE

Planning Issues

- * The conversion of farm land, particularly prime farm land, to non-farm uses removes an economic resource from the county.
- * The lack of development policy in the county has resulted in land use conflicts associated with rural residences, transportation corridors, feedlots, salvage yards and junk yards.
- * Development in flood hazard areas has been limited but efforts should be implemented to ensure that flood hazard areas and flood elevations are not impacted by development.
- * Lot sizes in existing rural residential areas have created potential environmental and health concerns due to the close proximity of septic systems and water wells. Areas where these concerns may exist include Berea and Rainbow Acres.
- * Adequate land is available within incorporated communities and their zoning jurisdictions to accommodate projected future growth. However, the county will still need to provide a range of development choices and opportunities in appropriate rural locations.
- * Agricultural use of county road right-of-way creates safety hazards and increases road maintenance costs for the county.
- * Rural residential areas that are improperly managed create additional weed concerns for the county and agricultural producers.
- * The sale of pivot corners for residential development has been discussed as both an income producing resource for farmers and a hindrance to farm practices such as aerial spraying.
- * Developments such as feedlots and salvage yards on primary thoroughfares, if not screened or properly setback, may detract from efforts to encourage new businesses and residents to locate in the county.
- * Shelterbelts planted too close to roadways prevents roads from drying out. This creates a safety concern for motorists.

DEVELOPMENT PLAN

Introduction

This section of the plan contains a series of recommended goals, objectives and policies that are based upon the information gathered and evaluated during the preparation of this report. The goals, objectives and policies are intended to provide guidance to the County in the preparation and implementation of land use controls and development projects. In addition, a future land use map and future development plan map are provided recommending actions that can be taken by the county.

The section begins with a presentation of overall development goals which are, by necessity, broad and general in nature. The goals reflect the desires and aspirations of the county by describing basic concepts which should be used to guide future development. Objectives are provided that coincide with each section of the plan. The objectives recommend specific actions and development programs addressing each topic. Policy statements are then provided which offer specific guidance and direction for the formulation of future land use and development controls.

Development Goals

1. To ensure orderly and efficient growth of residential, commercial, industrial and public land uses in order to maintain, improve and protect the general welfare of the residents of Box Butte County.
2. To protect and conserve the unique natural and physical resource base of the county.
3. To maintain and improve the county by under taking improvements that will provide a high quality living and working environment.
4. To foster a strong balanced economy capable of ensuring the economic future of all residents.
5. To achieve safety, convenience and economic efficiency through the wise distribution of land use activities.
6. To encourage cooperation, communication and coordinated efforts between the county, other local governments and the general public to improve the manner in which the county's natural, human and economic resources are managed and developed.

Development Objectives

Environmental:

- * To identify and develop a public environmental/recreation resource in the county.
- * To discourage development from locating on productive agricultural soils and in other agricultural areas where conflicts may arise with farming and efficient farm practices.
- * To implement development standards and regulations to ensure that high quality scenic and historically significant sites are aesthetically protected.
- * To carefully monitor the design of residential, commercial, industrial and agricultural waste systems to ensure a clean, high quality physical and natural environment.
- * To preserve the county's unique historical features and landmarks for the benefit of future generations.
- * To encourage the planting of windbreaks and shelterbelts to minimize soils erosion.

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Population:

- * To create an economic environment that will encourage the retention of young adults and the relocation of new residents to the county.
- * To ensure that facility and infrastructure improvements are developed with an awareness of the growing percentage of elderly residents.
- * To expand economic efforts to reverse previous out-migration trends.
- * To further diversify the county's economic base to lessen the impact of economic decline of individual employment sectors on the population base.

Economic:

- * To support and/or initiate efforts to supply the county's agricultural economy with an adequate pool of farm laborers and operators.
- * To assist existing business and industry with their efforts to expand, diversify and achieve higher growth rates.
- * To encourage and facilitate efforts to expand existing or attract new industries that will diversify the local economy.
- * To provide a broad range of employment opportunities to meet the needs of a diverse population.
- * To encourage and facilitate the creation and/or location of businesses and industries that will provide wages resulting in higher per capita and median family incomes.
- * To encourage and facilitate efforts to retrain and provide continuing education opportunities to the local labor force.
- * To encourage and facilitate efforts to expand and/or attract industries that employ higher percentages of professional, managerial and technical occupations.
- * To ensure adequate public facilities, infrastructure and housing opportunities are available to accommodate potential new residents and businesses.
- * To provide for the use of "Greenbelting" to ensure that agricultural land remains in production as long as economically feasible for the land owner.
- * To facilitate and support the establishment of home businesses in rural areas as means of generating supplemental income for rural residents, particularly farm operators.

Housing:

- * To encourage the removal of dilapidated structures and the preservation/rehabilitation of older residential structures in the county.
- * To ensure that adequate land is available to meet future demands for new housing construction.
- * To provide a broad range of housing opportunities needed to accommodate the present and future population.

Transportation:

- * To provide efficient circulation routes connecting all areas of the county with important social, economic and education functions.
- * To provide for the safe flow of vehicular traffic throughout the county.
- * To carefully monitor the location of rural residential, commercial, industrial and agricultural developments to ensure roadways are designed to safely carry potential traffic volumes.
- * To preserve and enhance the county's designated scenic byway corridors.
- * To monitor the future of Essential Air Service subsidies and investigate potential alternative air transportation services.

DEVELOPMENT PLAN

- * To monitor future railroad track expansions and train lengths to ensure that negative impacts are not created affecting traffic flow and emergency services.

Public Facilities:

- * To encourage cooperative efforts with other units of local government and/or the private sector in the development of new public facilities or provision of public services.
- * To maintain, upgrade and develop public facilities in a manner that will enhance the quality of life in all areas of the county.
- * To carefully assess the need for improvements to existing, or the development of new public facilities.

Land Use:

- * To encourage the efficient use of existing public facilities and infrastructure by future development.
- * To ensure that adequate amounts of land are available to accommodate future growth.
- * To ensure that adequate planning, plan revision and policy development efforts are undertaken to preserve and improve the unique rural character of the county.
- * To ensure that prime farmlands are protected, as much as possible, for the future economic benefit of the county.
- * To ensure that land use conflicts are minimized as much as possible for the benefit of both existing and future developments.

Land Use Policy

General:

- * New residential, commercial and industrial developments will be encouraged to locate within incorporated communities or in existing subdivisions. However, the county does recognize that some development in rural areas is both necessary and desirable. The following guidelines have been drafted to assist in reviewing proposed new development in unincorporated areas. In as much as possible development should occur:
 - on marginal agricultural land in order that quality agricultural land can be preserved and remain available for production.
 - adjacent to adequately paved, or graveled roads and in clusters to promote efficient development patterns where public and/or private facilities are present or planned including; streets, water, sanitary sewer and parks.
 - in areas near existing employment centers and commercial areas so as not to encourage sprawl and unplanned scattered development.
 - where it is least disruptive to existing agricultural activities.
 - in stable environmental areas.
 - where it can be demonstrated that there is a recognized need for such development.
 - in a manner that secures safety from fire, floods and other dangers, and protects the health and general welfare of the public.
 - in a manner that avoids undue concentration of the population and prevents overcrowding of land.
 - in a manner where the County is not being obligated for direct or indirect services beyond the value of the revenues received through a development.

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- * Land zoned for specific uses will be protected from the encroachment of conflicting land uses.
- * Planned residential, commercial and industrial parks will be encouraged as opposed to scattered or strip development patterns.
- * Distance separations, or buffers, may be used to minimize the potential for land use conflicts.
- * All future developments, both public and private, will be encouraged to be carefully planned and conducted in a quality manner to create an environment capable of attracting new residents and businesses.

Natural and Rural Environment:

- * In-filling and revitalization of existing developed areas will be encouraged to minimize the conversion of prime farmland to more intense urban uses.
- * Landscaping and design standards will be incorporated into future commercial, industrial and other high density development projects, particularly when located along major thoroughfares and environmentally sensitive areas.
- * Future development in flood hazard areas will be carefully monitored and strongly discouraged.
- * Recreational, tourist and historic resources will be protected from conflicting land uses.
- * The addition of wildlife habitat land accessible to the public for recreation purposes and the provision of shelterbelts and windbreaks will be encouraged.
- * Buffers, or distance separations, should be incorporated around future public wildlife habitat areas.

Residential:

- * Residential development will be encouraged to locate on existing lots within incorporated communities or in existing platted rural subdivisions.
- * The county recognizes the need to provide a broad range of housing development options. Therefore, rural estates and subdivisions may be developed if carefully located so as not to create conflicts with existing rural land uses or place unsafe traffic volumes and conditions on rural roadways.
- * Concentrated residential developments in rural areas will be encouraged to create a sanitary sewer and/or water district.
- * High density residential projects will be directed toward incorporated communities that have the infrastructure to accommodate development.
- * All rural residential lots, not located in a sanitary sewer and water district, shall be of sufficient size to ensure the safe installation and long term operation of water wells and septic systems.

Commercial:

- * Home businesses should be allowed to operate out of a residence, or out-building, when incidental to the primary use of the property, when compatible with surrounding land uses and provided the adjacent transportation system can accommodate projected traffic.
- * Commercial development in rural areas shall be restricted to those businesses that provide only neighborhood and agricultural business needs, site location specific businesses such as campgrounds or establishments that coincide with historical or recreational sites, or commercial and industrial businesses that by their nature should be located away from urban and residential areas.

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- * In-filling and revitalization of existing zoned commercial areas will be strongly encouraged.
- * Discontinuance of improperly zoned or placed commercial areas will be encouraged.
- * Redevelopment of properly zoned or placed commercial areas will be encouraged.

Industrial:

- * Industrial land uses will be directed toward existing industrial parks and to incorporated communities.
- * Redevelopment of existing industrial areas located adjacent to incorporated communities and paved roads will be encouraged.
- * Industrial uses will be allowed in rural areas only where the need for such can be demonstrated.

Agricultural:

- * High quality agricultural land should be designated for preservation and the establishment of agricultural preservation zones will be encouraged.
- * Quality and/or improved pasture and grazing land should be preserved for such uses.
- * Large feedlots, farrowing pens, other confinement operations and poultry farms may be considered commercial endeavors. Such businesses have special nuisance problems which require attention. As a means of protecting both the operator (whether commercial or agricultural), the rural resident, public recreational areas and the general aesthetics of the county a distance separation, or buffer area, should be established.

Future Land Use

The Future Land Use/Development Plan map (Map # 13) identifies both developed and undeveloped areas of the county that should receive special consideration when future development activities are considered. These areas include:

Floodplain, Environmental and Historic Preservation Areas

Land located in flood hazard areas, unique environmental areas and containing historic structures or landmarks should be protected from conflicting forms of development. Development allowed in these areas should be low impact.

Industrial/Commercial Areas

Future industrial or commercial activity should be directed into existing commercial/industrial areas, or directed to incorporated communities.

Agricultural Areas

The county's agricultural lands should be preserved as much as possible to maintain this economic resource.

Scenic Byways

Development along the county's designated scenic byways should be monitored to ensure the county's stature as desirable location for future residents and businesses.

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Heartland Expressway Corridor

Development allowed along the Heartland Expressway corridor should be in clusters and with proper setbacks to facilitate potential future development of the expressway.

Residential Areas

Future residential growth should be directed to communities or existing platted subdivisions as much as possible. New residential growth and subdivisions should be encouraged to locate near existing subdivisions to form residential clusters and minimize scattered development and strip development patterns.

Map 14: Future Land Use/Development Plan

