



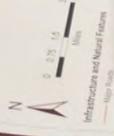
McKenzie County

COMPREHENSIVE PLAN

June 2016



Existing Land Use:
Area Six



ACKNOWLEDGMENTS

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Steering Committee members represented the following local entities:

- County Commission
- Planning and Zoning Commission
- Oil/Gas Industry
- Job Development Authority
- Tri Township Board of Supervisors
- Alexander Township Board of Supervisors
- Sioux Township Board of Supervisors
- Grail Township Board of Supervisors
- Blue Butte Township Board of Supervisors

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CHAPTER 1: INTRODUCTION

WHAT IS A COMPREHENSIVE PLAN?

The 2025 McKenzie County Comprehensive Plan is a legal document that serves as McKenzie County’s “blueprint” or “constitution” for all future land use and development decisions. Comprehensive Plans must be comprehensive and long-term.

- **Comprehensive.** Comprehensive plans are comprehensive both in their geographic coverage and in the range of subjects they cover. In the case of the 2025 McKenzie County Comprehensive Plan, the geographic coverage is the County’s zoning jurisdiction. The County’s Comprehensive Plan authority does not extend into the incorporated cities and their extraterritorial areas, townships with their own zoning authority, tribal lands, state lands, or federal lands. Each city adopts and implements a comprehensive plan that covers land within its planning area—this is the same for townships with their own zoning jurisdiction.
- **Long-Term.** Comprehensive plans are long-term in perspective. Comprehensive plan time horizons vary, but typically range from 10 to 30 years into the future. In the case of this comprehensive plan, the County has established the year 2025 as the plan’s time horizon.

LEGAL AUTHORITY AND REQUIREMENTS

A comprehensive plan is required by the North Dakota Century Code (NDCC) in order to legally exercise zoning and land use regulations. If challenged, local jurisdictions without comprehensive plans may be unable to defend zoning decisions or enforcement actions needed to protect residents. For counties, the requirement for a comprehensive plan is located in NDCC 11-33-03. The McKenzie County 2025 Comprehensive Plan is largely focused on the management of future development in following direction from NDCC 11-33-03, which states in part:

.....

The comprehensive plan shall be a statement in documented text setting forth explicit goals, objectives, policies, and standards of the jurisdiction to guide public and private development within its control.

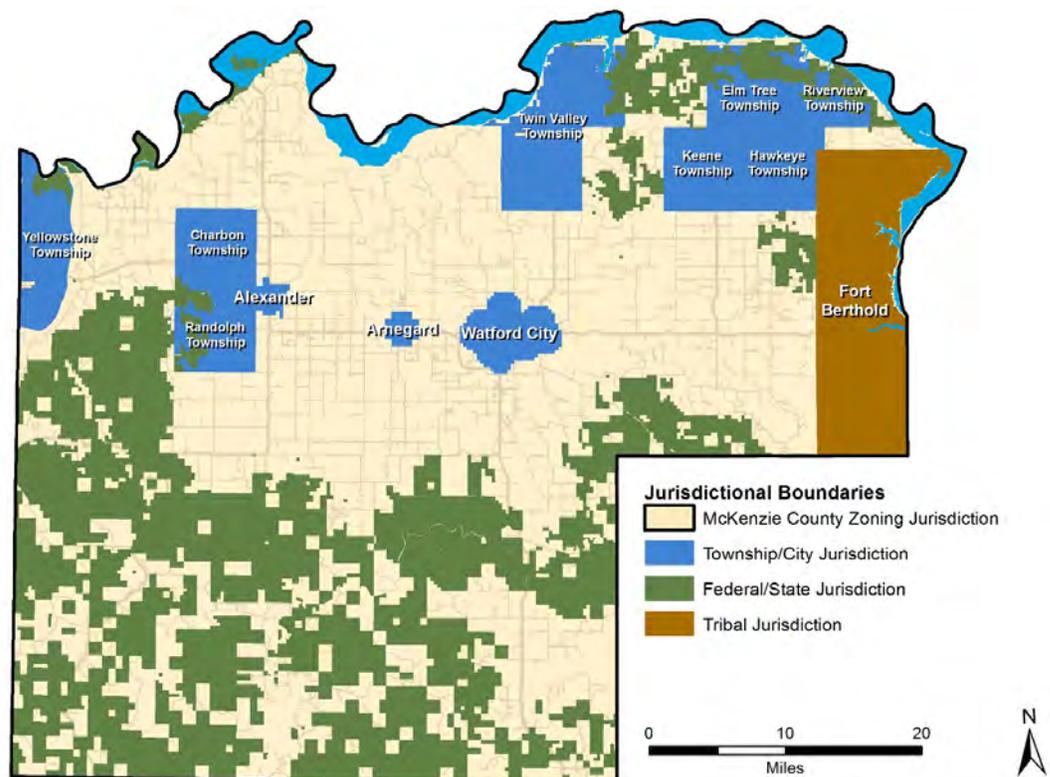
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In addition to documented text found in the plan document, the Comprehensive Plan Land Use Map visually directs future development within the county.

COMPREHENSIVE PLAN AREA

Figure 1-1 shows the Comprehensive Plan planning area, which includes all land subject to county zoning jurisdiction. Federal, state, and tribal lands, in addition to incorporated cities and their extraterritorial areas, and townships with their own zoning jurisdiction, are not in the Comprehensive Plan planning area.

Figure 1-1: Comprehensive Plan Planning Area

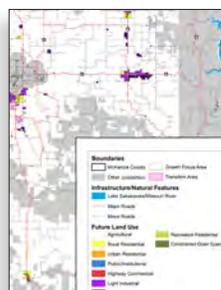


WHAT MAKES UP THE COMPREHENSIVE PLAN?

The 2025 Comprehensive Plan consists of four documents: the 2025 Comprehensive Plan (this document), the Comprehensive Plan Land Use Map, the Existing Conditions document, and the Plan Development Process and Results document.



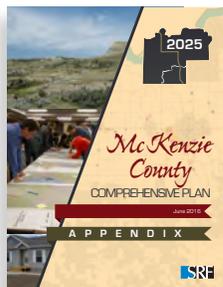
2025 McKenzie County Comprehensive Plan. Also referred to as the Policy Document, this document contains the goals, objectives, and implementation actions that guide the County’s future land use decisions.



Comprehensive Plan Map. The Map provides a foundation for the County’s zoning map. All zoning designations must be consistent with the Comprehensive Plan Map. The Comprehensive Plan Map is the most useful component of the Comprehensive Plan, to be utilized in many ways:

- A guide to prospective developers
- A promotional tool to attract desired growth
- A guide for the protection of sensitive environmental or other important areas
- A guide for decision makers in managing the location of growth

2025 McKenzie County Comprehensive Plan Existing Conditions Report. The report took a “snapshot” of McKenzie County’s conditions and trends/projections as of 2015. The report provides an overview of a wide range of topics related to the planning area, such as demographic and economic conditions, land use, and natural resources. The report also reviews the technical analysis of opportunities and constraints to future growth. The report provides the public and decision makers with context for making policy decisions. The Existing Conditions Report is contained in the Comprehensive Plan Appendix.



The Plan Development Process and Results Report. McKenzie County Economic Development Strategy. This report supports the Economic Development Element of the Comprehensive Plan and is a main component of the County’s overall economic development strategy. This report provides an overview of public involvement and the Steering Committee review process.

HISTORY COURTESY OF THE MCKENZIE COUNTY WEBSITE

Untamed Territory

McKenzie County in western North Dakota hosts rugged buttes, sagebrush and prairie grasses, rolling fields of wheat and other marketable crops. The land speaks of its history through fossils, petroleum deposits, petrified forests and evolving terrain. It was once a wild country; its badlands and rolling hills inhabited by few. For the native Hidatsa, Mandan and Arikara tribes, the land provided ample resources as their hunting and ceremonial grounds. Wildlife was abundant and the land’s native inhabitants survived the windswept prairie with a reverence for its unpredictable disposition.

Explorers, Hunters, and Trappers

During the spring of 1805, the first noted explorers came to the area. Captain Meriwether Lewis, his companion Captain William Clark and their party, including the Shoshoni woman known as Sakakawea made their legendary journey over these vast western plains. In the years following the Lewis & Clark expedition, the area’s earliest settlers appeared. Mainly, they were hunters and trappers. Here, they found a paradise of wild game. Bison, bear, elk, pronghorn antelope, mule deer, white-tailed deer, bighorn sheep, beaver, otter, mink, muskrats, wolves, coyotes and wild fowl were plentiful.

In 1883, the first log cabin which served as a hunting cabin was built at the mouth of Cherry Creek on the banks of the Little Missouri River. During that same year, President Theodore Roosevelt first visited western North Dakota. He fell in love with the badlands and established two ranches there, the Maltese Cross Ranch and the Elkhorn Ranch

Establishing a County

McKenzie County was established on March 8, 1883, and named after Alexander McKenzie who was a strong political figure in North Dakota at the time. In 1905, one hundred years after Lewis & Clark made their famous trek across western North Dakota, McKenzie County was officially organized by the North Dakota Legislative Assembly. McKenzie County was one of the last counties to be organized in North Dakota.

The first county seat was in Alexander (also named after Alexander McKenzie) as assigned by the governor in 1905. The county seat designation was a controversial issue in the beginning. It was quickly “stolen” from Alexander and moved to the more populous town of Schafer. The county seat question, placed on the ballot many times before, was officially settled and moved by special election in 1940 to Watford City, the present day location.

The Land

In the early days, McKenzie County was known as the “Island Empire” due to the fact that it is surrounded by water on three sides. The Missouri River forms the northern and part of the eastern border. The Little Missouri also runs along part of the eastern and southern borders. The Yellowstone River forms the western border.

McKenzie County and its cities struggled through the 1920s, '30s and '40s with the drought, the building of city water and sewer systems, and the establishing of medical care facilities and other public facilities. WPA labor helped with some of those early projects. The Civilian Conservation Corps (CCC) helped establish the Theodore Roosevelt in 1933-1941. It acquired National Park status in 1978. Garrison Dam was completed in 1954 on the Missouri River, resulting in the sprawling Lake Sakakawea, a body of water that now makes up the northern and eastern county borders. Much of Lake Sakakawea is now controlled by the Corps of Engineers. In 1960, Land Utilization Projects were designated as the National Grasslands, later named Little Missouri National Grasslands that now make up 503,000 acres in the county. Oil was first discovered in the early '50s in McKenzie County and is still a vital part of the county's economy.

PRECEDING COMPREHENSIVE PLAN

The preceding comprehensive plan, developed and adopted in 2013, consisted of two parts. Part I contained background information on the human, economic, and natural resources as well as the land characteristics of the county. Subsequently, Part II introduced the purpose of the plan and defined goals, objectives, and implementation strategies as recommended by the Planning Commission and derived from input by the public. The plan provided goals, objectives, and implementation strategies for the following categories:

- Economic Development
- Governmental
- Natural Resources
- Land Use
- Public Facilities and Services
- Transportation
- Recreation
- Housing

The plan also included a map of future land use designations within areas of County zoning authority.

CHAPTER 2: LAND USE ELEMENT

INTRODUCTION

The McKenzie County Comprehensive Plan Land Use Element consists of three components:

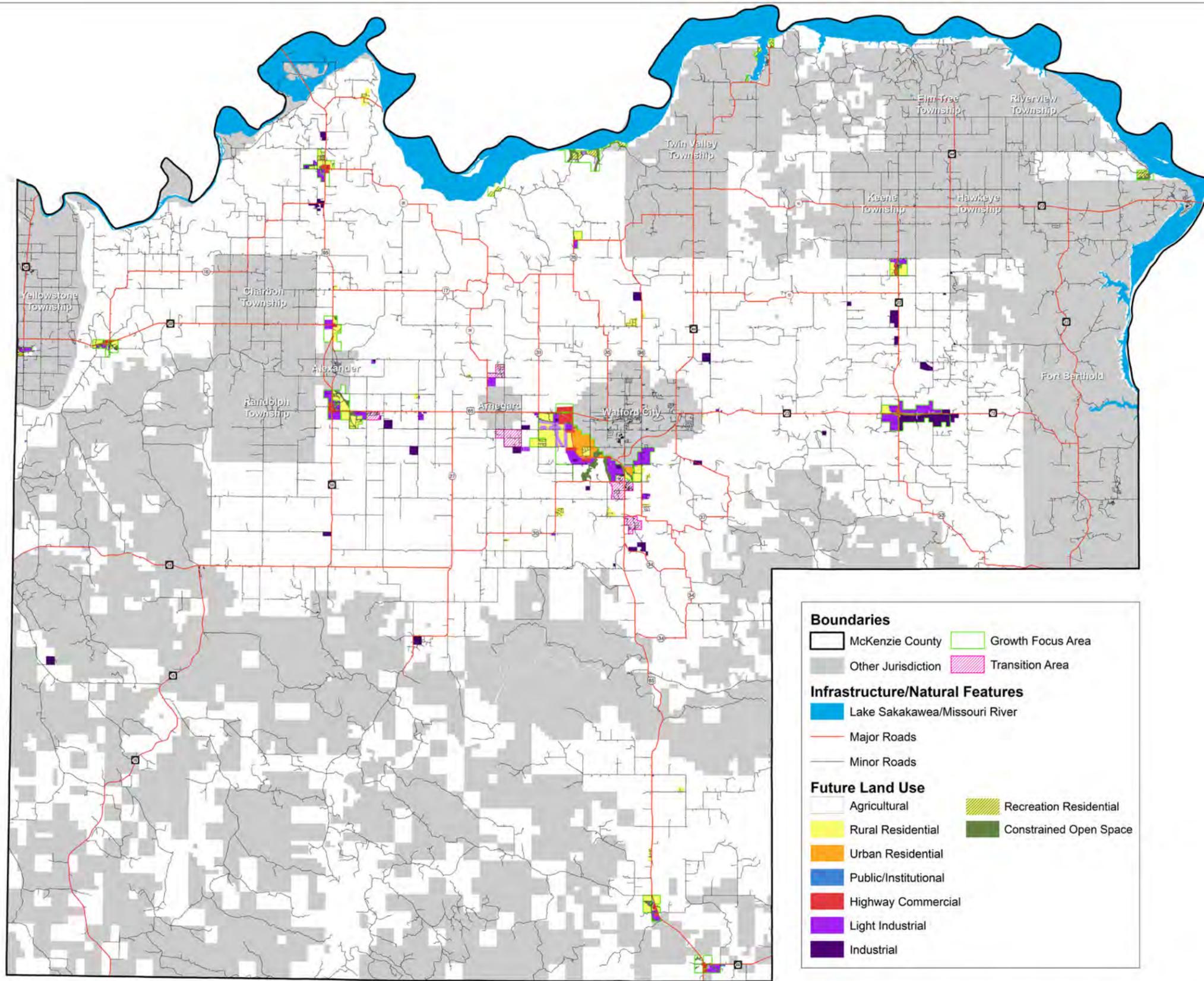
- A map that identifies the designated land use categories (also referred to as the “Comprehensive Plan Map”)
- Supporting text describing the character of each land use category and growth area
- The established goals and objectives regarding land use and growth management

The purpose of the land use plan is to serve as the basis for the county’s zoning decisions, which is required by the North Dakota Century Code (NDCC). In this way, the land use plan advances the county’s comprehensive plan, by providing a blueprint for implementing growth and land use goals and objectives to current citizens, property owners, prospective citizens, developers, and buyers.

Comprehensive Plan & Zoning Map – The comprehensive plan map is not the same as the zoning map, but rather is meant to be a guide for future zoning decisions.

An effective Comprehensive Plan Map needs to be based on reasonable expectations of future populations, as there is a greater likelihood that services and facilities will be available at the time and in the place they are most needed. As addressed in the Existing Conditions chapter of the Appendix, the 10-year (2025) population projection anticipates the county can expect a population between 18,000 and 25,000 excluding the major cities (i.e. Watford City, Alexander, and Arnegard). The future land use plan is specifically designed to meet the needs of such population through consideration of residential and employment generating land use demand. Since the county is not equipped to provide urban levels of infrastructure or services for future development, the plan guides growth near existing cities and infrastructure. Doing so relieves the county and its tax payers from major financial burdens, while producing growth which is efficient, orderly, and most feasible.

The land use plan is also derived from feedback by the general public of McKenzie County. Based on the public input, McKenzie County citizens demonstrated preferences for locating new development near existing cities and infrastructure, protecting existing agricultural uses, and for the county to take a stronger stance in guiding growth. Figure 2-1 illustrates the final collective effort for the McKenzie County plan. All subsequent maps within this chapter are supplementary to Figure 2-1.



Boundaries

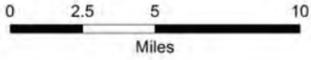
- McKenzie County
- Other Jurisdiction
- Growth Focus Area
- Transition Area

Infrastructure/Natural Features

- Lake Sakakawea/Missouri River
- Major Roads
- Minor Roads

Future Land Use

- Agricultural
- Rural Residential
- Urban Residential
- Public/Institutional
- Highway Commercial
- Light Industrial
- Industrial
- Recreation Residential
- Constrained Open Space



FUTURE LAND USE DESIGNATIONS

<p style="text-align: center;">AGRICULTURAL (A)</p>	
	<p>Agricultural is shown as white/clear on the Comprehensive Plan Map. This land use primarily consists of the raising of crops or livestock, as well as farm dwellings. In some cases, it includes open space that is not being farmed. Areas designated as agricultural on the land use plan include areas outside of the planning areas which are expected to remain as agricultural.</p>
<p style="text-align: center;">RECREATION RESIDENTIAL (RCR)</p>	
	<p>Recreation residential is shown as a green and yellow hatch on the Comprehensive Plan Map. This designation is for areas near Lake Sakakawea which allow flexibility for public recreational and private residential use. The implementing zoning district should provide standards for a high level of recreational opportunities in conjunction with new development. Uses of this designation are expected to be on larger lots between one (1) to ten (10) acres. For planning needs, the average density is assumed to be one dwelling unit per acre.</p>
<p style="text-align: center;">RURAL RESIDENTIAL (RR)</p>	
	<p>Rural residential is shown as yellow on the Comprehensive Plan Map. Rural residential uses are typically found near the outward boundaries of cities and other rural areas throughout the county. Sewer, fire flow, and other services may be limited or non-existent in these locations. Uses of this designation are expected to be on larger lots between one (1) to ten (10) acres. For planning needs, the average density is assumed to be one dwelling unit per acre.</p>

<p>URBAN RESIDENTIAL (UR)</p>	
	<p>Urban residential is shown as orange on the Comprehensive Plan Map. This designation accommodates more conventional single family detached housing, twin homes/duplexes, and multiple family housing development. Lots with this designation are less than one (1) acre and will have access to city sewer, fire service, and other city services when developed. For planning needs, the average density is assumed to be 12 dwelling units per acre.</p>

<p>PUBLIC/INSTITUTIONAL (PI)</p>	
	<p>Public/Institutional is shown as blue on the Comprehensive Plan Map. Government and institutional-type uses are included in this designation. Land uses considered as public and institutional include schools, religious institutions, colleges and universities, hospitals, government facilities, public facilities, cemeteries, and in some cases, major event facilities.</p>

<p>HIGHWAY COMMERCIAL (C)</p>	
	<p>Highway commercial areas are shown as red on the Comprehensive Plan Map. This land use designation is intended for retail sales and services along major highways and junctions. It is not intended for sales, services, or other activities of an industrial nature. In limited circumstances this designation is applied to non-highway areas where commercial uses are nonetheless needed to support the surrounding uses.</p>

<p>LIGHT INDUSTRIAL (LI)</p>	
	<p>Light industrial is shown as purple on the Comprehensive Plan Map. This designation consists of wholesale sales, warehousing, distribution, and industrial service-related uses. Ideally, this designation should prohibit less intense uses such as retail sales and service, restaurants, and so forth that would be incompatible in an environment with industrial land uses.</p>

<p>INDUSTRIAL (I)</p>	
	<p>Heavy Industrial is shown as dark purple on the Comprehensive Plan Map. This designation consists of above-ground oil and gas infrastructure (not regulated by the State of North Dakota), manufacturing, waste-related uses, and other uses which may be hazardous to the general public. This designation prohibits less intense uses such as retail sales and service, restaurants, office buildings, and so forth that would be incompatible in an environment with heavy industrial land uses.</p>

<p>OIL & GAS INFRASTRUCTURE (OG)</p>	
	<p>Oil and gas infrastructure areas are shown as light purple on the Comprehensive Plan Map. This designation is for areas utilized for oil and gas extraction and transmission. These uses are commonly regulated by the State of North Dakota.</p>

CONSTRAINED OPEN SPACE (COS)



Constrained open space is shown as green on the Comprehensive Plan Map. This designation is for areas deemed unsuitable for development due to the topography and/or drainage needs. The land use is mainly found along corridors that follow natural features such as creeks, rivers, and steep topography.

INDUSTRIAL/RESIDENTIAL SCREENING (IRS)



Industrial/Residential Screening is shown on the Comprehensive Plan Map as light green. New industrial development abutting existing or planned residential uses will be required to install screening that will consist of landscaping and a significant setback from the common border.

TRANSITION AREA (TA)



Transition Areas are clusters of existing and future light industrial and temporary workforce housing establishments operating in close proximity. These are specially-designated areas where light industrial and temporary workforce housing establishments must progressively transition to elevated operational and infrastructure standards established to improve the health, safety, and visual qualities of these areas.

General Land Use Designation Guidelines	
Proximity buffer of oil and gas pipeline facilities from residential uses.	500' from centerline
Proximity buffer of constrained open space from stream centerlines.	Dependent upon topography and visual flood plain (2015 aerial).
Proximity buffer of oil well pads from residential uses.	500'
Proximity buffer between industrial and residential uses.	250'

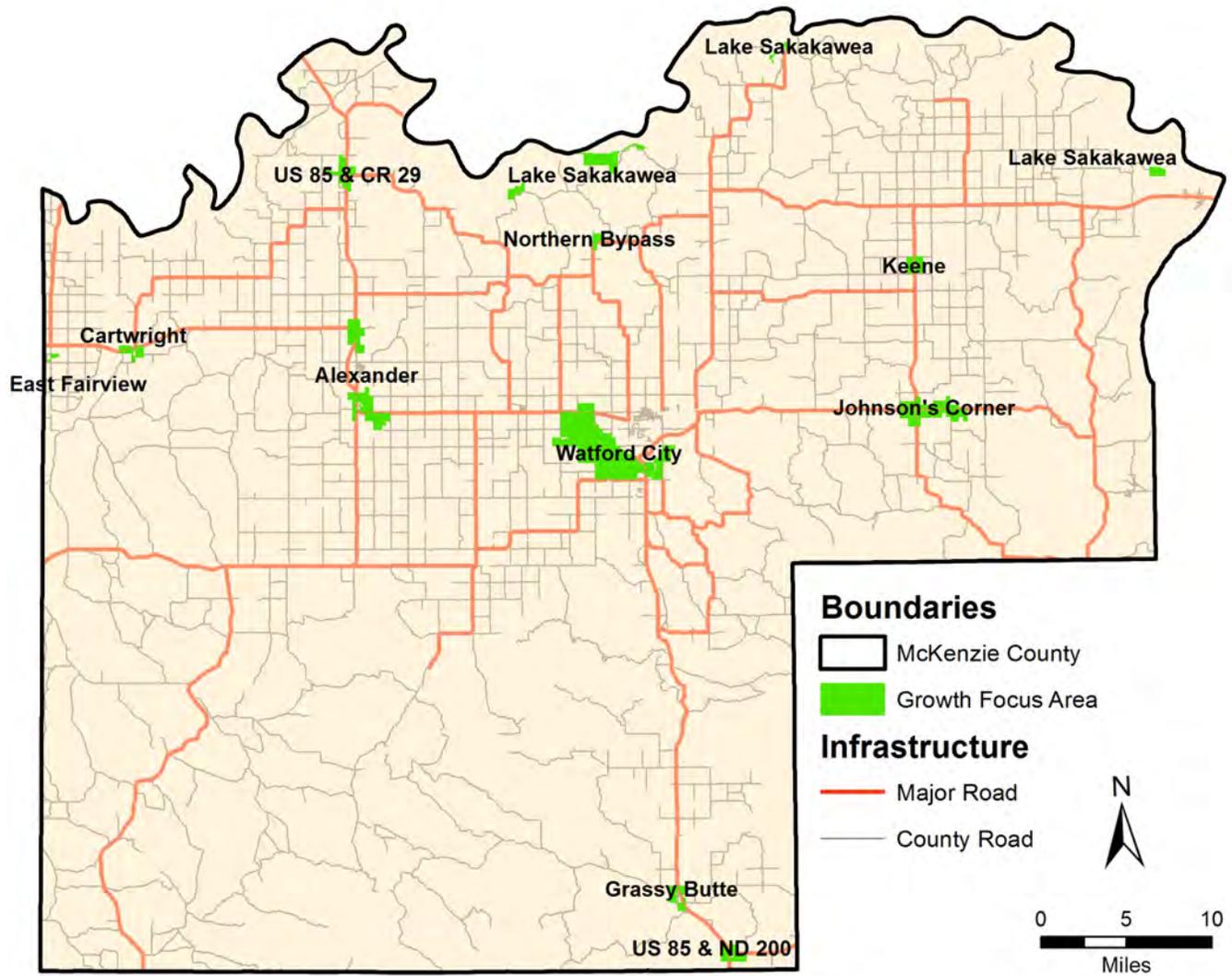
GROWTH FOCUS AREAS

The term “Growth Focus Area” (GFA) refers to areas defined by the County where future permanent development will be directed in an orderly, contiguous, and cost-efficient manner. There are eleven (11) identified GFAs within the Comprehensive Plan Map as outlined in Table 2-1. Each GFA is characterized as being located adjacent to or encompassing either a county city, unincorporated community, or a major road intersection. The names provided for each GFA are strictly representative of their general location and all GFA boundaries currently fall within the county’s planning and zoning jurisdiction. Figure 2-2 illustrates where all of the GFAs are located within the Comprehensive Plan Map.

Table 2-1: Categorization of Growth Focus Areas

County-City	Unincorporated Community	Major Road Intersection
Watford City	Lake Sakakawea	Johnson’s Corner
Alexander	Grassy Butte	US 85 & CR 29
	Keene	US 85 & ND 200
	Cartwright	Northern Bypass
	East Fairview	

Figure 2-2: Growth Focus Area Locations



County-City GFAs

Watford City

The Watford City GFA is located near the southern and western boundaries of Watford City's existing extraterritorial area (ETA). Inclusively, the Watford City GFA is the largest GFA, covering 8,475 acres. Measuring from the farthest points, the Watford City GFA spans 7 ¼ miles from east to west and 4 ½ miles from north to south. The primary regional transportation routes to this GFA include US Highway 85, which transverses the GFA, and County Road 30, which borders the southern boundary. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to Watford City (Largest and fastest-growing city in the county)
- Close proximity to rural water line and Western Area Water Supply Authority infrastructure.
- Close proximity to paved roads.
- Growth near Watford City received significant positive feedback from public.
- Survey results emphasized growth near existing cities.
- The area is compatible with Watford City's plans for growth.
- Growth constraints are limited in this area compared to other areas adjacent to Watford City.
- The area is centrally located within the county.

The future land use designations within the Watford City GFA are mapped in Figure 2-5. Figure 2-3 illustrates the distribution between all of the designation types. Figure 2-4 lists the acreage for each land use category in this growth focus area. A unique feature of the Watford City GFA is the addition of urban residential designations, which is a result of Watford City's plans for higher density residential in the area. To reflect the city's intentions for growth and likely expansion of the extraterritorial area, the McKenzie County Comprehensive Plan Map designates the vast majority of this area as urban residential. The focus area is well situated adjacent to the city to take advantage of city water supply (as the area is annexed over time) or to take advantage of future storage opportunities along a local Western Area Water Supply Authority (WAWSA) line.

Industrial designations are primarily established in the GFA to develop towards the south and southwest of Watford City due to the significant presence of oil and gas pipelines and the existence of light or heavy industrial uses within or near the area. Commercial designations are specifically positioned in the GFA where existing or future road intersections can create nodes of commercial activity while providing a buffer between residential and industrial uses. Since development has already occurred to the west of Watford City and the city is also planning for residential uses directly west of the city's existing ETA, extension of residential designation between the two was determined to be the most appropriate use for the area. Finally, the Comprehensive Plan Map provides recognition of oil and gas pipelines to ensure such uses do not conflict with the safety of future residential uses.

Figure 2-3: Watford City GFA – Land Use Designation Distribution

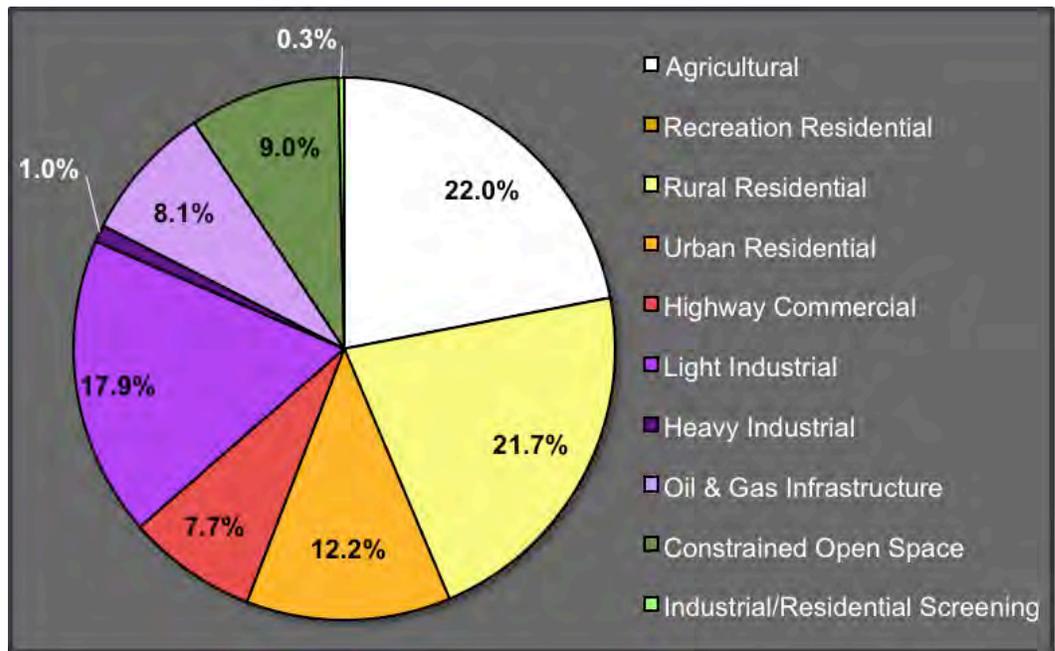
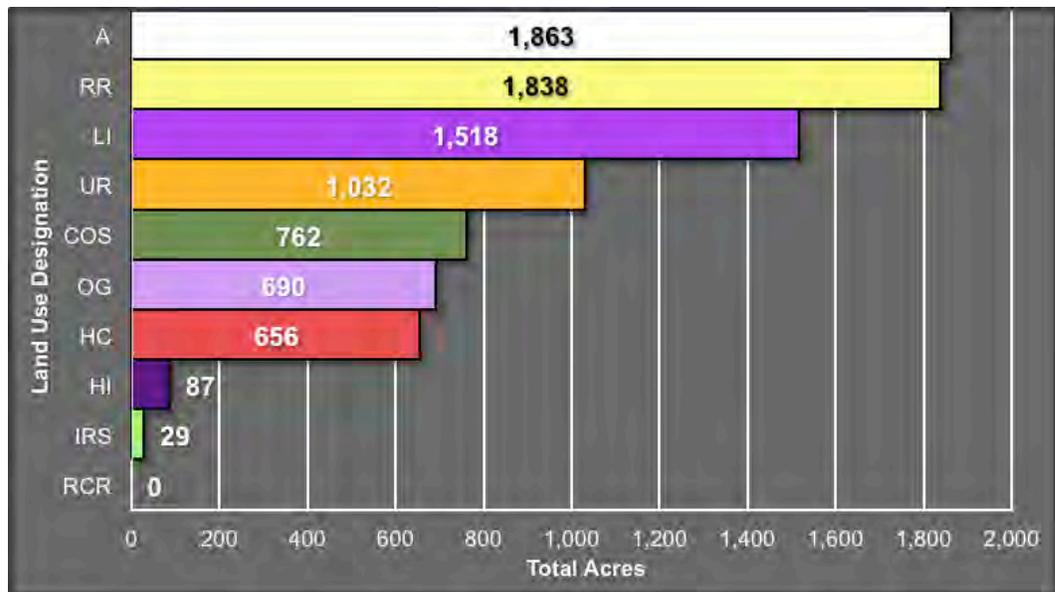


Figure 2-4: Watford City GFA – Land Use Designation by Acres



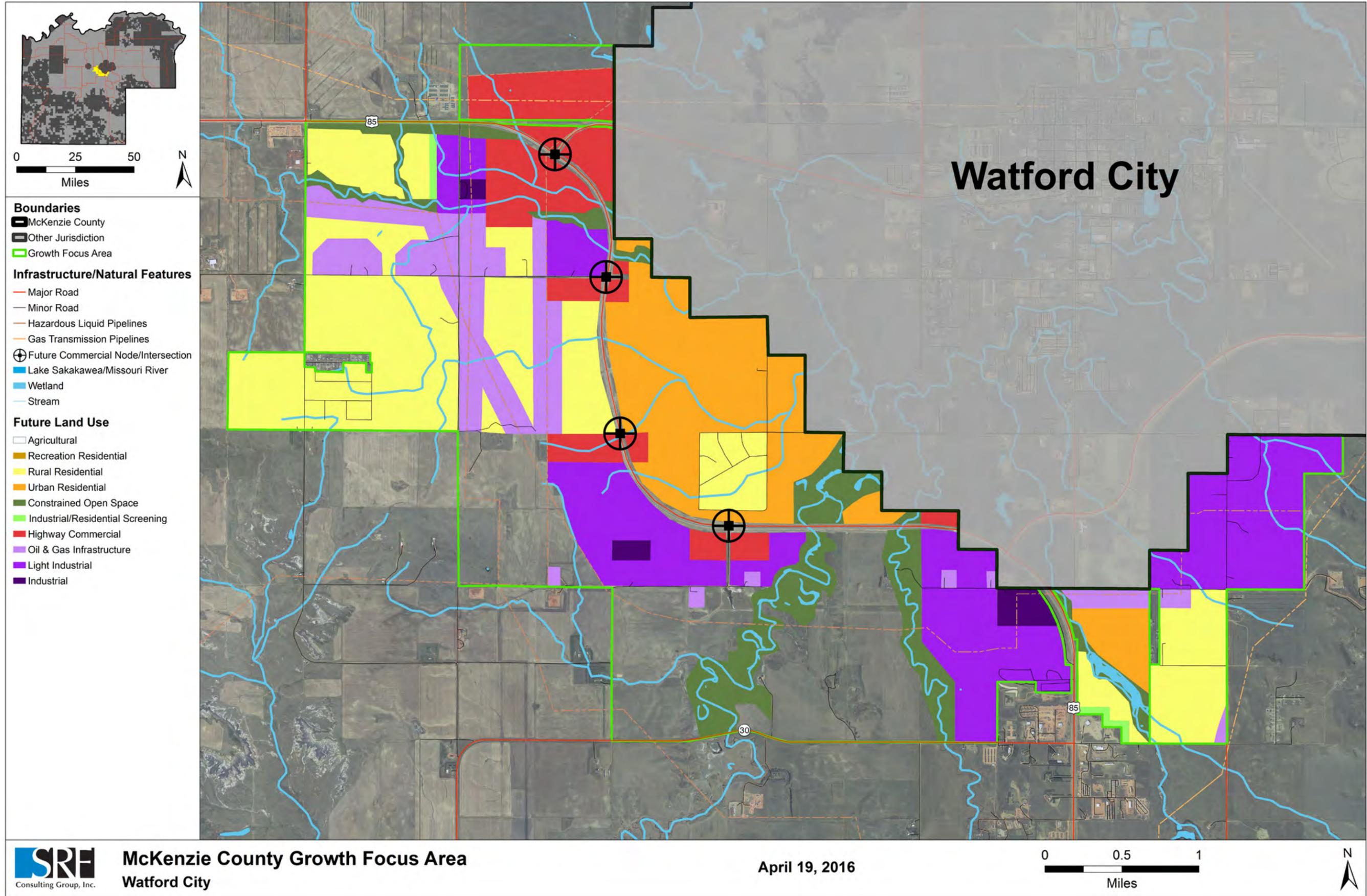


Figure 2-5: Watford City Growth Focus Area

Alexander

The Alexander GFA is located near the southern and northern boundaries of Alexander's existing extraterritorial area (ETA). Inclusively, the Alexander GFA covers 2,626 acres. Measuring from the farthest points, the Alexander GFA spans 2 ½ miles from east to west and 2 ¼ miles from north to south. The primary regional transportation routes to this GFA include US Highway 85, which transverses the GFA; ND Highway 200, which intersects the northern section of the GFA; and ND Highway 68, which intersects the southern section of the GFA. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to Alexander
- Close proximity to rural water line and Western Area Water Supply Authority infrastructure.
- Close proximity to paved roads.
- Growth near Alexander received significant positive feedback from public.
- Survey results emphasized growth near existing cities.
- Growth constraints are limited in this area compared to other areas adjacent to the Alexander.

The area is located at a junction of major transportation routes. The future land use designations within the Alexander GFA are mapped in Figure 2-8. Figure 2-6 illustrates the distribution between all of the designation types. Figure 2-7 lists the acreage for each land use category in this growth focus area. A unique feature of the Alexander GFA is that it is divided into two sections by the City of Alexander. The focus area is well situated adjacent to the city to take advantage of city water supply (as the area is annexed over time) or to take advantage of future storage opportunities along a local Western Area Water Supply Authority (WAWSA) line.

When determining appropriate land use designations for the Alexander GFA, consideration was given to land use compatibility, existing conditions, opportunities and constraints, public feedback, and Alexander's plans for growth. For example, industrial designations are primarily established in the GFA to develop towards the west of US Highway 85 due to the significant presence of oil and gas pipelines and light industrial uses near the area. Commercial designations are specifically positioned in the GFA where existing major road connections can create commercial nodes along US Highway 85. US Highway 85 will provide a wide buffer between the residential and industrial uses in the area. Residential uses are also positioned to avoid oil and gas pipelines in the area.

Figure 2-6: Alexander GFA – Land Use Designation Distribution

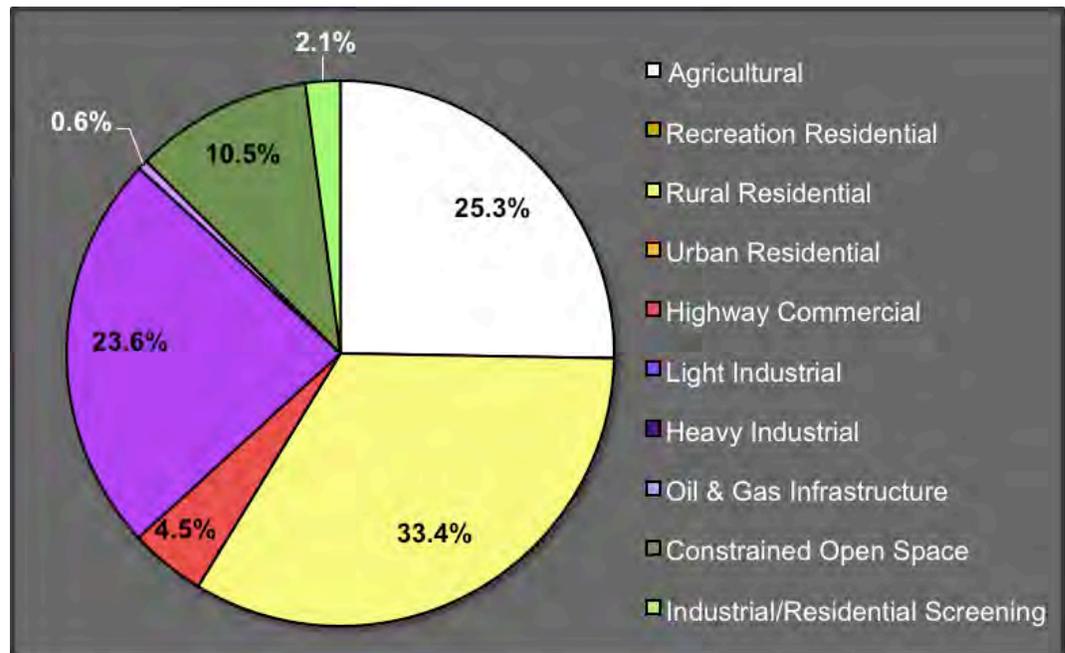
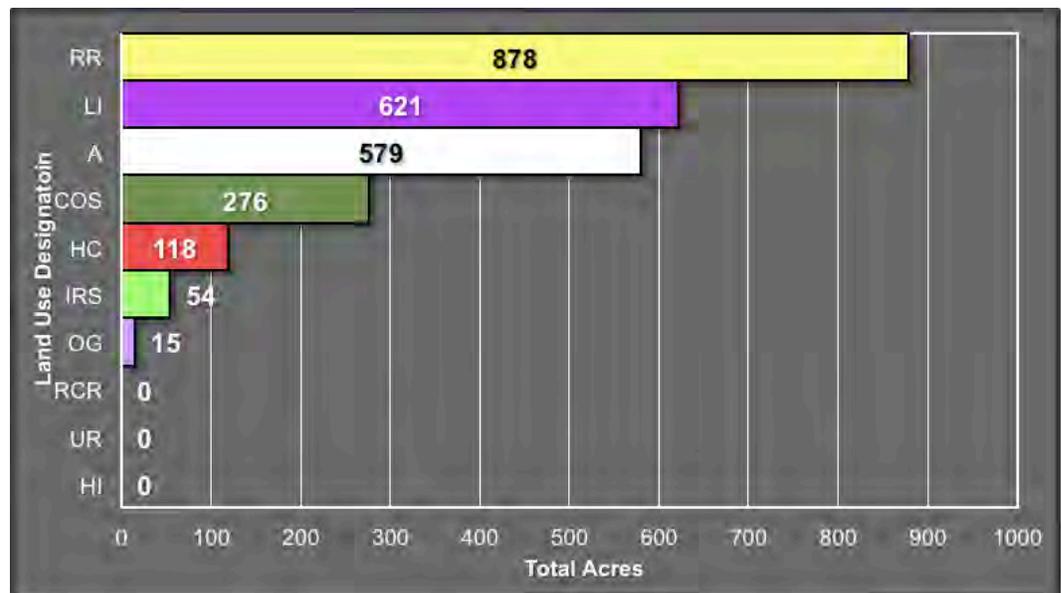


Figure 2-7: Alexander GFA – Land Use Designation by Acres



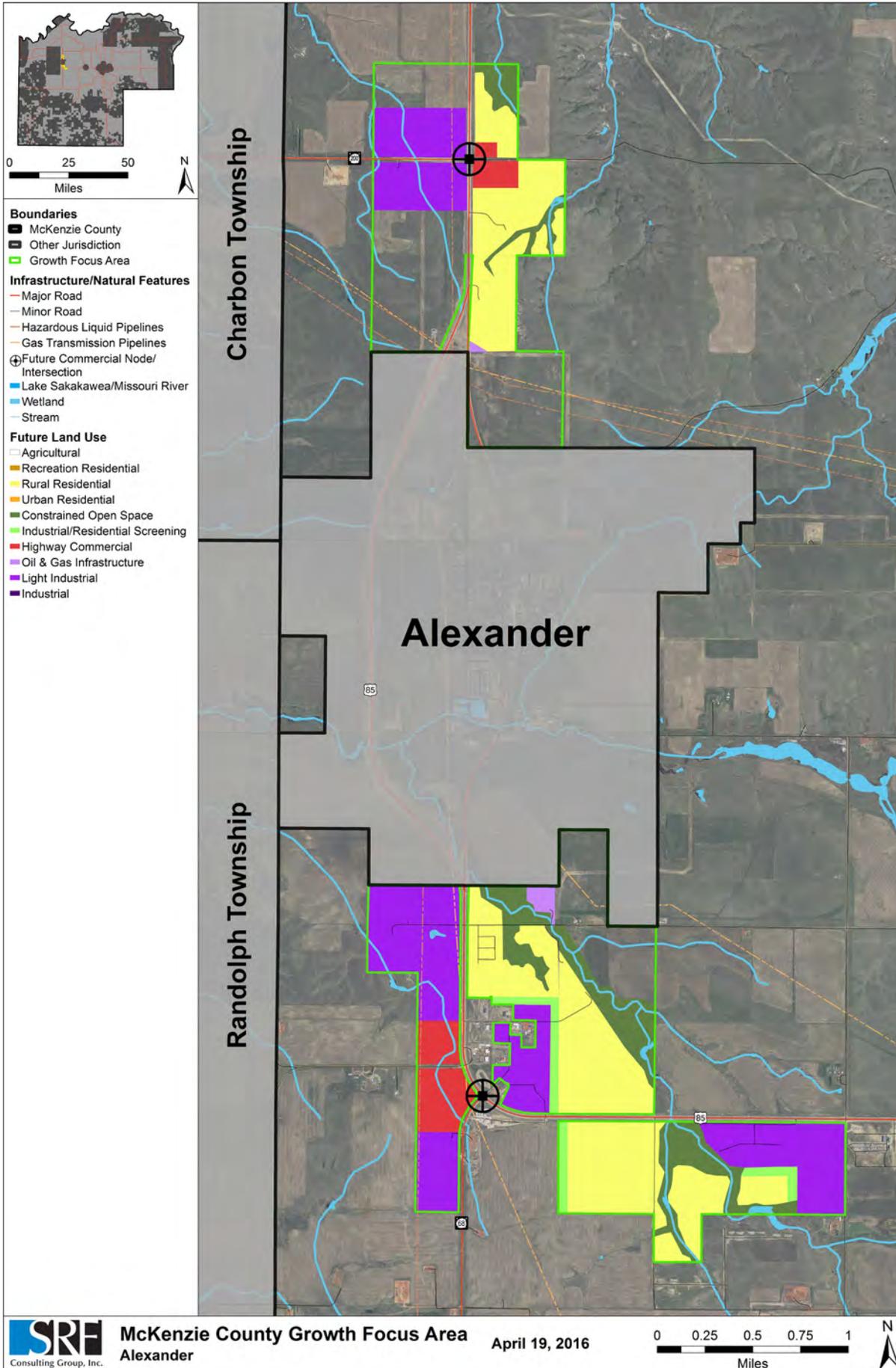


Figure 2-8: Alexander Growth Focus Area

Unincorporated Community GFAs

Lake Sakakawea

The Lake Sakakawea GFA is located in northeastern McKenzie County and all sections border the southern boundary of Lake Sakakawea. Inclusively, the Lake Sakakawea GFA covers a 2,065 acres. Measuring from the farthest points of the largest section, the Lake Sakakawea GFA spans 4 miles from east to west and 1 mile from north to south. The primary regional transportation routes to this GFA include ND Highway 1806 from Watford City and ND Highway 1806 from ND Highway 23. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to future rural water line infrastructure (only applicable to certain sections).
- Residential growth near Lake Sakakawea received significant positive feedback from the public, due to the existence of recreational opportunities available at the Lake.
- Growth constraints are limited in these areas compared to other areas adjacent to Lake Sakakawea.

The future land use designations within the Lake Sakakawea GFA are mapped in Figure 2-11. Figure 2-9 illustrates the distribution between all of the designation types. Figure 2-10 lists the acreage for each land use category in this growth focus area. The land use designation “Recreation Residential” can only be found within this GFA. The reason for there being numerous non-contiguous sections in the GFA is due to the challenging topography in the area. In order to provide ample opportunities for this unconventional land use designation to succeed, the McKenzie County Comprehensive Plan Map designates multiple areas along Lake Sakakawea which are capable of supporting such a use.

Derived from initial and consistent feedback, the land use intent for the Lake Sakakawea GFA is to primarily provide opportunities for rural residential with a focus on recreational opportunities in the immediate area. Finally, the Comprehensive Plan Map provides a limited and concentrated opportunity (~5 acres) for compatible commercial uses within the GFA which can collectively support future growth in the Lake Sakakawea GFA and Tobacco Gardens Resort and Marina areas.

Figure 2-9: Lake Sakakawea GFA – Land Use Designation Distribution

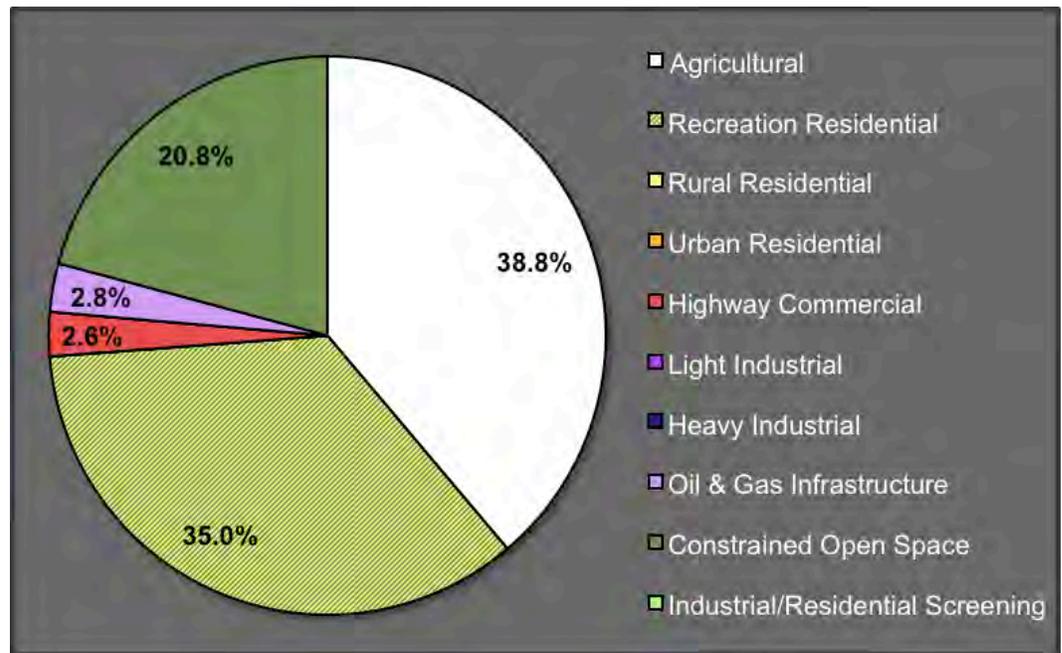
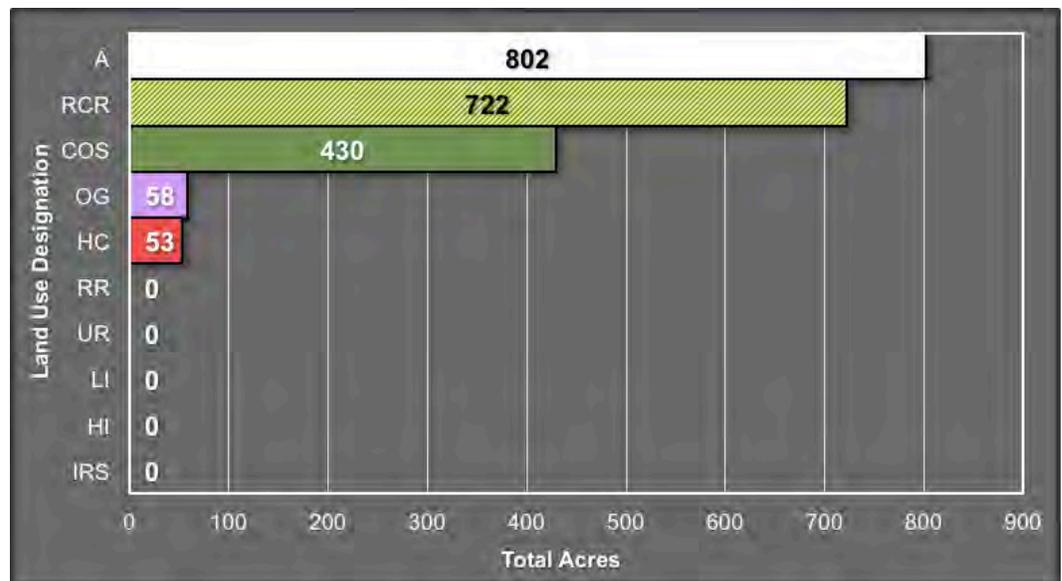
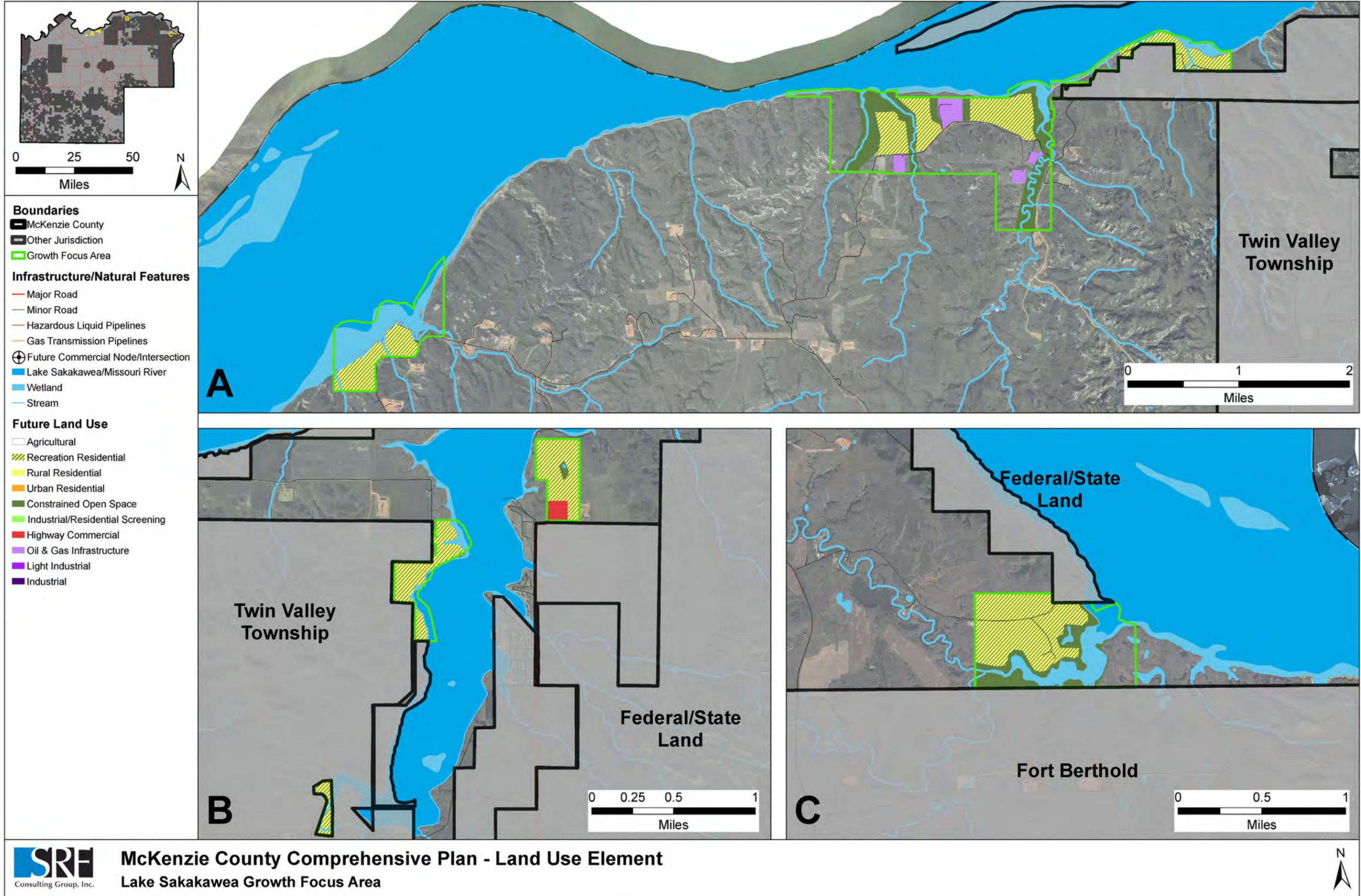


Figure 2-10: Lake Sakakawea GFA – Land Use Designation by Acres





McKenzie County Comprehensive Plan - Land Use Element
Lake Sakakawea Growth Focus Area



Figure 2-11: Lake Sakakawea Growth Focus Area



Grassy Butte

The Grassy Butte GFA contains the existing unincorporated community of Grassy Butte. Inclusively, the Grassy Butte GFA covers 607 acres. Measuring from the farthest points, the Grassy Butte GFA spans 1 mile from east to west and 1 ½ miles from north to south. The primary regional transportation route to this GFA is US Highway 85. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a well-established community (Grassy Butte).
- Close proximity to rural water line infrastructure.
- Close proximity to paved roads.
- Growth near Grassy Butte received positive feedback from the public.
- Survey results emphasized growth near unincorporated communities.
- Growth constraints are limited in this area.

The area is well positioned in southern McKenzie County to take advantage of growth opportunities in this region, should they arise. The future land use designations within the Grassy Butte GFA are mapped in Figure 2-14. Figure 2-12 illustrates the distribution between all of the designation types, with the top three uses consisting of rural residential (65.7%), light industrial (15.5%), and constrained open space (13.5%). Figure 2-13 lists the acreage for each land use category in this growth focus area. A unique feature of the Grassy Butte GFA is the location's potential for future residential growth. Opportunities for growth, particularly residential growth, are fairly limited in southern McKenzie County. If demand for growth were to occur in this region of the county, the Grassy Butte GFA is an area where future growth can be supported.

Industrial designations are primarily established in the GFA to develop towards the south of Grassy Butte due to the presence of existing industrial uses within or near the area. Commercial designations are specifically positioned in the GFA where existing road connections can create concentrated areas of commercial activity along US Highway 85. Residential designations are dominant in this GFA, surrounding the majority of the existing community of Grassy Butte.

Figure 2-12: Grassy Butte GFA – Land Use Designation Distribution

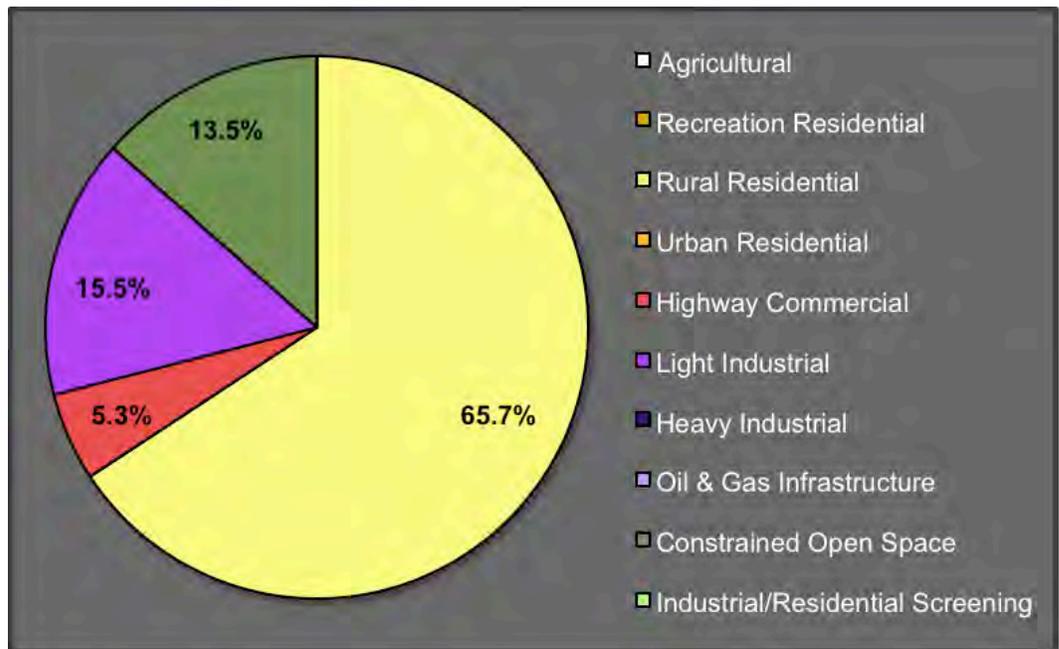
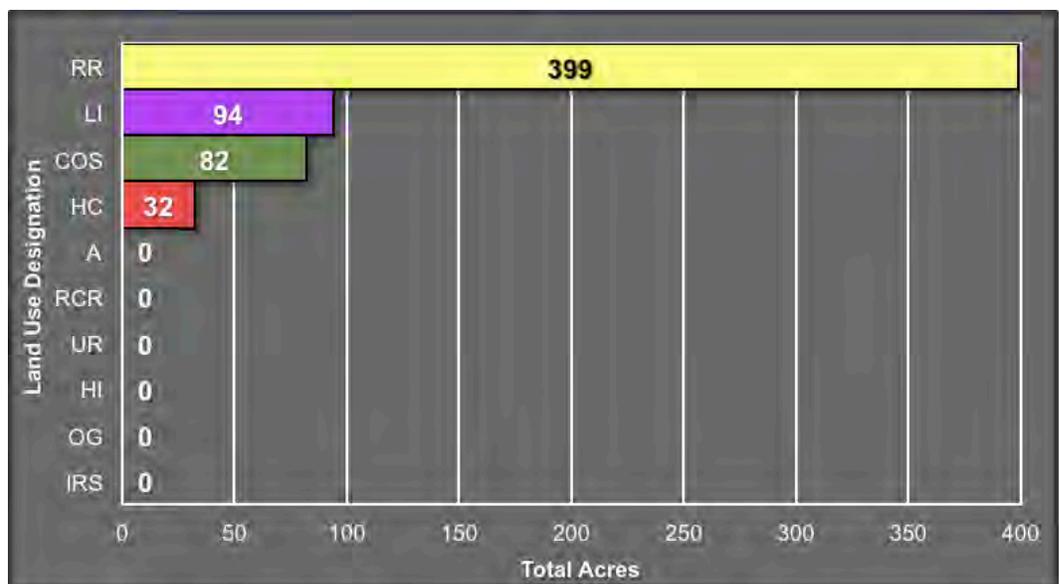


Figure 2-13: Grassy Butte GFA – Land Use Designation by Acres



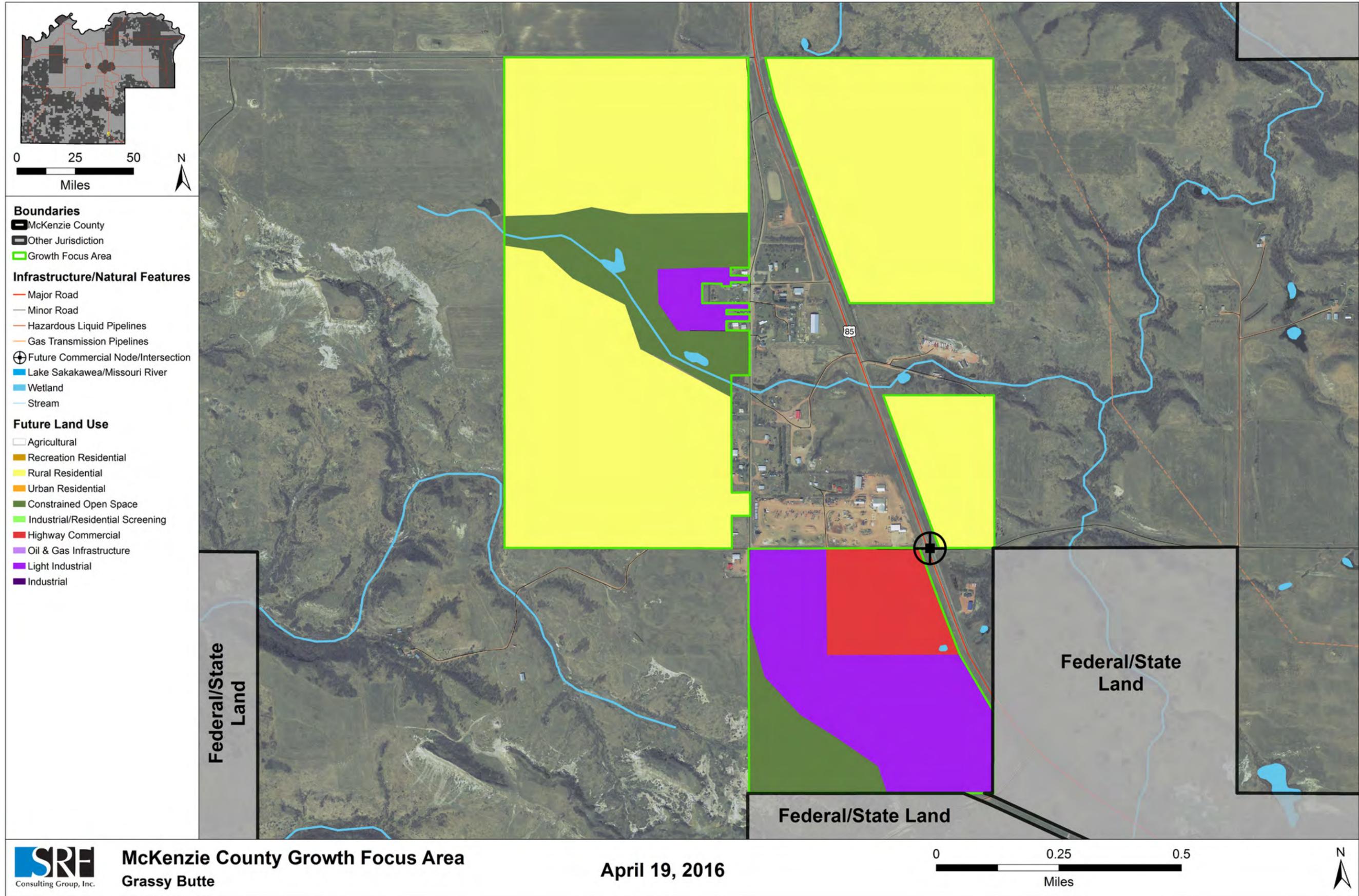


Figure 2-14: Grassy Butte Growth Focus Area

Keene

The Keene GFA contains the existing unincorporated community of Keene. Inclusively, the Keene GFA covers 567 acres. Measuring from the farthest points, the Keene GFA spans 1 mile from east to west and 1 mile from north to south. The primary regional transportation route to this GFA is ND Highway 23. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a well-established community (Keene)
- Close proximity to rural water line and Western Area Water Supply Authority infrastructure.
- Close proximity to paved roads.
- Growth near Keene received positive feedback from public.
- Survey results emphasized growth near unincorporated communities.
- Growth constraints are limited in this area.
- The area is advantageously located in northeastern McKenzie County where oil and gas operations are most prevalent.

The future land use designations within the Keene GFA are mapped in Figure 2-17. Figure 2-15 illustrates the distribution between all of the designation types. Figure 2-16 lists the acreage for each land use category in this growth focus area. The Keene GFA is centralized within northeastern McKenzie County where the oil and gas activity is especially prevalent. Public water storage capacity (Western Area Water Supply Authority) is planned to be increased in the vicinity of Keene, which makes the area especially attractive to future growth.

Industrial designations are primarily established in the GFA to develop towards the north of Keene due to the existing presence of industrial-related uses including oil and gas infrastructure. Commercial designations are specifically positioned in the GFA where existing road connections can create additional commercial activity along ND Highway 23. Residential designations southwest and southeast of Keene were determined to be optimal areas for residential development in order to maintain the community character of Keene. Further, additional residential designation in this area can provide opportunities in northeastern McKenzie County for future residential growth – an opportunity which is currently limited in this region of the county.

Figure 2-15: Keene GFA – Land Use Designation Distribution

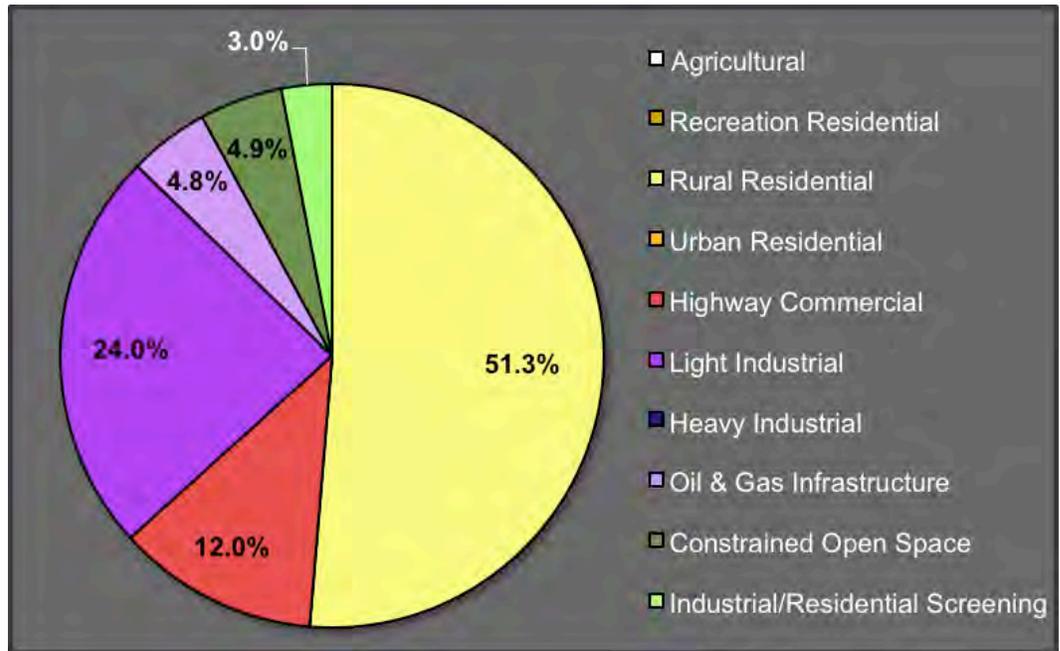
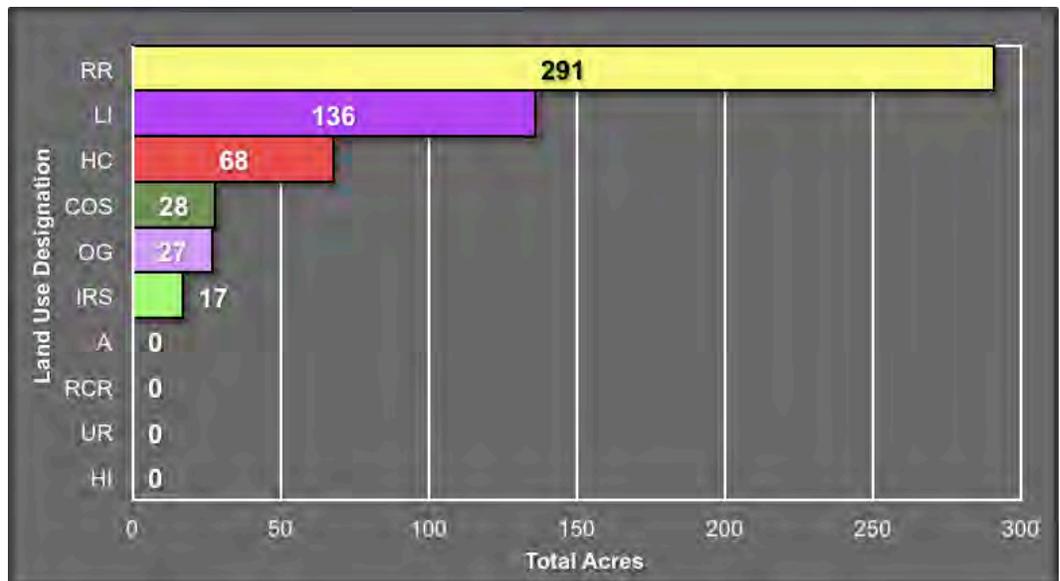
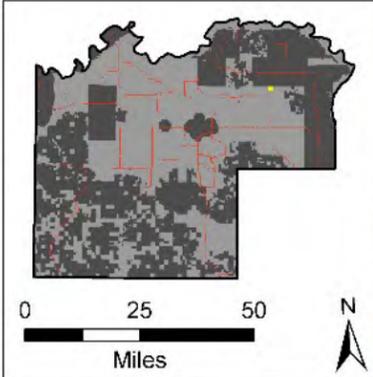


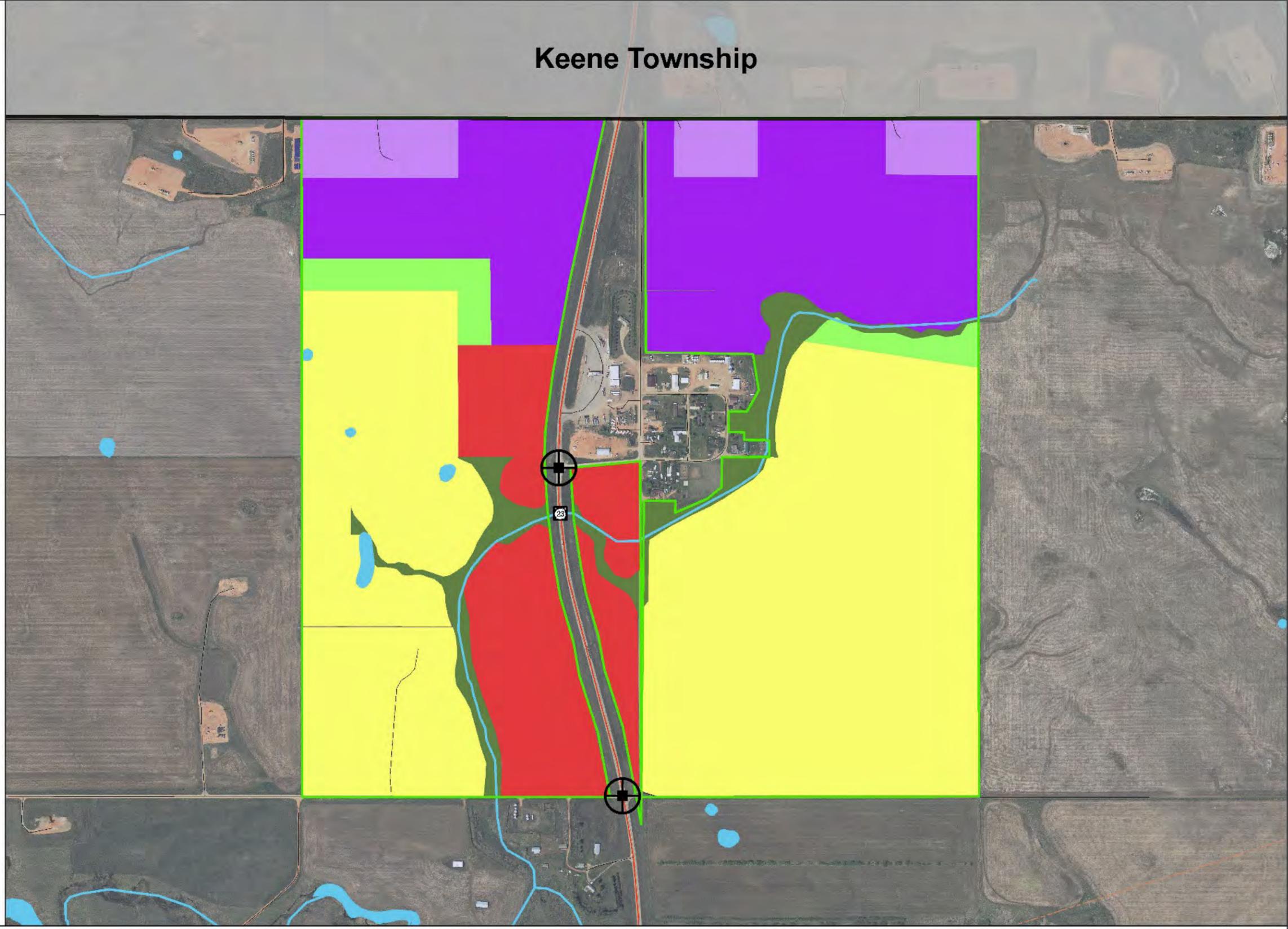
Figure 2-16: Keene GFA – Land Use Designation by Acres



Keene Township



- Boundaries**
- McKenzie County
 - Other Jurisdiction
 - Growth Focus Area
- Infrastructure/Natural Features**
- Major Road
 - Minor Road
 - Hazardous Liquid Pipelines
 - Gas Transmission Pipelines
 - Future Commercial Node/Intersection
 - Lake Sakakawea/Missouri River
 - Wetland
 - Stream
- Future Land Use**
- Agricultural
 - Recreation Residential
 - Rural Residential
 - Urban Residential
 - Constrained Open Space
 - Industrial/Residential Screening
 - Highway Commercial
 - Oil & Gas Infrastructure
 - Light Industrial
 - Industrial



McKenzie County Comprehensive Plan - Land Use Element
Keene Growth Focus Area



Figure 2-17: Keene Growth Focus Area



Cartwright

The Cartwright GFA contains the existing unincorporated community of Cartwright. Inclusively, the Cartwright GFA covers 526 acres. Measuring from the farthest points, the Cartwright GFA spans 1 ½ miles from east to west and 1 mile from north to south. The primary regional transportation route to this GFA is ND Highway 200. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a well-established community (Cartwright).
- Close proximity to rural water line infrastructure.
- Close proximity to paved roads.
- Growth near Cartwright received positive feedback from public.
- Survey results emphasized growth near unincorporated communities.

Growth constraints are limited in this area. The future land use designations within the Cartwright GFA are mapped in Figure 2-20. Figure 2-18 illustrates the distribution between all of the designation types. Figure 2-19 lists the acreage for each land use category in this growth focus area. Unique features of the Cartwright GFA are historical and natural features that are within close proximity of the area. Features such as the Cartwright Tunnel, Fairview Bridge, and historical character of Cartwright could make the Cartwright GFA an attractive place for future growth – particularly residential growth.

Industrial designations are limited in the GFA to develop only near existing industrial uses. Commercial designations are specifically positioned in the GFA where existing road connections can create commercial activity and expand upon existing commercial activity along ND Highway 200. Residential designations west and east of Cartwright were determined to be optimal areas for residential in order to maintain the community character of Cartwright. Further, additional residential designation in this area can provide opportunities in northwestern McKenzie County for future residential growth – an opportunity which is currently limited in this region of the county.

Figure 2-18: Cartwright GFA – Land Use Designation Distribution

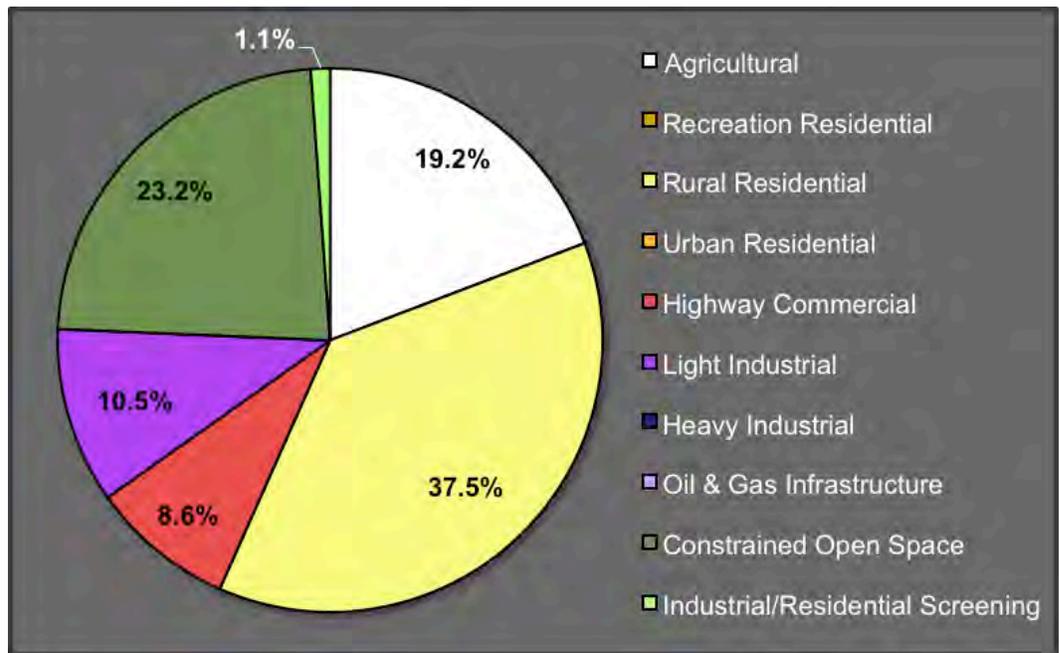
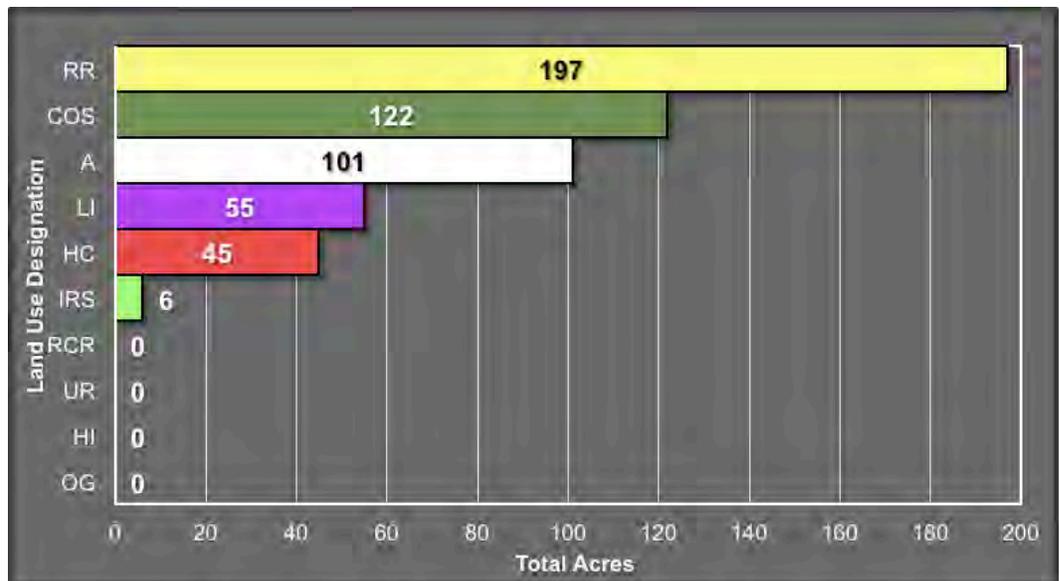


Figure 2-19: Cartwright GFA – Land Use Designation by Acres



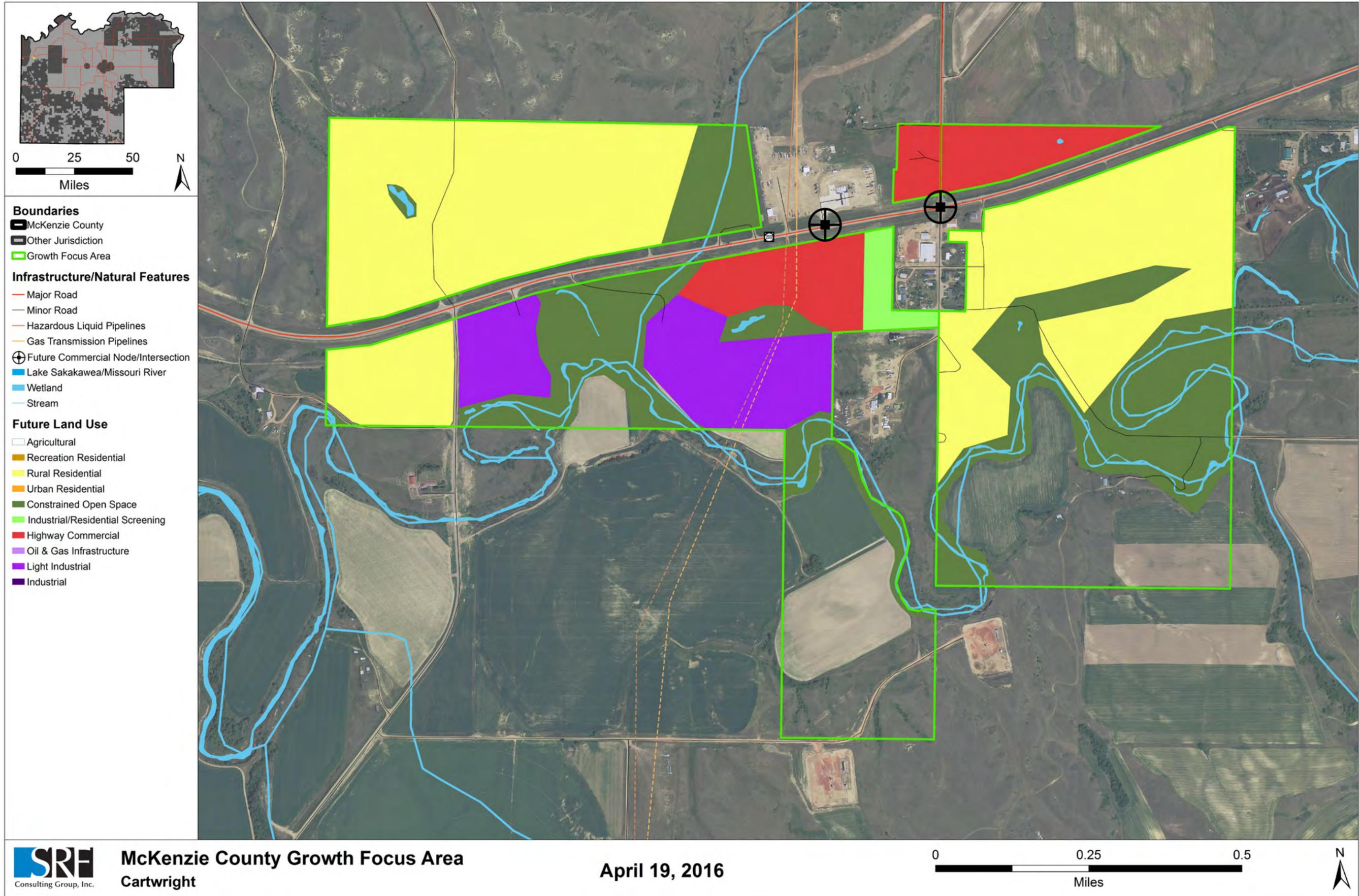


Figure 2-20: Cartwright Growth Focus Area

East Fairview

The East Fairview GFA is located near the border of North Dakota and Montana and is adjacent to the existing community of East Fairview. Inclusive, the East Fairview GFA is the smallest GFA covering 97 acres. Measuring from the farthest points, the East Fairview GFA spans $\frac{3}{4}$ mile from east to west and $\frac{1}{2}$ mile from north to south. The primary regional transportation route to this GFA is ND Highway 200, which is located approximately $\frac{1}{2}$ mile to the north. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to Fairview, MT, and East Fairview, ND.
- Close proximity to rural water line infrastructure.
- Close proximity to paved roads.
- Growth near East Fairview received positive feedback from public.
- Survey results emphasized growth near unincorporated communities.
- Growth constraints are limited in this area.

The future land use designations within the East Fairview GFA are mapped in Figure 2-23. Figure 2-21 illustrates the distribution between all of the designation types. Figure 2-22 lists the acreage for land use category in this growth focus area. A unique feature of the East Fairview GFA is the addition of the urban residential designation, which is located in close proximity to the state border. The inclusion of urban residential is the result of existing urban residential densities within the immediate area and areas platted for urban densities.

Industrial designations are primarily established in the GFA to develop towards the east of East Fairview due to the significant presence of industrial uses near the area as well as access to railroad infrastructure. A limited opportunity (~5 acres) for commercial uses within the GFA is intended to collectively support the surrounding existing and future residential uses. Residential uses are designated in this GFA towards the southeast of East Fairview in order to extend the urban character while providing more opportunities for residential growth along the state border.

Figure 2-21: East Fairview GFA – Land Use Designation Distribution

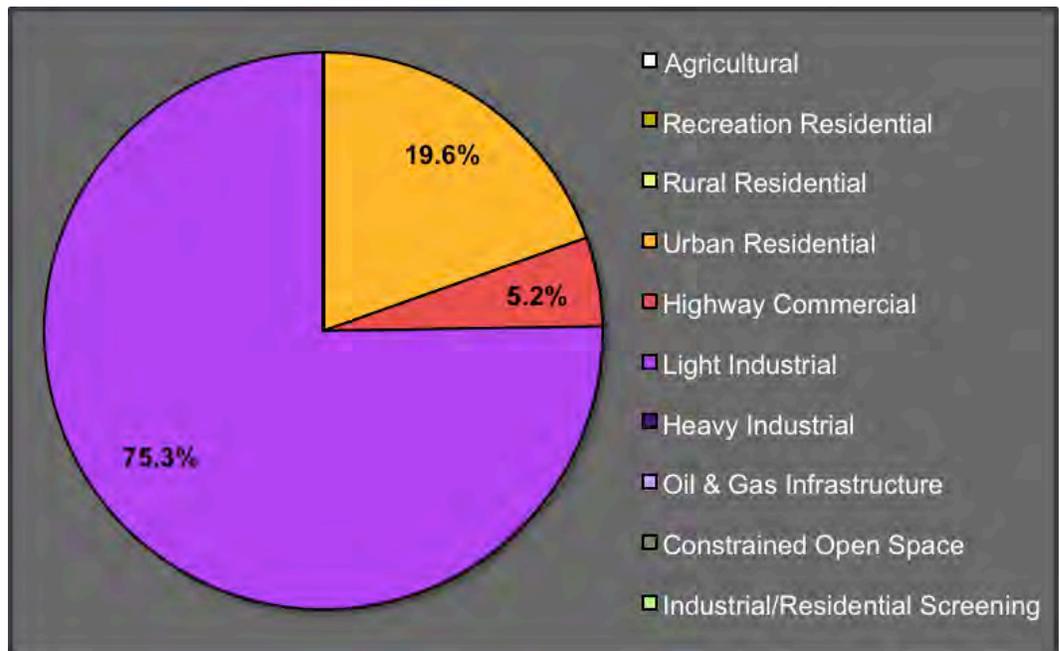
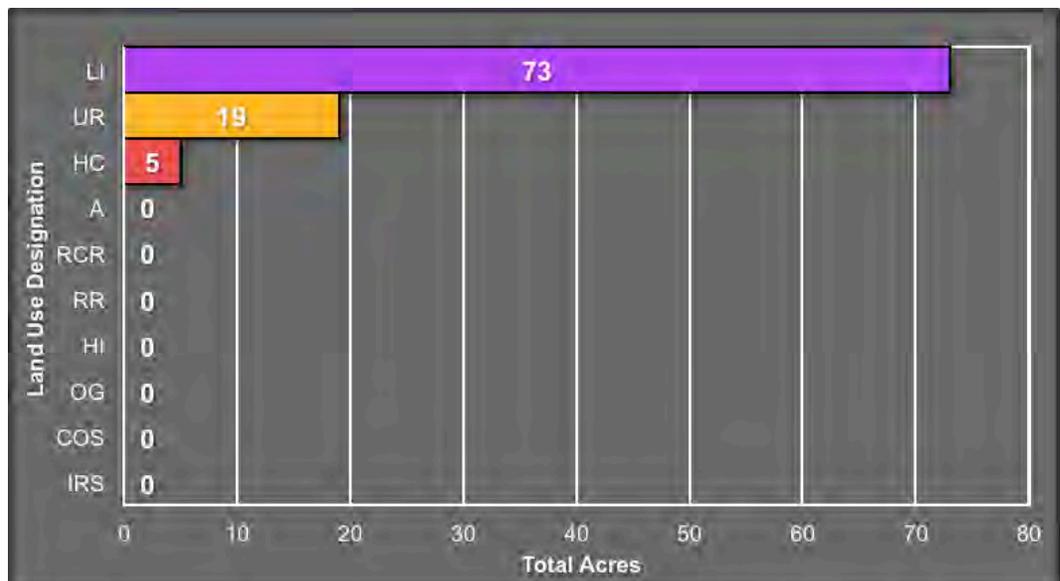


Figure 2-22: East Fairview GFA – Land Use Designation by Acres



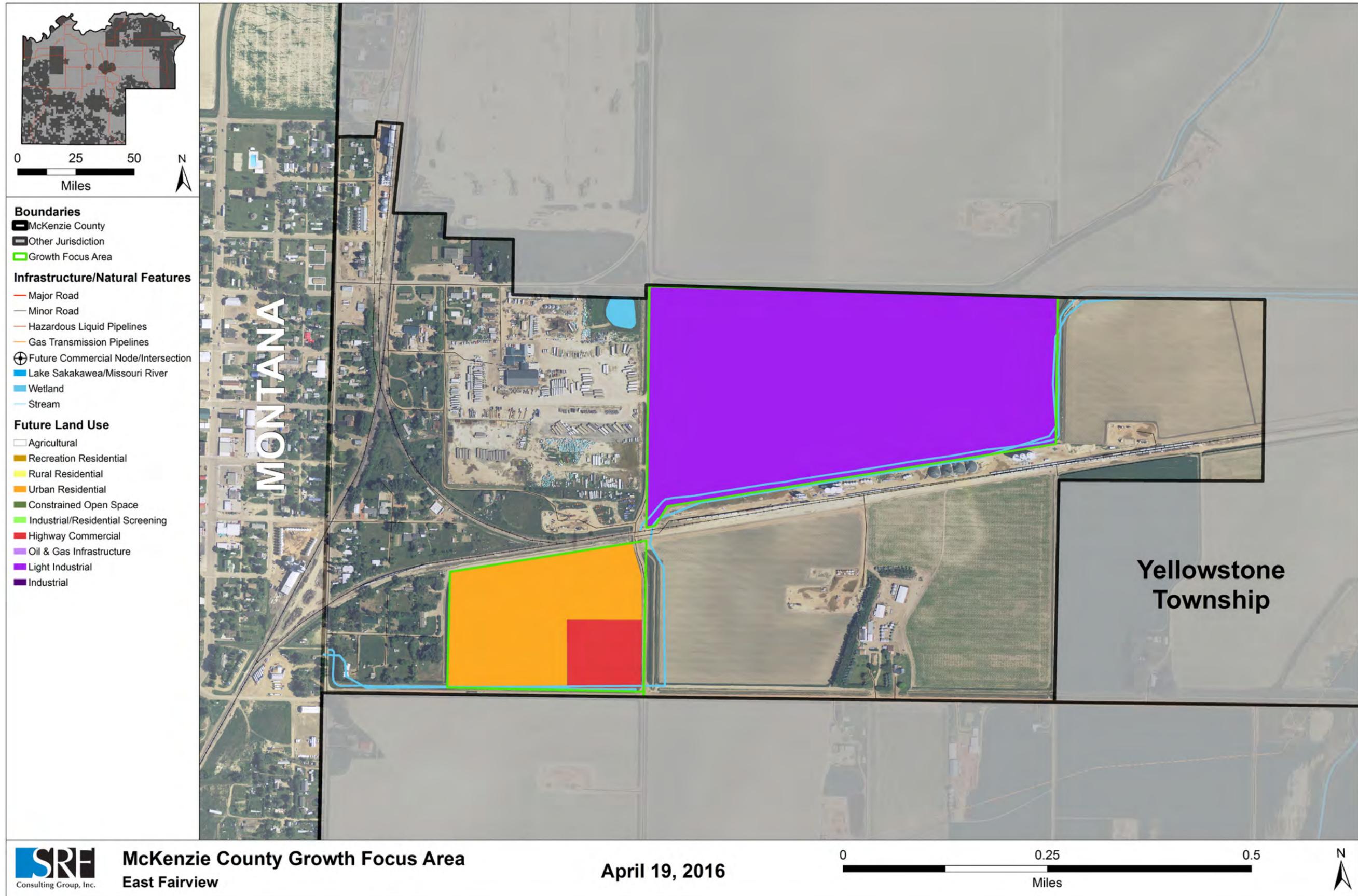


Figure 2-23: East Fairview Growth Focus Area

Major Road Intersection GFAs

Johnson's Corner

The Johnson's Corner GFA is located in northeastern McKenzie County at the intersections of ND Highway 23, ND Highway 73, and County Road 53. Inclusively, the Johnson's Corner GFA covers 2,432 acres. Measuring from the farthest points, the US 85 & CR 29 GFA spans 4 miles from east to west and 1 $\frac{3}{4}$ miles from north to south. The primary regional transportation routes to this GFA include ND Highway 23 and ND Highway 73. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a connection of major transportation routes.
- Close proximity to rural water line infrastructure.
- Close proximity to paved roads.
- Growth near Johnson's Corner received positive feedback from public.
- Survey results emphasized growth near major road intersections.
- Growth constraints are limited in this area.
- Area is already anticipated to receive significant future growth.
- Area includes a high concentration of oil and gas pipelines and associated infrastructure and is already planned for further related infrastructure improvements.

The future land use designations within the Johnson's Corner GFA are mapped in Figure 2-26. Figure 2-24 illustrates the distribution between all of the designation types. Figure 2-25 lists acreages for each land use category in this growth focus area. The area has ample access to major north-south and east-west transportation routes in the county (ND Highways 23 and 73). The McKenzie County Comprehensive Plan Map identifies this area as a GFA due to the significant potential for growth and existing oil and gas infrastructure development and future plans for this area.

Industrial designations are the primary use established in the GFA due to the significant presence of oil and gas pipelines, and there being existing and planned industrial uses throughout area. Commercial designations are specifically positioned in the GFA surrounding the roundabout in order to develop a concentrated commercial node. Residential uses are designated in this GFA towards the northwest of the intersection roundabout in order to avoid the widespread oil and gas pipeline and related infrastructure in the area. However, residential designations are limited in this GFA due to the nature of the existing conditions described above.

Figure 2-24: Johnson’s Corner GFA – Land Use Designation Distribution

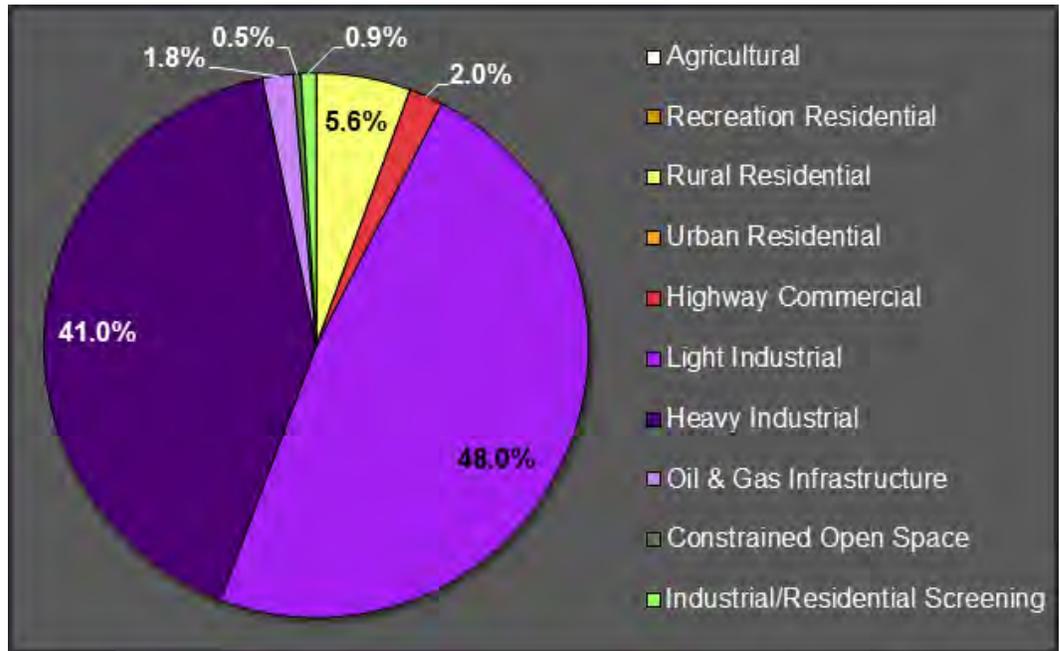


Figure 2-25: Johnson’s Corner GFA – Land Use Designation by Acres



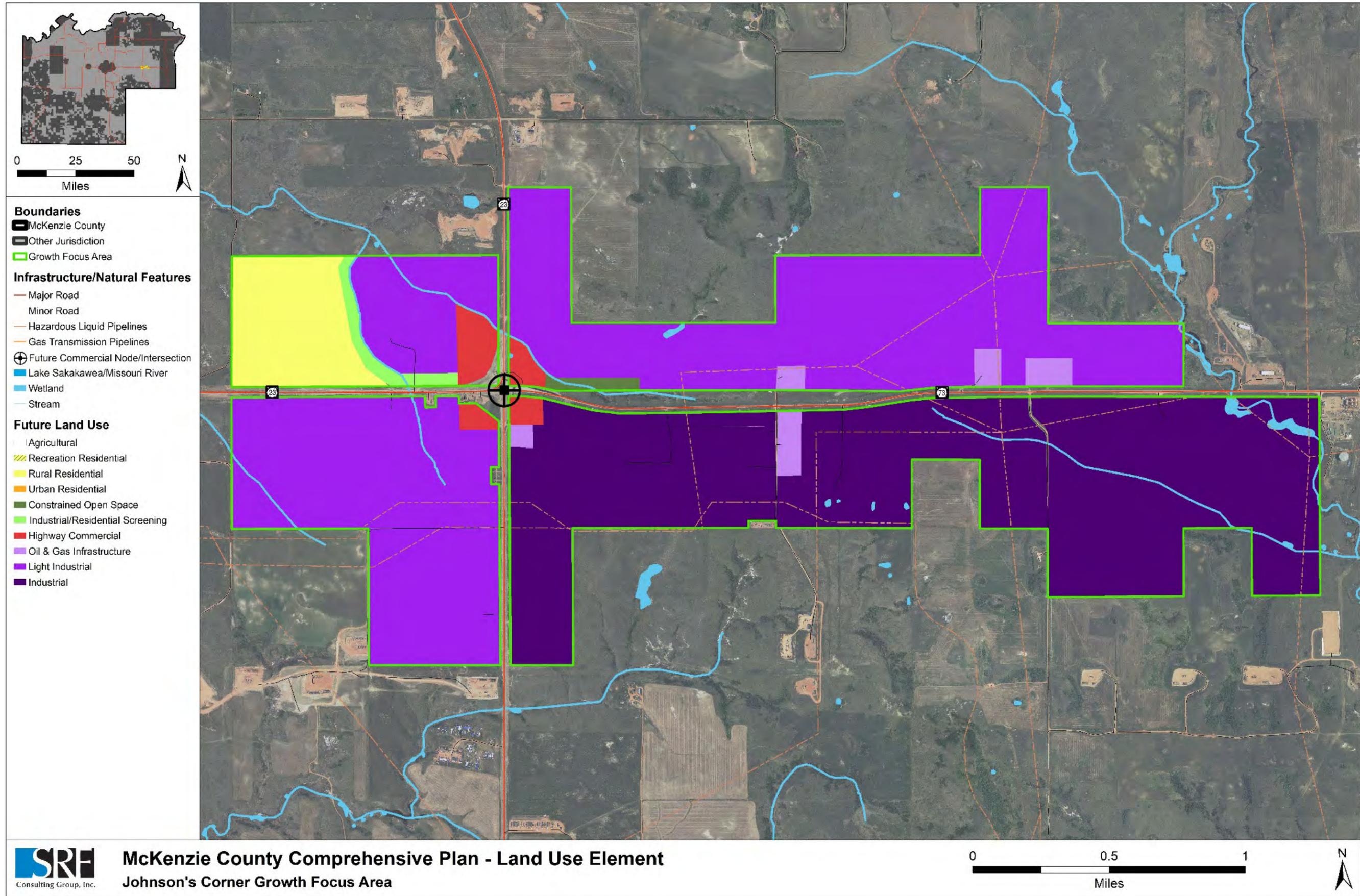


Figure 2-26: Johnson's Corner Growth Focus Area

US 85 & CR 29

The US 85 & CR (County Road) 29 GFA is located in northwestern McKenzie County at the intersection of US Highway 85 and CR 29. Inclusively, the US 85 & CR 29 GFA covers 851 acres. Measuring from the farthest points, the US 85 & CR 29 GFA spans 1 $\frac{3}{4}$ miles from east to west and 2 miles from north to south. The primary regional transportation routes to this GFA include US Highway 85 and County Road 29, which intersects the GFA from the east. The justifications for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process including the following:

- Close proximity to a connection of major transportation routes.
- Close proximity to rural water line and Western Area Water Supply Authority infrastructure.
- Close proximity to paved roads.
- Growth near US 85 and CR 29 received significant positive feedback from public.
- Survey results emphasized growth near major road intersections.
- Growth constraints are limited in this area.
- Area has received growth in recent years.
- Location between Alexander and Williston.

The future land use designations within the US 85 & CR 29 GFA are mapped in Figure 2-29. Figure 2-27 illustrates the distribution between all of the designation types. Figure 2-28 lists the acreages for each land use category in this growth focus area. Opportunities for growth, particularly residential growth between Williston and Alexander, are fairly limited in northwestern McKenzie County. The US 85 and CR 29 GFA responds to this need by providing more opportunities for growth in this region. The focus area is well situated to take advantage of future storage opportunities along a local Western Area Water Supply Authority (WAWSA) line.

Industrial designations are primarily established in the GFA to develop towards the west and south of the major intersection as a result of existing industrial uses in the area. Commercial designations are specifically positioned in the GFA surrounding the intersection in order to develop a concentrated commercial node. Finally, residential uses are designated in this GFA towards the north of the intersection to expand upon the residential uses already found in the area.

Figure 2-27: US 85 & CR 29 GFA – Land Use Designation Distribution

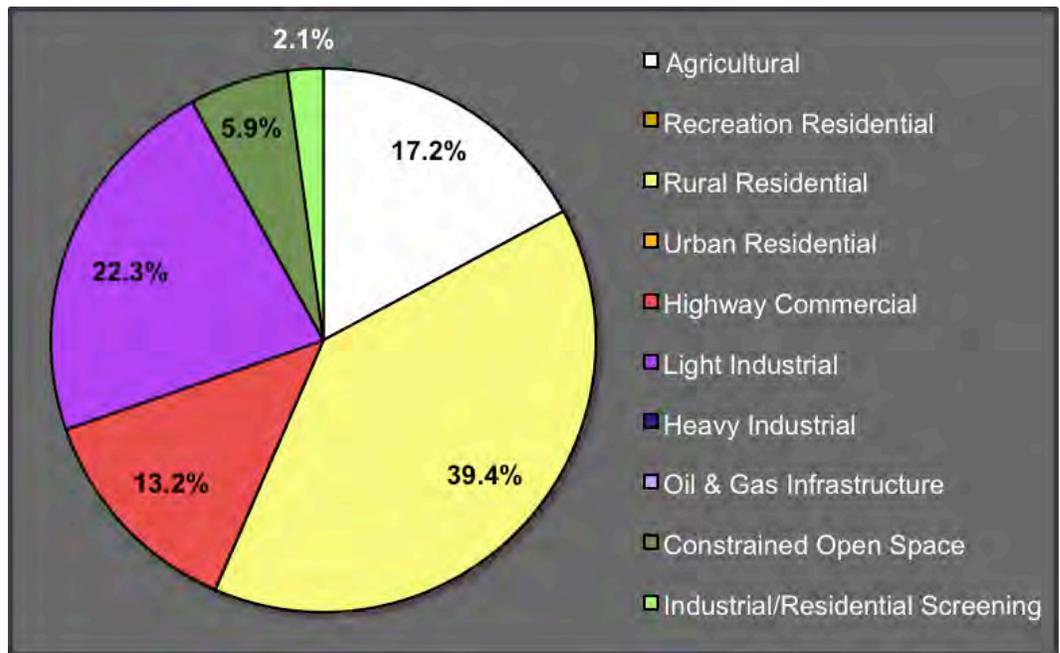
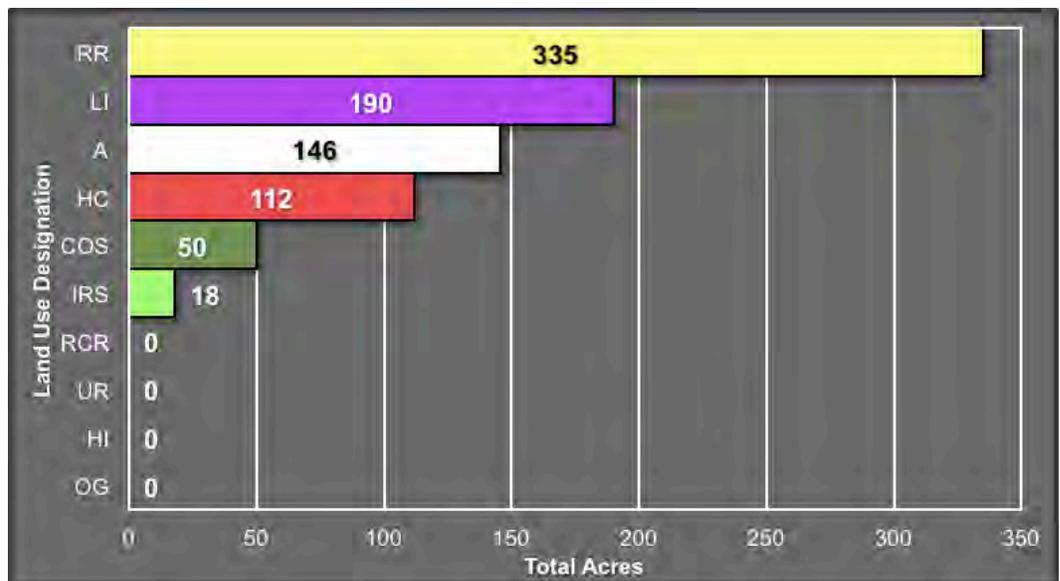


Figure 2-28: US 85 & CR 29 GFA – Land Use Designation by Acres



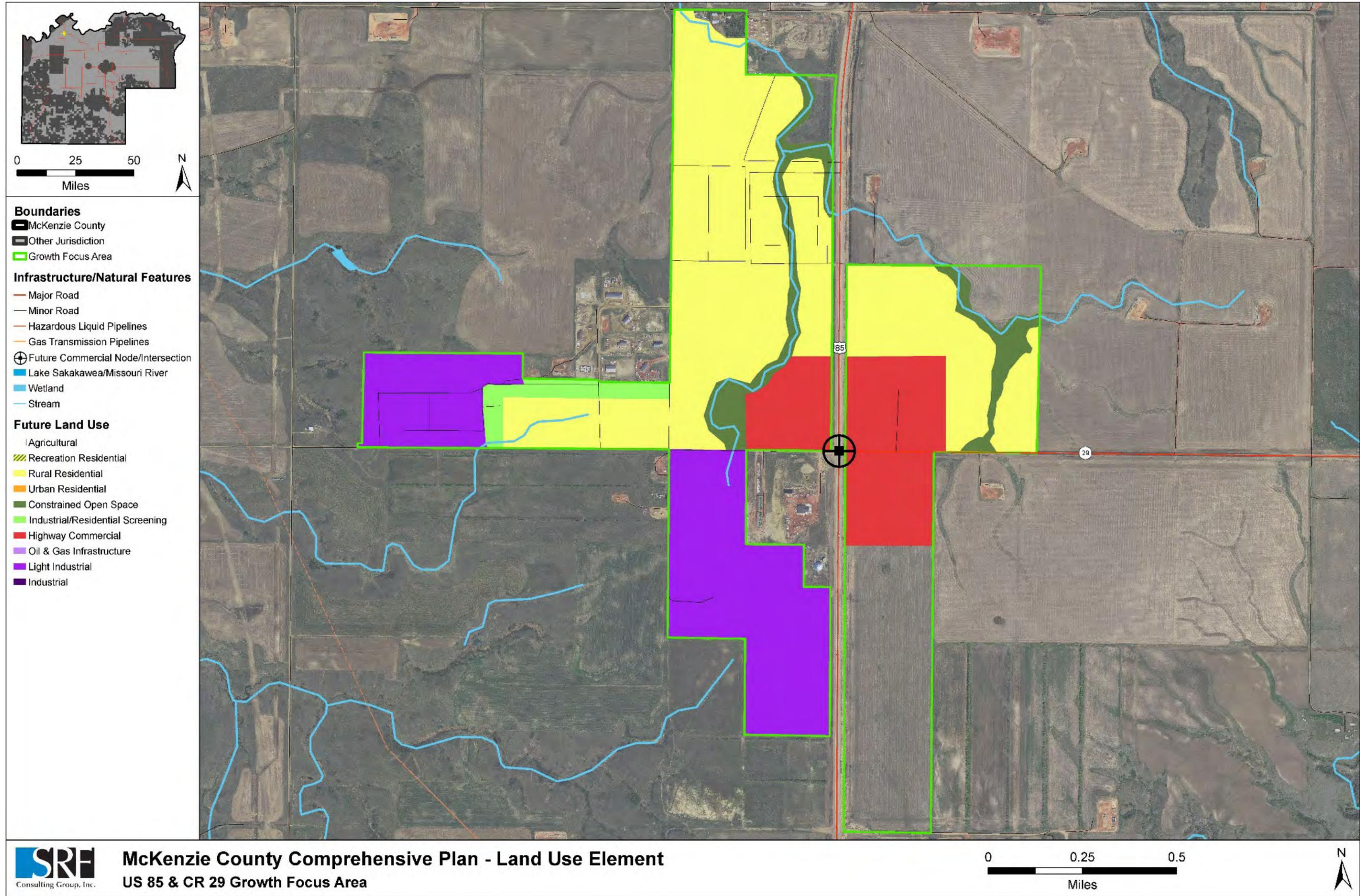


Figure 2-29: US 85 & CR 29 Growth Focus Area

US 85 & ND 200

The US 85 & ND 200 GFA is located in southeastern McKenzie County at the intersection of US Highway 85 and ND Highway 200. Inclusively, the US 85 & ND 200 GFA covers 712 acres. Measuring from the farthest points, the Johnson's Corner GFA spans 1 ½ miles from east to west and one 1 mile from north to south. The primary regional transportation routes to this GFA include US Highway 85 and ND Highway 200, which intersects the GFA from the east. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a connection of major transportation routes.
- Close proximity to rural water line infrastructure.
- Close proximity to paved roads.
- Growth near US 85 and ND 200 received significant positive feedback from public.
- Survey results emphasized growth near major road intersections.
- Growth constraints are limited in this area.

The future land use designations within the US 85 & CR 29 GFA are mapped in Figure 2-32. Figure 2-30 illustrates the distribution between all of the designation types. Figure 2-31 lists the acreage for land use category in this growth focus area. Similar to the Grassy Butte GFA, this GFA's unique feature is location. In order to provide an opportunity for commercial and industrial growth in this region, this GFA provides an outlet where such growth can be supported if significant demand were to occur.

Industrial designations are primarily established in the GFA to develop towards the southeast of the major intersection as a result of existing industrial uses in the area. Commercial designations are specifically positioned in the GFA surrounding the intersection in order to develop further activity around the intersection. Residential uses are not designated in this GFA in order to encourage such development to occur 4 miles north in the Grassy Butte GFA where an existing community is already present.

Figure 2-30: US 85 & ND 200 GFA – Land Use Designation Distribution

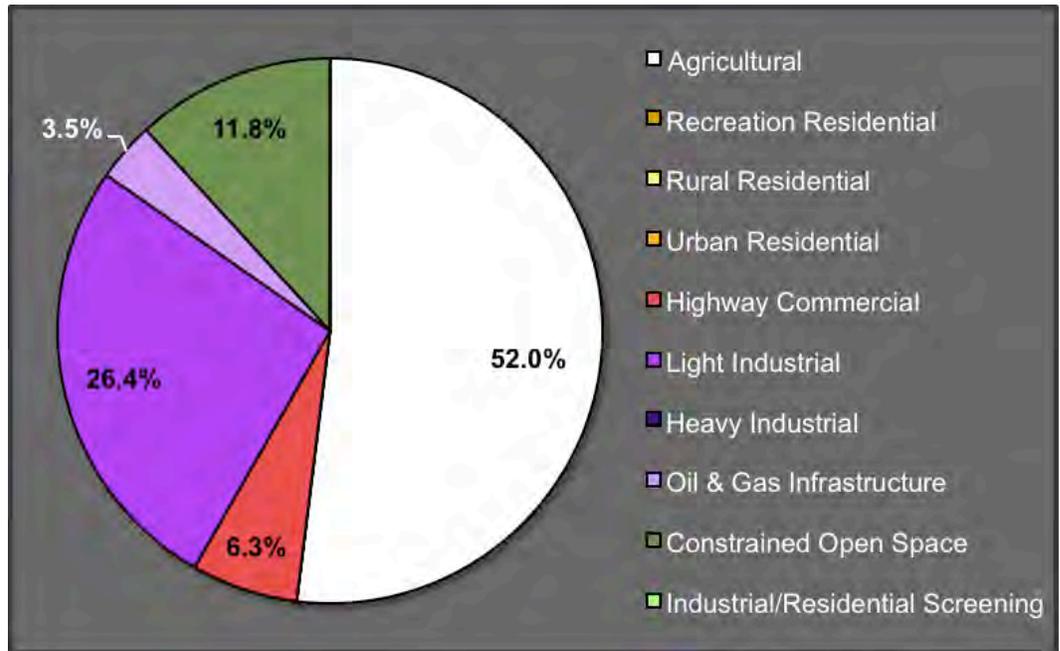
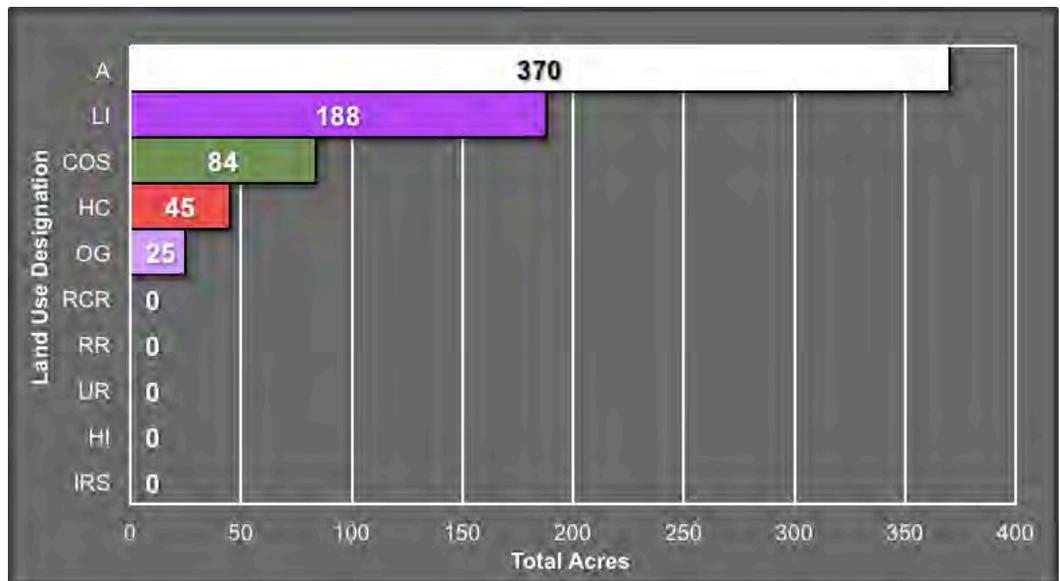


Figure 2-31: US 85 & ND 200 GFA – Land Use Designation by Acres



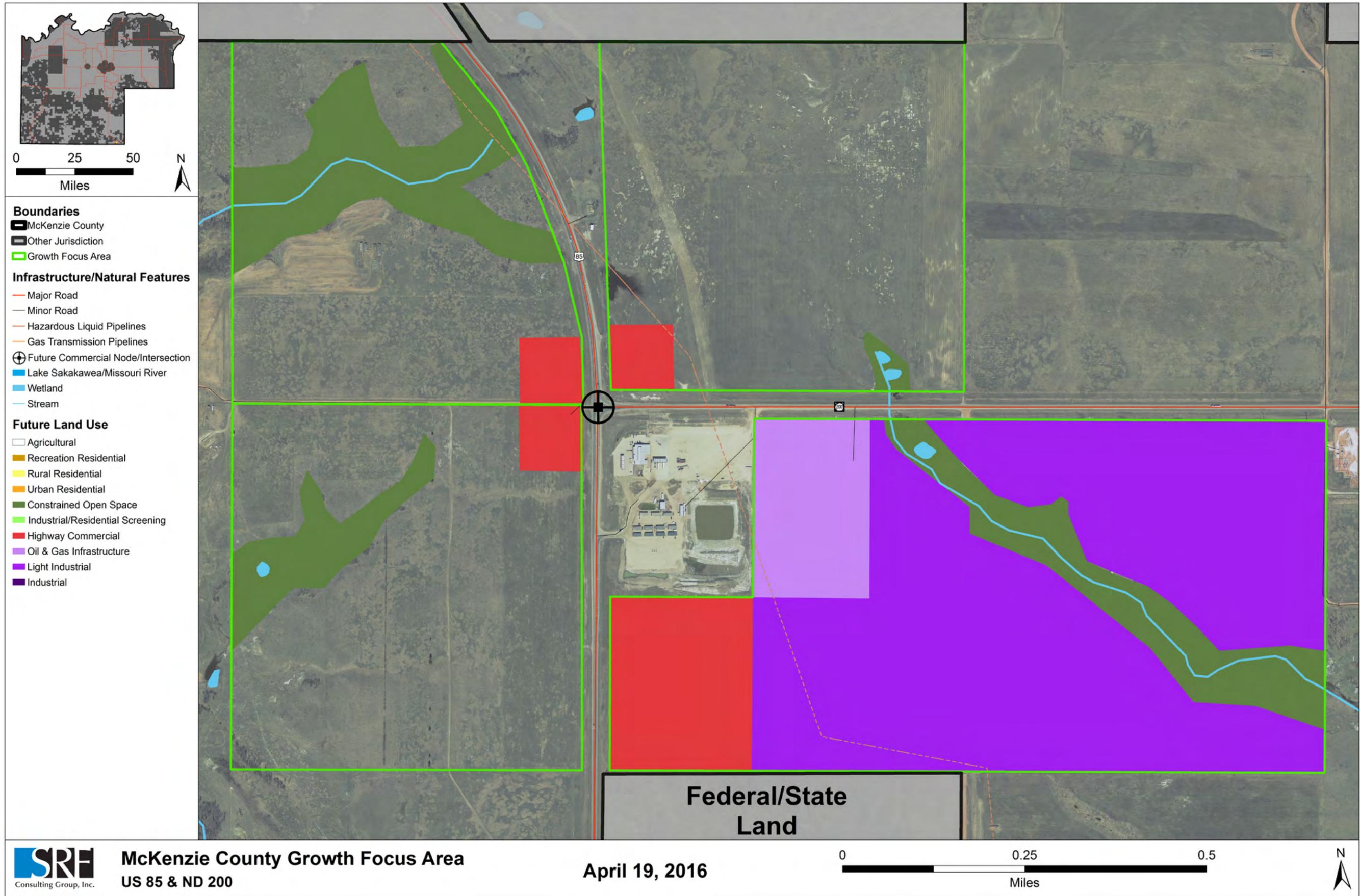


Figure 2-32: US 85 & ND 200 Growth Focus Area

Northern Bypass

The Northern Bypass GFA is located in northern McKenzie County along County Road 35 where a northern bypass of US Highway 85 and ND Highway 23 has been developed, consisting of improved county roads. Inclusive, the Northern Bypass GFA covers 241 acres. Measuring from the farthest points, the Northern Bypass GFA spans ½ mile from east to west and 1 mile from north to south. The primary regional transportation route to this GFA is County Road 35. Justification for labeling this area as a GFA was the result of multiple opportunities identified during the planning development process, including the following:

- Close proximity to a major transportation route.
- Close proximity to future rural water line infrastructure.
- Close proximity to paved roads.
- Growth near along the Northern Bypass received significant positive feedback from public.
- Growth constraints are limited in this area.

The future land use designations within the Northern Bypass GFA are mapped in Figure 2-35. Figure 2-33 illustrates the distribution between all of the designation types. Figure 2-34 lists the acreages for each land use category in this growth focus area. It is likely that development of the Northern Bypass will occur over the long term, potentially beyond 2025, as demand for uses other than agricultural in northern McKenzie County will likely intensify over this time frame.

Commercial designations were first considered and specifically positioned in the GFA along the interior curvature of the road in order to provide an opportunity for a limited commercial area. Compatible with the commercial use, industrial designations are identified adjacent to the commercial area as well as south and east of County Road 35. Residential designations in this GFA are located to the north of County Road 35 in order to provide a buffer between the differing uses.

Figure 2-33: Northern Bypass GFA – Land Use Designation Distribution

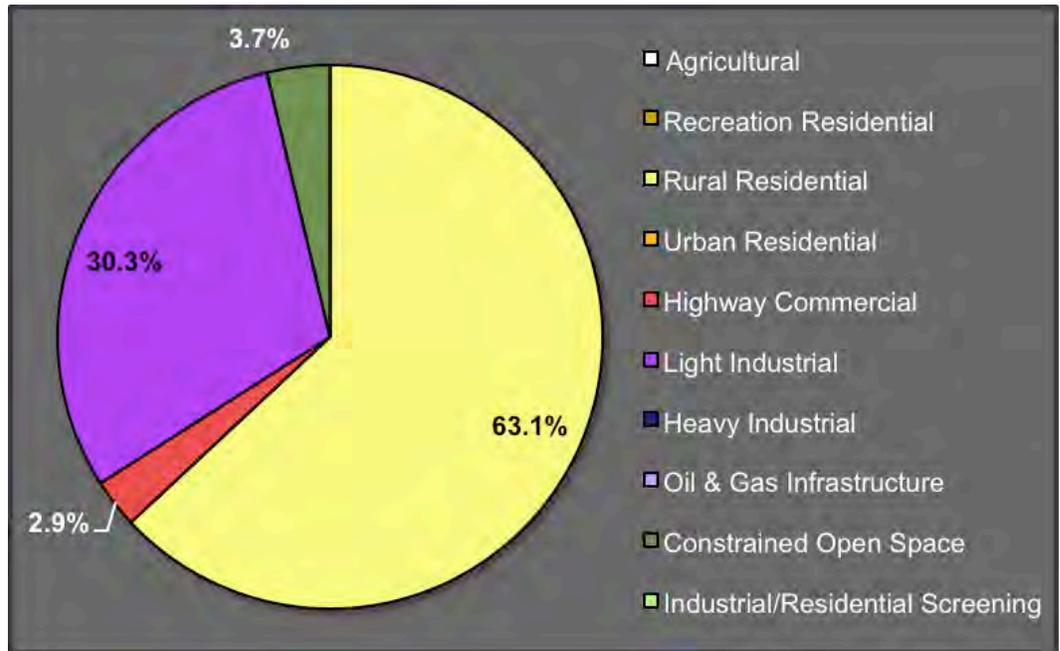
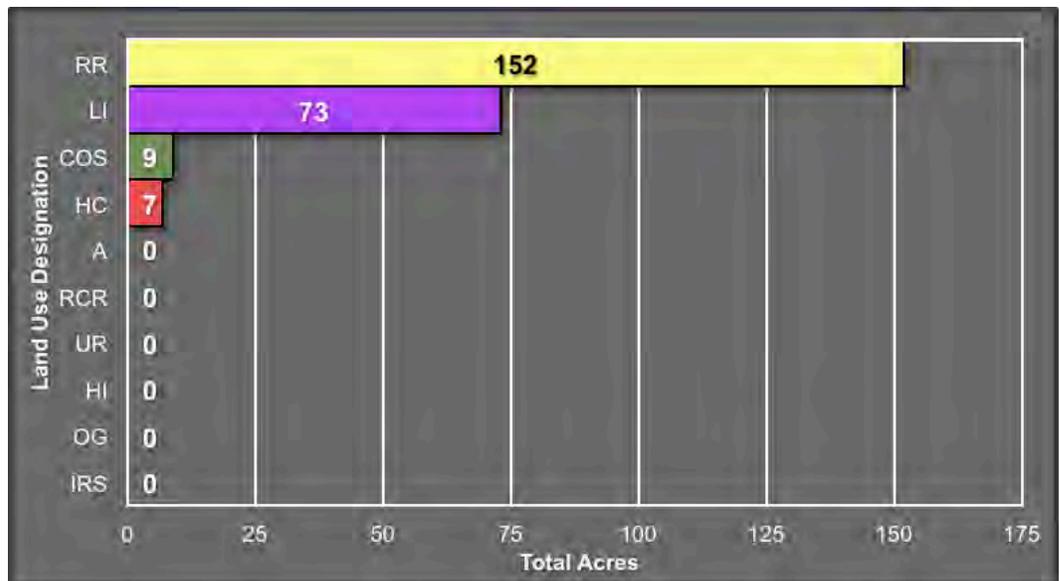


Figure 2-34: Northern Bypass GFA – Land Use Designation by Acres



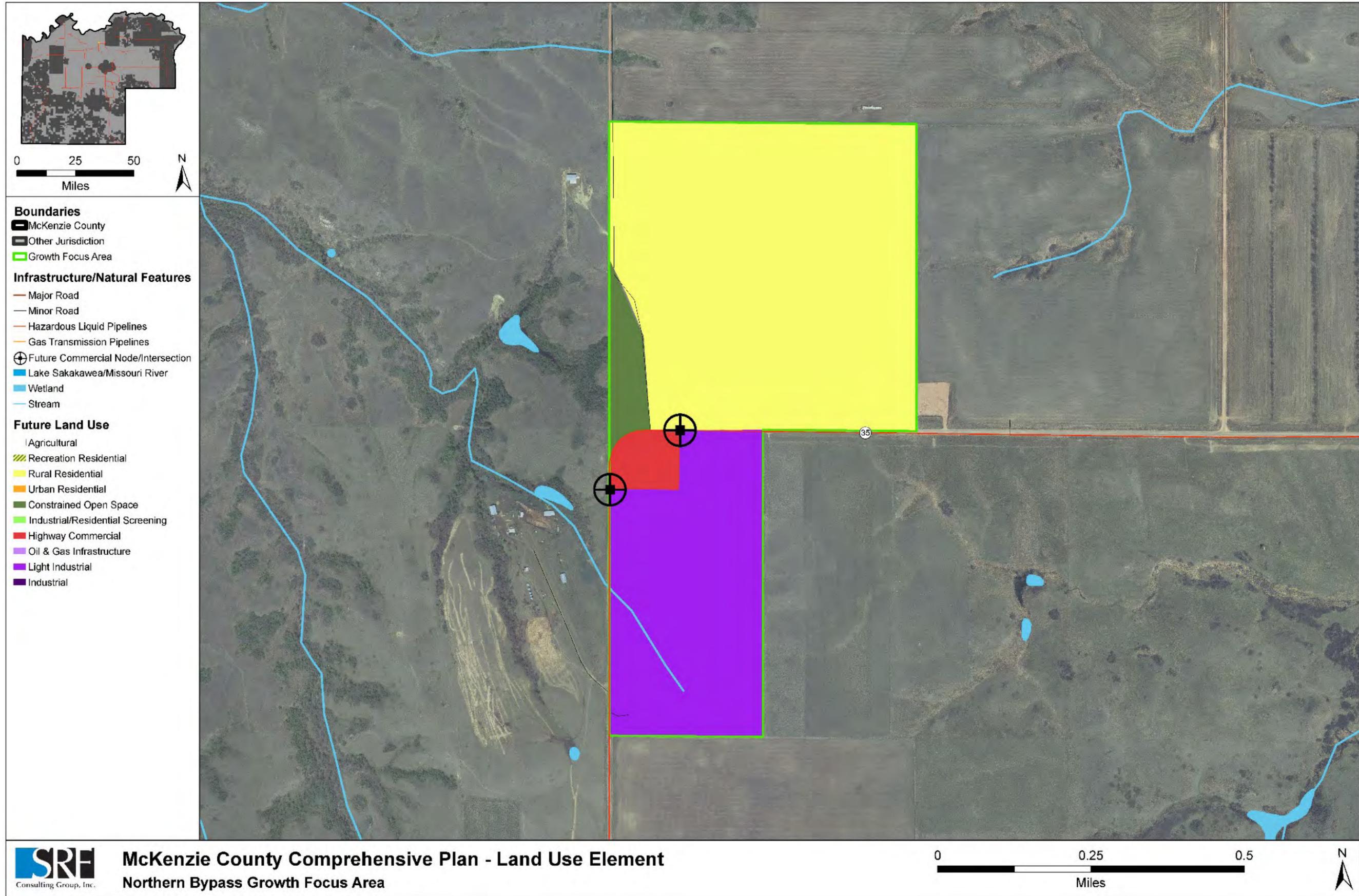


Figure 2-35: Northern Bypass Growth Focus Area

TRANSITION AREAS

The term “Transition Area” (TA) refers to designated areas where existing and future light industrial and temporary workforce housing establishments may be allowed to operate. However, the existing light industrial and temporary workforce housing establishments must progressively transition to elevated operational and infrastructure standards established to improve the health, safety, and visual qualities of these areas. The primary purpose of Transition Areas is to enhance both the quality of life and functional application of these areas, and not to alienate or eliminate a specific use. McKenzie County recognizes demand for temporary workforce housing will continue into the future, thus these areas provide an outlet for existing and future temporary workforce housing held to local standards.

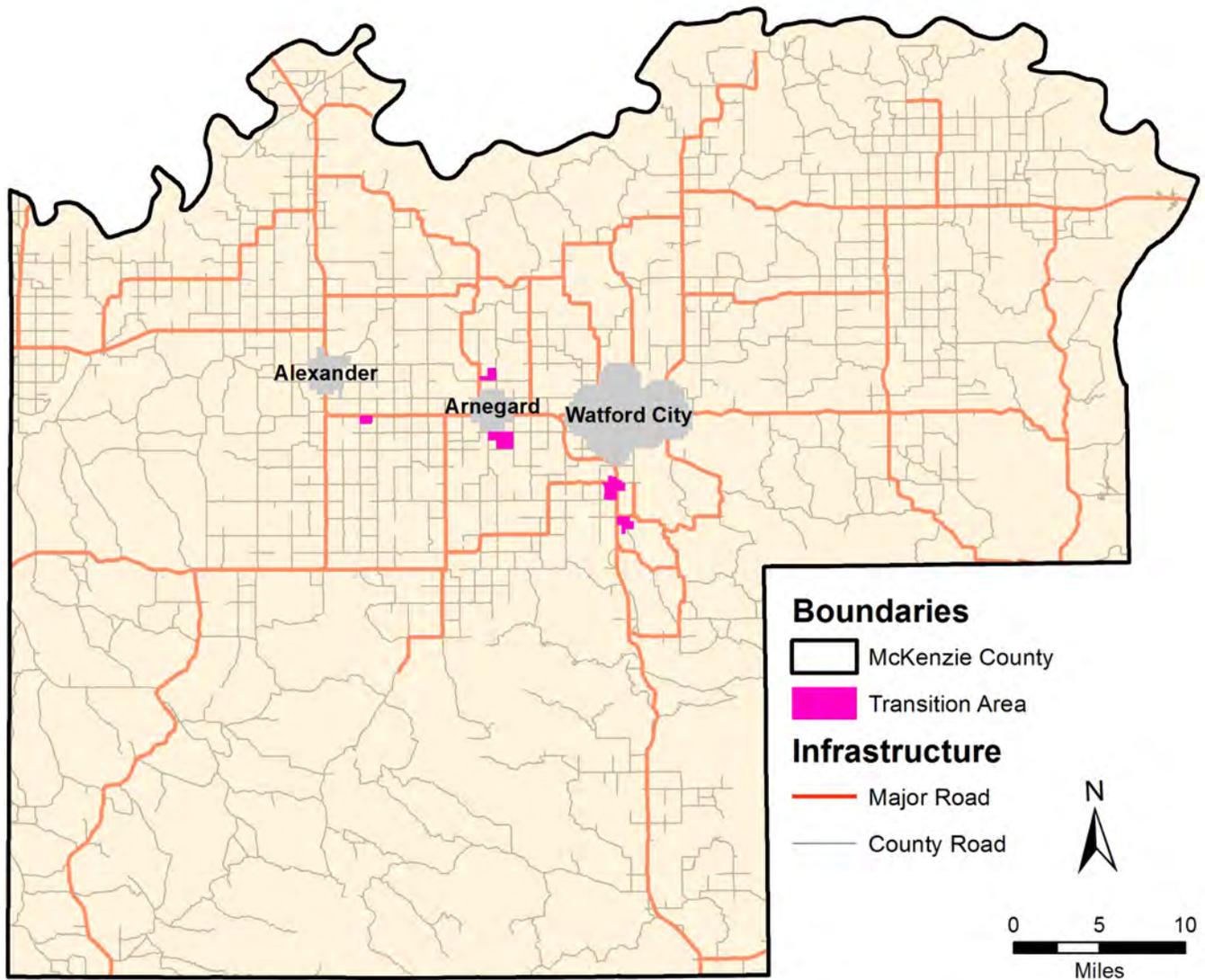
The subsidiary purpose of Transition Areas is to identify the succeeding land use in the event that temporary workforce housing is no longer economically viable or does not meet county standards. When a temporary workforce housing establishment concludes its operations, the succeeding use must be light industrial. For those Transition Areas located along a state highway or US highway, highway commercial use may be an appropriate succeeding use, when abutting the highway.

There are five identified Transition Areas within the Comprehensive Plan Map, a breakdown of which is provided in Table 2-2. Collectively, 2,573 acres of land are classified as Transition Areas. Figure 2-36 illustrates where all of the Transition Areas are located regionally within the land use plan. In addition, Figure 2-37 provides an enhanced geographic representation of their locations.

Table 2-2: Breakdown of Transition Areas

GENERAL LOCATION	TOTAL ACRES	NORTH-SOUTH DISTANCE (MILES)	EAST-WEST DISTANCE (MILES)
South of CR 37, North of CR 34, and East of US Hwy 85	437	1	1
East and West of US Hwy 85, and North and South of CR 30	787	1 ½	1 ¼
South of US Hwy 85 and Arnegard	800	1	1 ½
North of Arnegard and US Hwy 85, and East of CR 29	321	¾	1
South of US Hwy 85 and 2 Miles East of ND Hwy 68	228	½	¾

Figure 2-36: Transition Area Locations



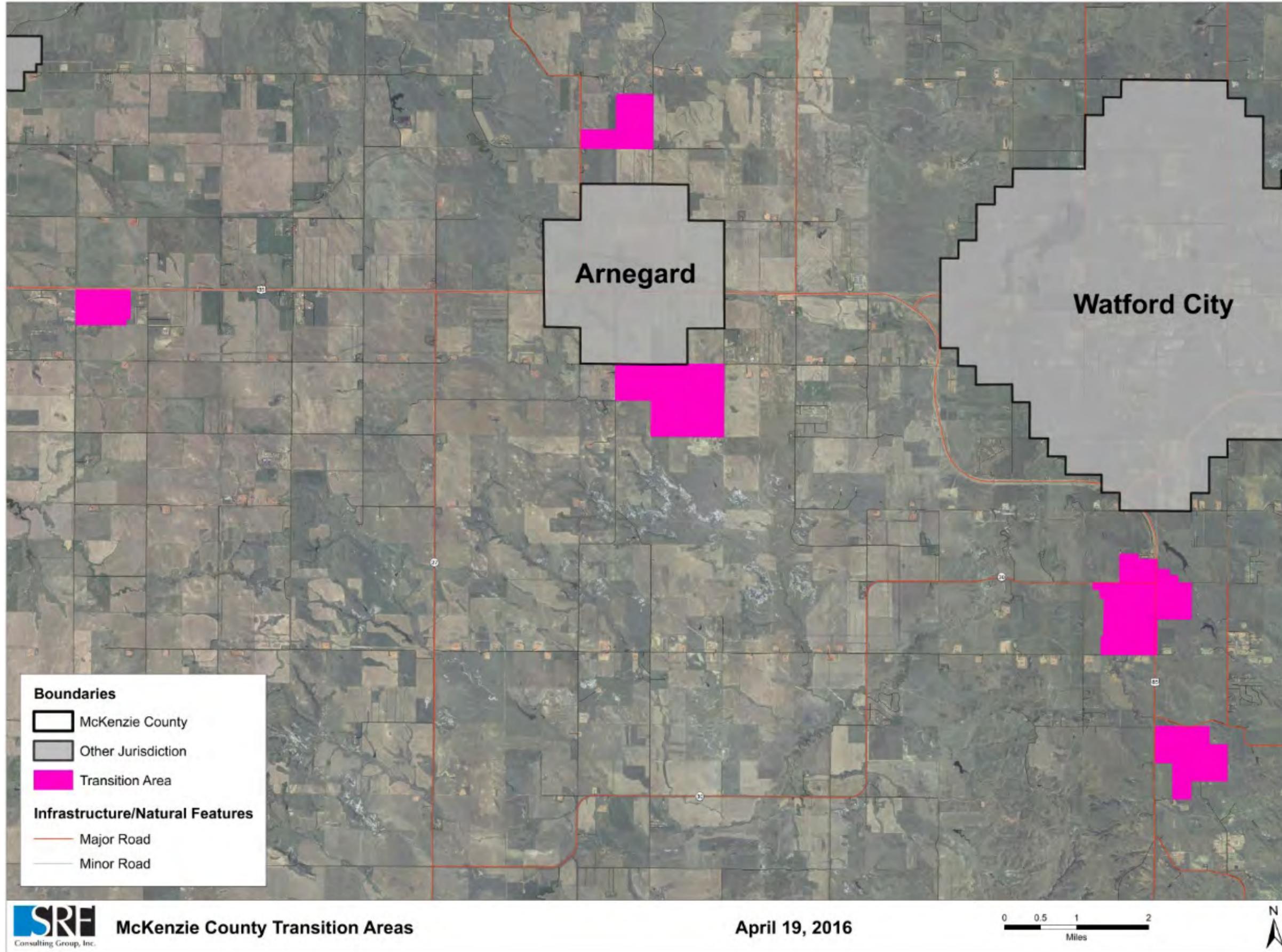


Figure 2-37: Transition Area Locations Enhanced

ADDITIONAL AREAS OF FUTURE LAND USE

The term “Additional Area” refers to areas within the county’s planning and zoning jurisdiction which are not established within either a GFA or TA. The purpose of the Additional Areas is to ensure all of the county’s jurisdiction is accounted for in the Comprehensive Plan Map. The vast majority of existing uses are designated on the plan with their compatible comprehensive plan land use designation. This allows many of these land uses to remain conforming with this plan. Where there are instances of a land use designation not matching the existing use, the intention is for such land uses to return to agricultural use once the existing use has concluded.

As noted in the previous section, McKenzie County recognizes that demand for temporary workforce housing will continue in the near future. While temporary workforce housing will remain an option for agricultural designations with a Conditional Use Permit, elevated operational and infrastructure standards will be applied regardless of location. In addition, proposals for temporary workforce housing not located within a Transition Area can expect to receive more scrutiny during the approval process.

Excluding the agricultural designation, there are six designations identified for Additional Areas within the Comprehensive Plan Map, a breakdown of which is provided in Table 2-3. Collectively, 5,379 acres of land are classified as Additional Areas, excluding the agricultural designation. Figure 2-38 illustrates where all of the non-agricultural Additional Areas are located regionally within the Comprehensive Plan Map. In addition, Figure 2-39 identifies the future land use designations for the Additional Areas.

Table 2-3: Breakdown of Additional Areas

Land Use Designation	Total Acres
Rural Residential	1,507
Urban Residential	28
Public/Institutional	64
Highway Commercial	118
Light Industrial	985
Industrial	2,677

Figure 2-38: Additional Area Locations

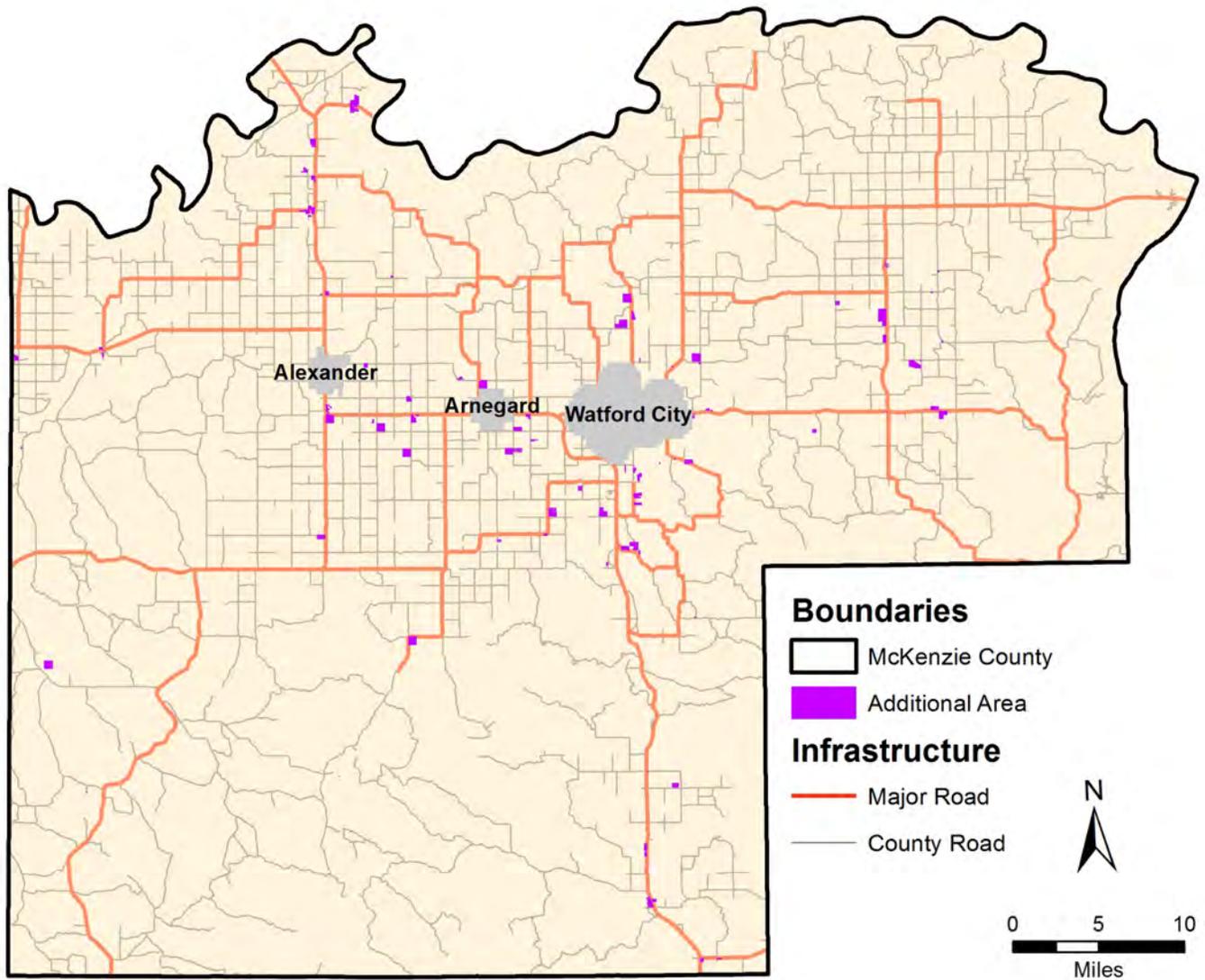
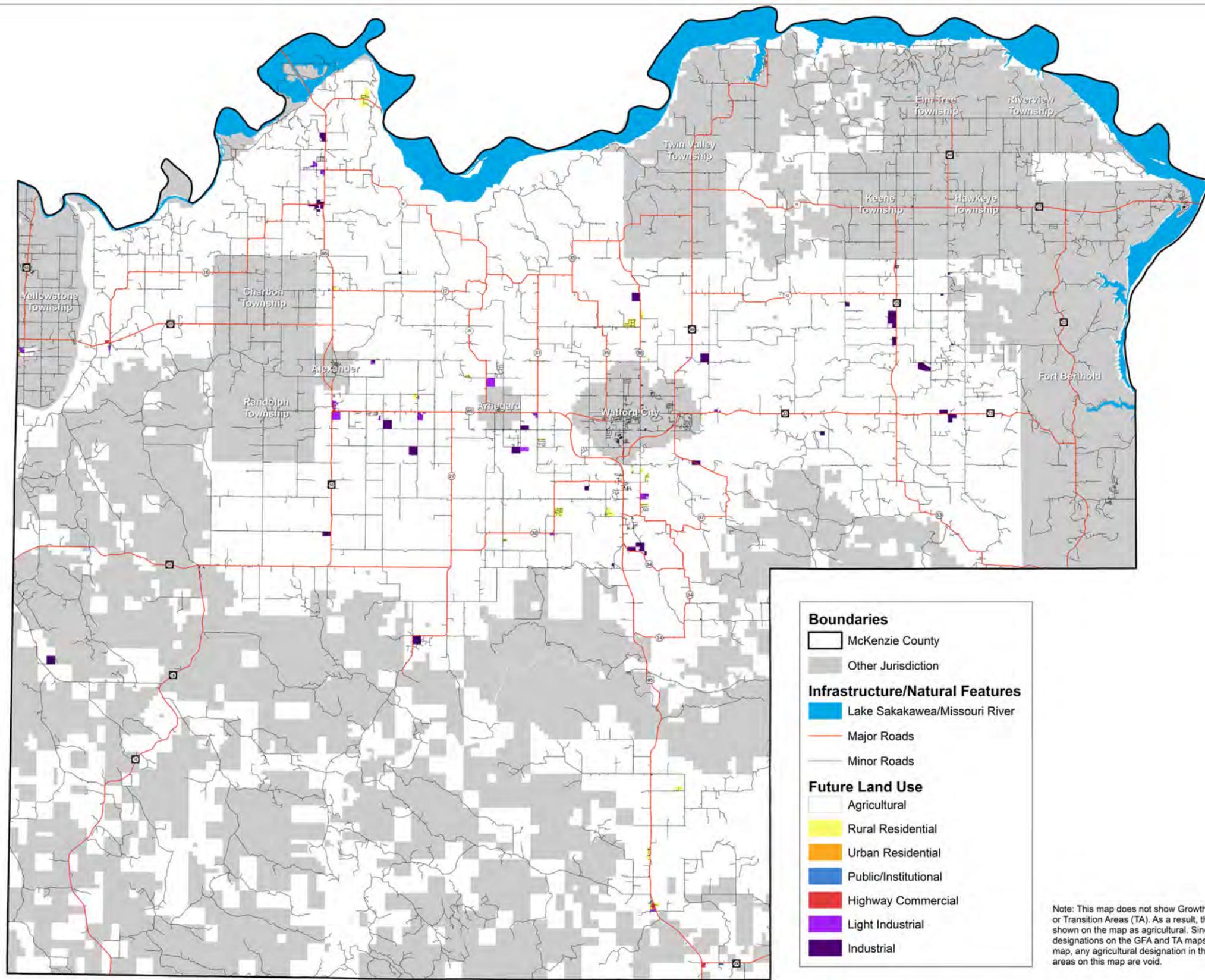


Figure 2-39: Additional Area Future Land Use Designations



Boundaries

- McKenzie County
- Other Jurisdiction

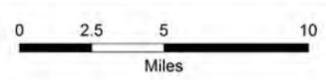
Infrastructure/Natural Features

- Lake Sakakawea/Missouri River
- Major Roads
- Minor Roads

Future Land Use

- Agricultural
- Rural Residential
- Urban Residential
- Public/Institutional
- Highway Commercial
- Light Industrial
- Industrial

Note: This map does not show Growth Focus Areas (GFA) or Transition Areas (TA). As a result, these locations are shown on the map as agricultural. Since the future land use designations on the GFA and TA maps supersede this map, any agricultural designation in those respective areas on this map are void.



LAND USE GOALS AND OBJECTIVES

Goal LU.1: To facilitate growth which is efficient, orderly, and flexible.

Objectives:

- A. Direct future permanent development (e.g. rural residential, highway commercial, etc.) towards the Growth Focus Areas.
- B. Suppress proposed incompatible development which is in direct conflict with the Comprehensive Plan Map.
- C. Ensure incompatible abutting land uses are avoided throughout the county.
- D. Encourage new temporary workforce housing establishment to locate in Transition Areas.
- E. Confirm buffers between conflicting uses are established and enforced to protect county businesses and residents.
- F. Review designations of the Comprehensive Plan Map regularly and revise them as needed and/or as amendments are approved.

Goal LU.2: To ensure the protection of the county's natural resources.

Objectives:

- A. Maintain, to the most viable extent, the integrity of sites designated as constrained open space (i.e. wetlands, streams, steep hills, etc.).
- B. Drainage areas must be maintained in a natural state to 1) help in achieving no "net change" of storm water runoff from pre-development conditions to post-development conditions and 2) preserve the topographic floodplain of the drainage/stream.
- C. Preserve wetland areas to allow groundwater recharge and flood protection.
- D. Discourage development from occurring on the top of bluffs and ridges in the County.
- E. Ensure grading and site prep work respects the natural terrain and is discouraged where slopes exceed 20 percent.
- F. Safeguard significant natural assets (e.g. National Park, Lake Sakakawea, Little Missouri River, etc.) by closely scrutinizing and only approving neighboring uses which are less intense such as agricultural, rural residential, or recreational-type uses.

Goal LU.3: To encourage ongoing communication and cooperation between different governmental entities within McKenzie County.

Objectives:

- A. Periodically review the Comprehensive Plan Map as rural water systems in the county are modified and expanded.
- B. Maintain open lines of communication with the county's rural water providers.
- C. Pursue communication and cooperation between the County, Cities, and Townships of McKenzie County throughout any revision of the comprehensive plan.

Goal LU.4: To recognize school sites and facilities as an integral component of the county.

Objectives:

- A. Promote school facilities to locate, where possible, in residential neighborhoods to provide for efficient pedestrian and vehicle access/egress and to minimize conflicts with incompatible uses.
- B. Encourage school design that is compatible with residential neighborhoods in order to foster the concept of neighborhood schools, to minimize busing of students, and to encourage neighborhood identity.
- C. Collaborate with all school districts in the county during the siting and design of school sites in order to implement public transportation, private transportation, pedestrian, and bicycle transportation routes which promote safe and hazard free access/egress to school sites.

LAND USE IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	Upon initial contact with project applicants, convey the importance of project location and encourage consistency with the Comprehensive Plan Map. Recognize the proposal location and inform applicants of any proximity concerns with important natural assets (i.e. National Park, Little Missouri River, etc.)	Planning and Zoning Department	No	Ongoing
2	Utilize the appropriate Growth Management Checklist (as shown on pages 2-52 through 2-57) with developers prior to application submittal to help guide growth into Growth Focus Areas as identified on the Comprehensive Plan Map.	Planning and Zoning Department	No	Ongoing
3	Work with applicants before application submittal to ensure that buffers between incompatible land uses are incorporated into project applications. Utilize the Comprehensive Plan Map, goals and objectives, and the Screening and Buffering section of the Zoning Ordinance to educate applicants.	Planning and Zoning Department	No	Ongoing
4	Work with applicants before application submittal to ensure that constrained open space areas and streams as identified on the Comprehensive Plan Map are reasonably protected. Work through Objective (A) of Goal LU.2 to cover all resource areas with the applicant.	Planning and Zoning Department	No	Ongoing
5	Place the Comprehensive Plan Map so that it may be easily found by prospective planning and zoning applicants. Provide updated hard copies in the Planning and Zoning Department lobby, as well as digital access no more than one click away on the County's Planning and Zoning home page.	Planning and Zoning Department	No	Short-term
6	Notify local townships and cities of any Comprehensive Plan Map amendment proposals within one (1) mile of the township or city's boundary of zoning jurisdiction.	Planning and Zoning Department	Yes	Ongoing
7	Coordinate with the Water Resource District and Southwest Water Authority on an annual basis to review updates to rural water system plans. Share the Comprehensive Plan Map with the rural water providers to help them understand the potential locations and scale of future growth.	Planning and Zoning Department Water Resource District	Yes	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
8	<p>Coordinate with all county school districts on an annual basis to ensure that land use, zoning, subdivision, and other applications/changes fairly account for school needs. Important issues to consider during annual school coordination meetings could include:</p> <ul style="list-style-type: none"> ▪ Residential subdivisions and school bus access ▪ School district facility plans and compatibility with the Comprehensive Plan Map <p>Residential subdivisions proposed adjacent to a school sites and pedestrian or bike access</p>	Planning and Zoning Department	Yes	Ongoing
9	Amend the Zoning Ordinance to include a reasonable variety of residential districts consistent with the Rural Residential land use designation as detailed in the Land Use Element.	Planning and Zoning Department	Yes	Short-term
10	Assess the need, and amend if necessary, existing residential districts as provided in the Zoning Ordinance to provide for urban densities at a realistic/ marketable scale.	Planning and Zoning Department	Yes	Short-term
11	Review all districts provided in the Zoning Ordinance and ensure that public/institutional uses as detailed in the Public/Institutional land use designation (detailed within the Land Use Element) are reasonably accounted for where practicable.	Planning and Zoning Department	Yes	Short-term
12	Amend the existing Recreational District as provided in the Zoning Ordinance to be consistent with the Recreation Residential land use designation as detailed in the Land Use Element.	Planning and Zoning Department	Yes	Mid-term

*Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.

GROWTH MANAGEMENT CHECKLIST A (APPLICANT)

Recreation Residential, Rural Residential, Urban Residential, Highway Commercial, and Light Industrial

1. WHAT IS THE PROPOSED USE?	
<input type="checkbox"/> Recreation Residential	<input type="checkbox"/> Highway Commercial
<input type="checkbox"/> Rural Residential	<input type="checkbox"/> Light Industrial
<input type="checkbox"/> Urban Residential	

2. IS THE PROPOSED SITE LOCATED WITHIN A GROWTH FOCUS AREA?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

3. IS THE PROPOSED USE COMPATIBLE WITH THE COMPREHENSIVE PLAN?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

4. DOES THE PROPOSED SITE SHARE A COMMON BOUNDARY WITH EXISTING DEVELOPMENT?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

5. HOW CLOSE IS THE PROPOSED SITE FROM INFRASTRUCTURE ACCESS? (PAVED ROADS AND RURAL WATER LINES)			
Paved Roads	<input type="checkbox"/> Abutting	<input type="checkbox"/> Within ½ Mile	<input type="checkbox"/> More than ½ Mile
Rural Water	<input type="checkbox"/> Abutting	<input type="checkbox"/> Within ½ Mile	<input type="checkbox"/> More than ½ Mile

6. STAFF RECOMMENDATION AND JUSTIFICATION:	
<input type="checkbox"/> Approval	<input type="checkbox"/> Denial

GROWTH MANAGEMENT CHECKLIST A (STAFF)

Recreation Residential, Rural Residential, Urban Residential, Highway Commercial, and Light Industrial

WITHIN GROWTH FOCUS AREA	COMPATIBLE WITH COMPREHENSIVE PLAN	SHARES COMMON BOUNDARY WITH EXISTING DEVELOPMENT	ACCESS TO INFRASTRUCTURE (PAVED ROADS AND RURAL WATER LINES)	LIKELIHOOD OF ACCEPTANCE*
✓	✓	✓	Abutting	High Likelihood of Acceptance
✓	✓	✓	Within ½ Mile	
✓	✓	✗	Abutting	
✓	✓	✗	Within ½ Mile	
✓	✗	✓	Abutting	
✓	✗	✓	Within ½ Mile	
✓	✗	✗	Abutting	
✓	✗	✗	Within ½ Mile	
✓	✓	✗	More than ½ Mile	
✓	✗	✗	More than ½ Mile	
✗	✓	✓	Abutting	
✗	✓	✗	Within ½ Mile	
✗	✓	✗	More than ½ Mile	
✗	✗	✓	Abutting	
✗	✗	✗	Within ½ Mile	
✗	✗	✗	More than ½ Mile	

*Position within table does not guarantee approval or denial of proposal. The table only reflects likelihood of acceptance based on a proposal location, and not design, which may affect the approval outcome.

GROWTH MANAGEMENT CHECKLIST B INDUSTRIAL (APPLICANT)

Industrial and Oil & Gas Infrastructure

1. WHAT IS THE PROPOSED USE?	
(EXCLUDES PIPELINES AND USES UNDER STATE JURISDICTION)	
<input type="checkbox"/> Industrial	<input type="checkbox"/> Oil and Gas Infrastructure

2. IS THE PROPOSED USE COMPATIBLE WITH THE COMPREHENSIVE PLAN?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

3. DOES THE PROPOSED SITE SHARE A COMMON BOUNDARY WITH EXISTING HEAVY INDUSTRIAL OR OIL & GAS INFRASTRUCTURE USES?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No

4. HOW CLOSE IS THE PROPOSED SITE FROM INFRASTRUCTURE ACCESS?			
(PAVED ROADS AND RURAL WATER LINES)			
Paved Roads	<input type="checkbox"/> Abutting	<input type="checkbox"/> Within ½ Mile	<input type="checkbox"/> More than ½ Mile

5. STAFF RECOMMENDATION AND JUSTIFICATION:	
<input type="checkbox"/> Approval	<input type="checkbox"/> Denial

GROWTH MANAGEMENT CHECKLIST B INDUSTRIAL (STAFF)

Industrial and Oil & Gas Infrastructure

(Excluding Pipelines and Uses under State Jurisdiction)

COMPATIBLE WITH COMPREHENSIVE PLAN	SHARES COMMON BOUNDARY WITH EXISTING INDUSTRIAL OR OIL AND GAS INFRASTRUCTURE USES	ACCESS TO INFRASTRUCTURE (PAVED ROADS)	LIKELIHOOD OF ACCEPTANCE*
✓	✓	Abutting	
✓	✓	Within ½ Mile	
✓	✗	Abutting	
✓	✗	Within ½ Mile	
✓	✓	More than ½ Mile	
✓	✗	More than ½ Mile	
✗	✓	Abutting	
✗	✓	Within ½ Mile	
✗	✓	More than ½ Mile	
✗	✗	Abutting	
✗	✗	Within ½ Mile	
✗	✗	More than ½ Mile	

*Position within table does not guarantee approval or denial of proposal. The table only reflects likelihood of acceptance based on a proposal location, and not design, which may affect the approval outcome.

GROWTH MANAGEMENT CHECKLIST C (APPLICANT)

Temporary Workforce Housing

1. IS THE PROPOSED SITE LOCATED WITHIN A TRANSITION AREA?

Yes

No

2. IS THE PROPOSED USE COMPATIBLE WITH THE COMPREHENSIVE PLAN?

Yes

No

3. DOES THE PROPOSED SITE SHARE A COMMON BOUNDARY WITH EXISTING WORKFORCE HOUSING OR LIGHT INDUSTRIAL?

Yes

No

4. HOW CLOSE IS THE PROPOSED SITE FROM INFRASTRUCTURE ACCESS?

(PAVED ROADS AND RURAL WATER LINES)

Paved Roads

Abutting

Within ½ Mile

More than ½ Mile

Rural Water

Abutting

Within ½ Mile

More than ½ Mile

5. STAFF RECOMMENDATION AND JUSTIFICATION:

Approval

Denial

GROWTH MANAGEMENT CHECKLIST C (STAFF)

Temporary Workforce Housing

WITHIN TRANSITION AREA	COMPATIBLE WITH COMPREHENSIVE PLAN	SHARES COMMON BOUNDARY WITH EXISTING WORKFORCE HOUSING AND LIGHT INDUSTRIAL	ACCESS TO INFRASTRUCTURE (PAVED ROADS AND RURAL WATER LINES)	LIKELIHOOD OF ACCEPTANCE*
✓	✓	✓	Abutting	
✓	✓	✓	Within ½ Mile	
✓	✓	✗	Abutting	
✓	✓	✗	Within ½ Mile	
✓	✗	✓	Abutting	
✓	✗	✓	Within ½ Mile	
✓	✗	✗	Abutting	
✓	✗	✗	Within ½ Mile	
✓	✓	✗	More than ½ Mile	
✓	✗	✗	More than ½ Mile	
✗	✓	✓	Abutting	
✗	✓	✗	Within ½ Mile	
✗	✓	✗	More than ½ Mile	
✗	✗	✓	Abutting	
✗	✗	✗	Within ½ Mile	
✗	✗	✗	More than ½ Mile	

*Position within table does not guarantee approval or denial of proposal. The table only reflects likelihood of acceptance based on a proposal location, and not design, which may affect the approval outcome.

Symbology	Land Use Designation		Zoning Districts										
			Agricultural District	Recreational District	Rural Residential (10 Acre Minimum)*	Rural Residential (5 Acre Minimum)*	R-1 Low Density Residential	R-2 Medium Density Residential	R-3 High Density Residential District	Commercial District	Industrial District	LI Light Industrial District	PUD Planned Unit Development
	Agricultural		✓										✓
	Recreation Residential												
	Rural Residential		✓	✓									
	Urban Residential												
	Public/Institutional												
	Highway Commercial												
	Light Industrial												
	Industrial												
	Oil & Gas Infrastructure												
	Constrained Open Space												
	Industrial/Residential Screening												
	Transition Area												

Key

- ✓ Consistent
- Potentially Consistent, Needs Further Evaluation
- * Proposed Future Zoning District



CHAPTER 3: TRANSPORTATION ELEMENT

INTRODUCTION

The Transportation chapter of the McKenzie County Comprehensive Plan is designed to capture the most important aspects of transportation for the 10-year period of the 2025 Comprehensive Plan. It is common for roadway projects, by virtue of their cost and the process of design, to take a substantial amount of time to be completed. Thus many of the project recommendations of this chapter are shown for continuity and connectivity purposes, knowing that they will not all be constructed in the 10-year timeframe of this planning document.

It is important to include the projects identified in this chapter in order to establish a cohesive network for future growth of the areas identified. This chapter focuses on connections in the county that will improve mobility and facilitate movement between growth focus areas, as well as area-specific improvements that should be considered as each growth focus area develops.

The Transportation chapter also contains several policy statements that should guide decision makers in developing county roadways in a rational and safe manner. Policy recommendations will come in the form of a series of goals and objectives to help coordinate transportation needs with land use improvements.

This chapter begins with transportation Goals and Objectives. It then reviews current transportation planning in McKenzie County, develops a hierarchy of roads, identifies potential truck traffic impacts, provides conceptual roadway network, bicycle, and pedestrian connections, discusses possible funding sources, and provides recommendations for the County. This sequence is not unlike a Transportation Plan, but the level of analysis is less rigorous and largely qualitative.

Safety

Motor travel at a high rate of speed is inherently dangerous. People often discount this risk, because they drive places every day. Yet car crashes are the leading cause of death for Americans between the ages of 1 and 39, killing more than 3,000 Americans a month in 2015, according to an April 2016 article on Citylab. It isn't until a crash happens or a tragedy occurs that people associate risk with this daily activity.

Traffic and transportation engineers have made great strides in design of roadways to increase roadway safety and in turn decrease crashes. However, dramatic changes in traffic can increase crashes and also help identify areas that have safety concerns that need to be addressed.

McKenzie County has experienced several dramatic changes to its traffic over the last decade. The county went from being a rural agrarian county with very low traffic volumes to being in the heart of the Bakken shale formation with thousands of new oil wells being drilled at a breakneck pace. This activity brought much higher traffic volumes, as well as a much higher percentage of truck traffic. In addition to overwhelming the State

highway facilities, traffic growth quickly outpaced McKenzie County's ability to keep up with maintenance demands on County roadways. The vast majority of County roads are gravel, which have quickly degraded under increased car and truck, leading to short-term safety concerns.

Even with the slowing of the oil-based economy, McKenzie County has continued to have crash rates that are higher than the national average. The severity of these crashes is particularly troubling – from 2013 through 2015 there were 54 fatal crashes. The majority of these have been on State highways, but fatalities are a concern no matter where on the roadway system they occur.

In 2014, the North Dakota DOT published Phase 3 of their Local Road Safety Program. This was a comprehensive analysis for roadway safety throughout the 17 counties that make up the western 1/3rd of the State. This project generated a lot of useful information for the region and McKenzie County specifically. This report went into great detail about potential safety improvements in the county, and on county roads. The report however looked for what are essentially No-Build options for safety improvements. The primary recommendations were for signage, lighting, pavement markings, and rumble strips.

Further investigation and build alternatives should be considered in areas with high crash rates and high crash severity. Signing, lighting, pavement markings, and rumble strips are an important part of any safety improvement, but also are roadway realignments, widenings, and paving, which need to be included for future analysis.

The North Dakota Department of Transportation (NDDOT) has taken steps to reduce the number of fatalities on the State Highway system with recent projects that should have significant positive safety impacts. The recent bypasses that have opened around Watford City and Alexander should improve safety around those communities along Highway 85. The four-lane section between Watford City and Alexander should also improve safety for travelers, and awaits bridge reconstruction the County line. This improvement was constructed in 2013-2015, so it will positively impact safety into the future.

NDDOT plans to continue making improvements to US Highway 85 south of Watford City as funds allow. Based on crashes and crash severity there still needs to be additional investment on the State transportation system. Specifically ND 23 and ND 22 both have a significant crash history. Attention should be paid to these facilities to reduce safety concerns.

While there are safety concerns throughout the State Highway system in McKenzie County, there are also crashes on the County roadways that warrant further analysis. The scope of this document does not allow for the level of detailed analysis that would be needed to properly identify and propose corrections for the crash history on these roads. Further analysis is recommended.

Truck Movements

Truck traffic has increased significantly throughout McKenzie County due to the rapid growth of the oil-based economy. While the volume of new truck traffic has recently decreased with the downturn in oil prices, truck volumes remain considerably higher than they were in the prior decade. This increase in truck traffic has led to infrastructure deterioration, as

the volume of equivalent single axle loads (ESAL) has increased dramatically on roads which were not designed for heavy truck traffic. This situation poses a safety risk for all roadway users.

Truck traffic has very different performance characteristics than do automobiles. Trucks accelerate slowly and require a much greater stopping distance than passenger vehicles. While the increased truck volumes can be difficult to negotiate, there are design treatments that can help integrate heavy trucks into the traffic stream.

Traffic Control

Rural counties typically have very little in the way of traffic control for intersecting roadways. Traditionally this is expected and local drivers know to approach these intersections with caution and proceed through with caution. “Rules of the road” govern interactions between vehicles with the vehicle on the right given the right of way. This system of travel coordination was meant for low volume rural roadways and helps reduce costs of signage and maintenance.

As these roads have been used more often to gain access to well pads for drilling and servicing throughout the county with volumes increasing considerably, traffic control actions need to be considered. The most common types of traffic control exercised in rural counties is stop and yield signage at intersections. However, there may be locations on paved County roads that are approaching warrants for signalization.

Other forms of traffic control may be considered appropriate in some situations. These would include roundabouts, rumble strips, speed control devices, driver information systems, variable message signs, and increased traffic enforcement, as well as a host of other possibilities. Identifying these appropriate systems and locations is beyond the scope of this document; however, the County may wish to consider a comprehensive Transportation Safety Plan that would develop this detailed analysis.

Finally, Access Management is a form of traffic control as well. It is a more passive form, but can have significant beneficial impacts. By limiting access points onto roadways, a good access management strategy reduces the number of points where conflicting traffic movements occur. These conflict points are where a majority of crashes occur, as well as congestion. The NDDOT has a negotiated agreement with the County for access points on County roads in proximity to State Highway intersections.

Land Use and Transportation

It is important to plan for the land uses desired by the County so that roadway improvements can be planned and implemented as development progresses and the need arises. This Comprehensive Plan has laid out planned land use nodes, or Growth Focus Areas, in various locations throughout the County. As these areas develop, it will be important to ensure that transportation facilities are adequate to serve the needs within and between these locations.

GOALS AND OBJECTIVES

Goal T.1: To improve safety for county motorists through roadway upgrades, budgeting, and maintenance of State and County roadways.

Objectives:

- A. Work with NDDOT to continue improvement of State roadways within McKenzie County. Focus should be on areas with a significant crash history.
- B. Develop a McKenzie County Transportation Safety Improvement Plan that addresses significant crash history on County roadways and makes improvement recommendations for driver advanced warning systems and geometric improvements, and identifies areas for enhanced winter roadway maintenance.
- C. Continue to work with NDDOT on the design and construction of a bicycle and pedestrian trail that connects Watford City and the Theodore Roosevelt National Park North Unit. This facility would allow cyclists to use a grade-separated trail to access the park without needing to travel on the highway itself.
- D. Seek cooperating agency status from the NDDOT in regards to the Environmental Impact Statement for the US Highway 85 project from McKenzie County Road 30 south to the Billings County boundary. Continue to work closely with the NDDOT and Watford City to ensure County concerns are incorporated into the project.

Goal T.2: To identify and implement measures that promote safety and ease of movement for heavy truck traffic integrating into the traffic stream.

Objectives:

- A. Identify locations with heavy truck movements that could benefit from turn lanes, longer acceleration/deceleration lanes, or hill climbing lanes. All of these improvements are designed to better integrate heavy truck traffic into the travel stream.
- B. Identify county roads where paving of aprons would be beneficial. This would consist of resurfacing the first 200-300 feet of gravel roadways leading to/from busier paved roadways.
- C. When gravel or dirt roads are wet, trackout onto the paved highway system can cause dust debris and slick travel surfaces. Aprons reduce trackout by allowing truck tires to shed mud prior to accessing busier roadways. In addition, paved aprons give trucks greater traction prior to stopping, which allows them to stop in shorter distances.

Goal T.3: To identify areas for further study and implementation of traffic control measures.

Objectives:

- A. Improve roadway safety by developing appropriate traffic control measures for higher traffic County roadway facilities.
- B. Apply access management standards on County roads in proximity to intersections with US and State Highways.

Goal T.4: To plan and coordinate roadway projects to serve county development areas over the next 10-20 years.

Objectives:

- A. Coordinate with NDDOT for roadway development on State Highways that serve development areas.
- B. Coordinate with oil companies to determine phasing of future exploration or well pad construction activities.
- C. Phase roadway development priorities based upon planned future development activities.

REVIEW OF EXISTING STRATEGIC PLAN

Findings and Recommendations

In November of 2014, McKenzie County completed a six-year Strategic Transportation Plan. The purpose of the plan was to establish funding priorities for roadways throughout the county and develop a phased approach to making improvements. This plan was developed over one year beginning in October of 2013. It has been a very useful document, but has tended to overreach in light of declining oil activity. Because revenues for roadway improvements have been harder to obtain after the drop in oil prices, phasing timeframes have shifted.

Traffic volumes were well researched for the Strategic Transportation Plan. In 2013, the county performed a comprehensive traffic count on its arterial and collector system, which yielded volumes for trucks and passenger vehicles. These counts were supplemented using AirSage data, which tracks cellular phone pings in the region.

Crash rates in the county were assessed and found to be more than double that of the state average. This substantiated the need to begin the process of planning for a safer roadway network. The Strategic Transportation Plan proposed a series of County Major Collectors (CMCs) which were approved by NDDOT in May of 2014. This allows federal aid funding to be used on these facilities.

The study estimated that all county roadway improvements would cost over \$600 million, with a minor amount needed for bridges. Improvements were itemized for paved and unpaved roads. In total, there are almost five times as many projects on unpaved roads as there are on paved road facilities. While high, this isn't unexpected as the preponderance of roads in McKenzie County are gravel surfaced.

The Strategic Transportation Plan includes a Capital Improvement Plan (CIP) that identifies projects for 2015 to 2020. Again, CIP projects were originally prioritized on an aggressive timeline. The county has been updating this list regularly based on the reality of the revenue stream that is forecast for the fiscal year. As a result, some projects have slid down the schedule or been shelved for now. The plan also identifies roadway needs beyond the 2020 timeframe.

Role of the CIP

The Capital Improvement Plan is as much of a budgeting tool as it is a planning and prioritization tool. The CIP uses the list of projects generated by the Strategic Plan to plan, prioritize, and budget projects for construction. More complex projects may have a design and environmental review components that would be included in the CIP in order to ensure that all necessary funds are secured.

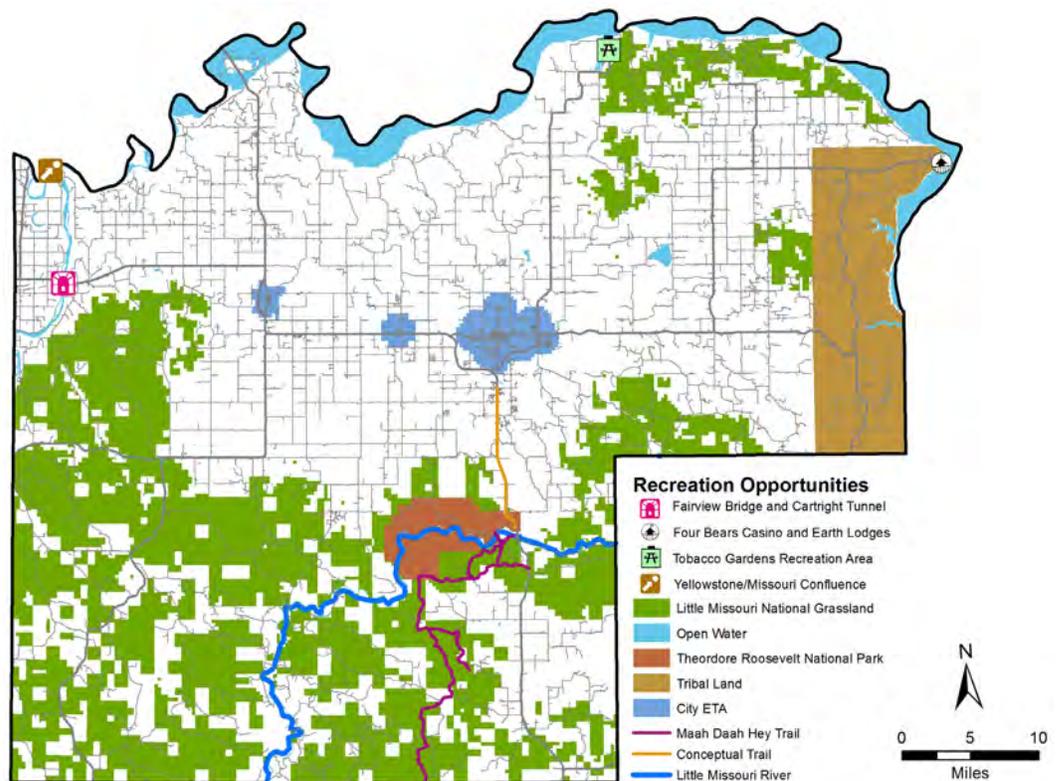
This program is updated annually, at minimum, based on funding realities. Project limits can change to accommodate reduced funding, or projects can slide into a later year based on the anticipated revenue stream. Some projects can also be accelerated if others run into issues for right of way purchase, environmental factors, or a shift in priorities.

Traditionally, CIPs draw their project list from a long range transportation plan (LRTP) that establishes a long-term vision for transportation in the county. Since McKenzie County has never had a long range transportation plan prior to this document, the decision was made to complete the Comprehensive Plan first and use that as the basis for a more extensive long-range transportation plan. An LRTP would use elements, goals, objectives, and most importantly land use plans to generate the basic inputs for a LRTP.

While the Strategic Plan has served the County's needs in the near term, its focus has been limited to linear roadway improvements – primarily upgrading existing alignments from gravel to paved. An LRTP would establish priorities for a multitude of projects and potential funding sources including safety, air quality, bicycle and pedestrian, intersection improvements, minor realignments, as well as new roadways.

Bicycle and Pedestrian Projects

Figure 3-1: Recreation Opportunities



The McKenzie County Strategic Plan concludes with a discussion of a McKenzie County Bike Trail. The scope of this project would construct a grade-separated bicycle and pedestrian facility from Watford City to Theodore Roosevelt National Park. This concept would build a 10-foot-wide pathway with 2-foot shoulders. In addition it would have trailhead stations and picnic spots along the route, and be maintained by McKenzie County.

Currently, the NDDOT is developing plans to widen Highway 85 south of Watford City to the North Unit of Theodore Roosevelt National Park and beyond. A part of this design for the new roadway is a 10-foot separated grade pathway from just south of Watford City to the park entrance. NDDOT has proposed to design-build the facility as part of the roadway project, but it would be up to the County to pave it.

ROADWAY FUNCTIONAL CLASSIFICATION

McKenzie County has a basic roadway classification system currently in place. All State roads are either principal arterials, minor arterials, or state major collectors. The county roads are classified as county major collectors, other paved, or other gravel. Also included are forest service roads and Indian service roads. Currently, the County can only apply for Federal Aid Road Funds for work to be done on the County Major Collector road network. All other roads are the responsibility of the State of North Dakota, McKenzie County, or the federal government.

There is very little in the way of hierarchy of county roads at this time. Establishing a well thought out hierarchy of roadways can help to prioritize needed improvements with limited funds. Furthermore, some engineering specifications are tied to the functional classification. This will include standard cross sections for both two lane and four lane facilities. Having a functional classification system will allow the county to have developers bring roadway surfaces and cross sections up to standard as development occurred throughout the county.

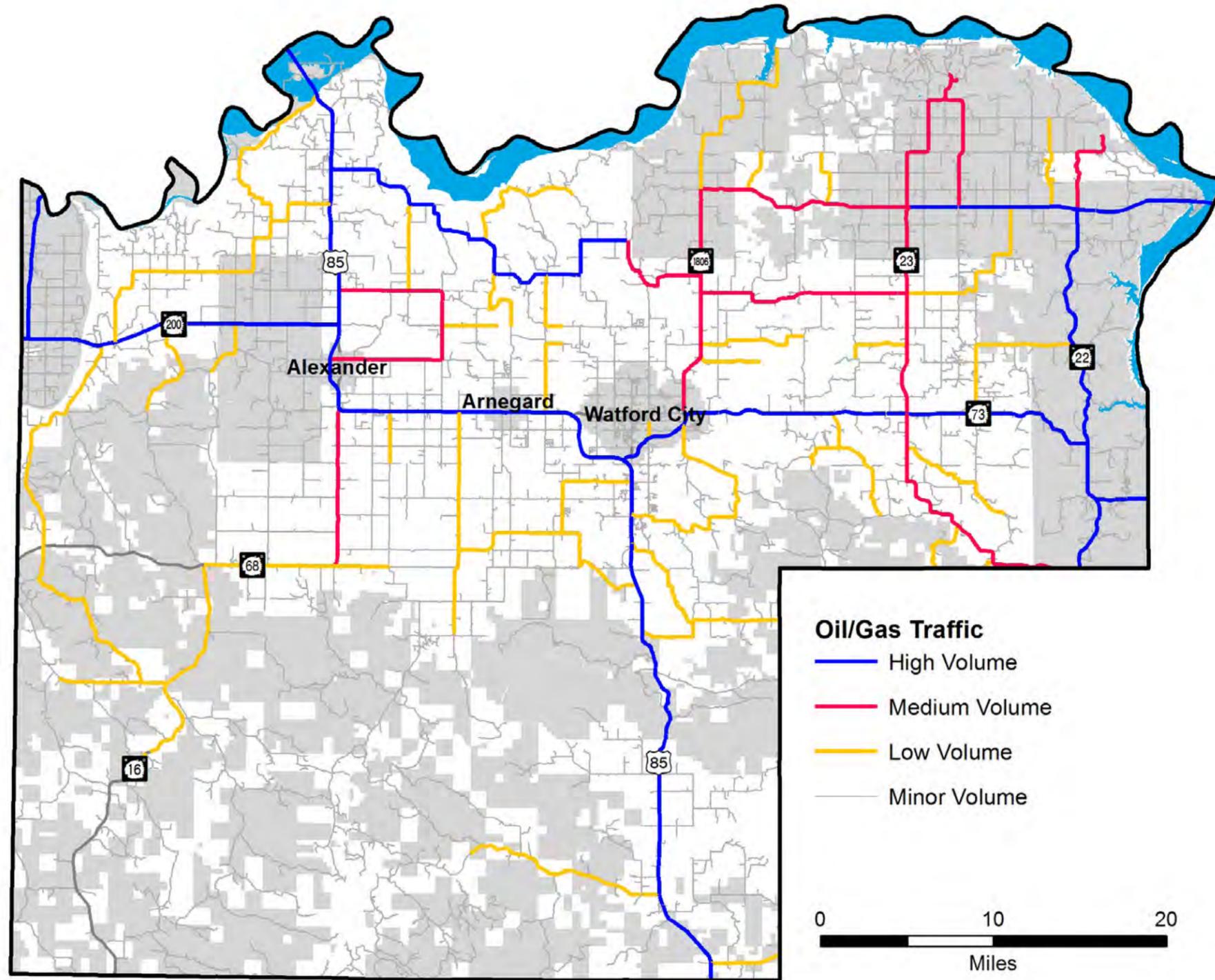
Establishing a more thorough roadway classification system is the role of the transportation plan and is outside the scope of this chapter.

TRUCK TRAFFIC

With the exception of the Northern Bypass which McKenzie County has improved over the last two construction seasons, the state highway system in McKenzie County makes up the backbone for heavy truck movement through the county. The highest truck volumes are found on these facilities, along with the overall highest vehicle volumes in the county. The oil economy has had a significant impact on the vehicle mix on these roadways, with some reaching over 50 percent truck traffic.

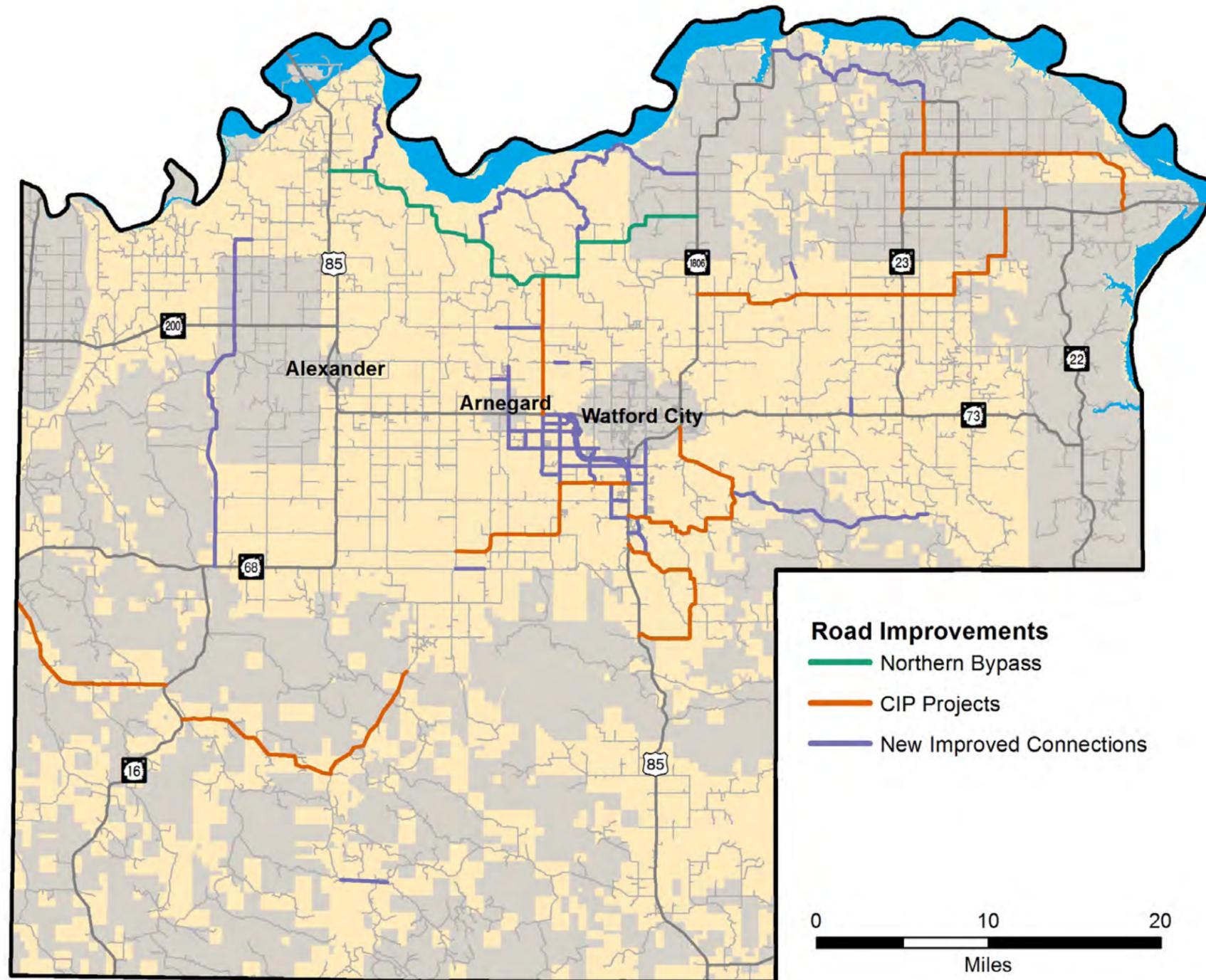
The shift in vehicle stream mix has taken a toll on McKenzie County. The County now has one of the highest crash rates in the State of North Dakota, over twice the state average, and the severity of these crashes has worsened as well. There were 54 fatal crashes in McKenzie County alone between 2013 and 2015. As stated previously, the state has begun an aggressive roadway improvement program throughout the county, but more remains to be done. Specifically, there is a dangerous stretch of road along ND 23 and ND 22 that needs to be addressed to reduce crashes and crash severity.

While the entire county has experienced increases in truck traffic, the majority of truck traffic occurs in the northeast portion of McKenzie County. This also is the area with the most oil related activity, and the highest degree of severe crashes on state highways. The goal to improve safety for the traveling public is especially relevant for this part of the county, and with the recent reduction in drilling activity, this is an opportune time to address needed safety improvements on the state and county roadway system.



FUTURE CONNECTIONS

Difficult topography and an absence of long-range planning have shaped McKenzie County's roadway network. McKenzie County is very topographically diverse, with canyons, coulees, badlands, wetlands, and agricultural fields. The landscape of the county has limited roadway connectivity and taken many county roadway facilities off of a traditional grid alignment. In areas where a grid could be established it has not always been developed, so it is largely incomplete.



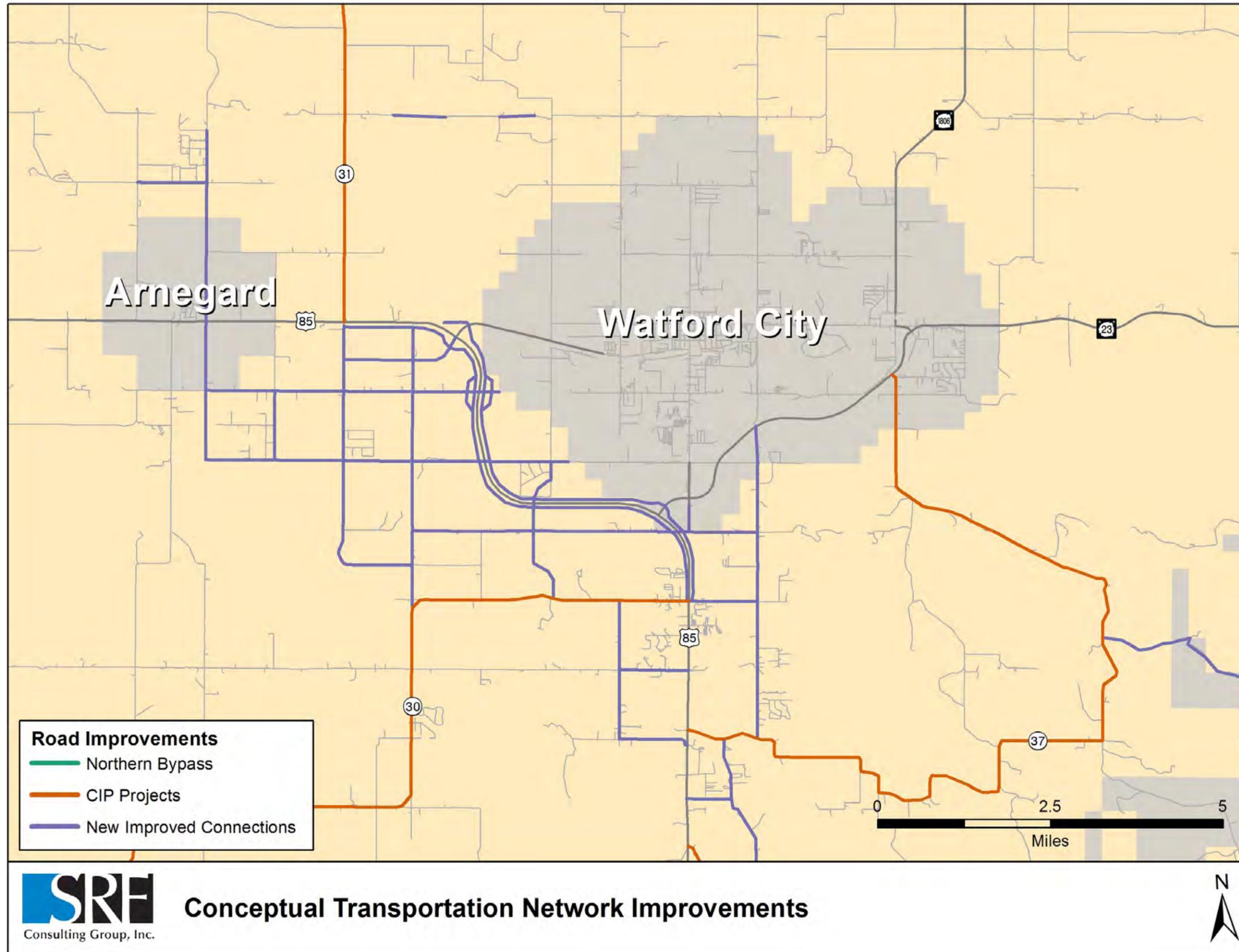


Figure 3-4: Conceptual Transportation Network Improvements

Roadway Development Concepts

The map presented was developed with several concepts which are important for the county to achieve. Below are a listing of these concepts, and each roadway segment proposed is based on one or more of these conceptual parameters.

Connectivity:

Connectivity within the context of McKenzie County may be the most important parameter of roadway development concepts. Connectivity gives the roadway network resiliency. It allows for alternate routes in times of closure for crashes or weather related closure, it gives motorists options for their route planning between destinations, and decreases overall vehicle miles of travel by allowing for shorter routes between destinations.

Quantitatively, connectivity could be defined by the number of potential routes within a given area, or the ratio of intersection nodes to total lane miles. Generally speaking, the roadway network in McKenzie has some connectivity to it, but it is selective and sporadic. This creates confusion among drivers because there is little predictability in the network. The suggested improvements stop far short of creating a complete grid, however in areas that are developing or expected to grow where traffic could be expected to increase, roadway concepts were developed that promote improved connectivity.

Gap Closure:

Lacking the guidance of a formal transportation plan or policies, there are many gaps in McKenzie County's section line roadway network. For example, there are locations throughout the county where roads terminate abruptly within view of other roads. In some instances, a topographical barrier prohibits road extension, but there are other times where these barriers don't exist, yet the gap is present. Closing these gaps provides improved connectivity and improves overall performance of the transportation network.

Highway Asset Protection:

The backbone of the transportation network within McKenzie County is a system of U.S. and State highways that carries the preponderance of all traffic in the county and region. These roadways are high cost and high value for mobility in and around McKenzie County. Because of the importance of these facilities, their protection is paramount to ease of movement throughout the county.

There are a handful of ways to relieve travel volumes on these roads and extend their lifetimes. Establishing a system of parallel roads effectively increases the capacity of the state highway system. In addition, limiting access points onto state highways also helps to preserve their capacity for traffic growth, rather than potentially creating congestion by introducing areas of conflict at at-grade intersections.

Capacity:

Capacity is defined by the number of lanes going in a given direction. These lanes don't all need to be on the same roadway. Parallel routes are very important to providing capacity for mobility throughout the county. This is another reason why the grid network is important to mobility. It provides needed capacity for the transportation network by increasing the number of lanes in a particular direction.

Convenience:

Sometimes connecting existing roads, or creating parallel routes is just a simple matter of convenience for the motorist. Grid roadway systems and connected roadways are far more convenient than a disconnected network with dead ends and long circuitous routes. Some of this cannot be avoided due to topography, but in areas where it is possible to connect roads and improve the flow of traffic, greater convenience for the travelling public can also be achieved.

Congestion Mitigation:

Emphasizing connectivity and a gridded network helps to ease the potential for congested areas in the network. By building in redundancy and creating several routes that connect origins destinations, congestion can be reduced.

Cohesiveness:

A transportation system does more than just move people from origin to destination, it ties county communities and other destinations together. In this sense it provides the backbone of community for McKenzie County. As the conceptual network was developed this principle of establishing a cohesive network was considered.

Access:

Finally, in developing the conceptual roadway network providing access to land uses was a goal of the network. This is most clearly represented by the suggested frontage road facilities along the US 85 Bypass to the southwest of Watford City. Clearly these roads add capacity and protect the bypass, but their intent is to provide needed access to local land uses that prefer the visibility of the highway but need the frontage facilities for traffic circulation and access to their businesses.

Another location where access was emphasized was in the roadway network around Lake Sakakawea in the northern part of the county. This area around Tobacco Gardens is both scenic and recreational. Providing improved access to this resource can both serve county residents and provide for greater tourist traffic and activity within the county.

FUNDING OVERVIEW

It is easier to make roadway recommendations than it is to fund the improvements. Today roadway project funding has more sources than ever that need to be sought out, negotiated and combined to put together a funding package for each and every improvement. Some improvements are simple with just one or two funders, others may have a dozen or more sources of funding to pull together and construct a roadway or other civic improvement.

There are numerous funding sources available to McKenzie County for roadway improvement projects. Not all funding sources are available at the same time, and many need to be used in combination to secure sufficient funding to complete a project. Funding parameters and categories are always shifting based on federal, state, and local priorities. Furthermore, the qualifications for various funding categories may change as well. Finally, the amount of available funds changes over time. When the oil economy was strong and thriving, funds from the state for oil producing counties were plentiful. Now that oil prices have sharply declined and drilling activities have declined, the state is not planning on any

funds from oil production to be available for county roadway improvements though the next biennium. The following is a list of potential funding sources. The list is not intended to be exhaustive.

Federal Funding

Federal funding is an important source of funds, but there are strings attached that go along with its use. First, federal funds are cost-reimbursable, meaning that funds need to be expensed and then those funds are reimbursed to the project sponsor. This can make cash flow on a large project difficult to stream, and may require a phased approach to the work. Also, federal funds come in funding silos that can't be mingled. This can get confusing at transition areas on a project. On a bridge project, for example, should the funding be applied only to the structure, or should it also be applied to the approach zones leading to the bridge, or a trail crossing on the bridge, etc? These decisions all have to be made prior to construction of the facility. Finally, after a project is built, and sometimes during construction, Federal Highway Administration (FHWA) engineers will review the project and determine if all applicable rules for construction were followed, whether appropriate funding was used, and for what it was expended. All of this can lead to "non-participation" whereby if some rules were overlooked or determined to be noncompliant with federal rules and standards the FHWA can withdraw their funding and the project sponsor will need to reimburse the FHWA for those areas that were determined to be non-participating.

The state DOT administers the federal funding programs so there is a safety buffer, but these issues come up routinely on larger projects. Even though these funds come with many strings attached they are widely used and highly sought after because they can mean the difference between a project getting built or not.

Additional Federal Funding Categories

Safety

State DOTs typically have Safety as a funding category for project improvements. With McKenzie County's high accident rate and high number of severe crashes, in particular, there are likely many good candidate projects for safety improvement funds.

Enhancement

The state also receives federal funding that is distributed for enhancement projects. These funds can be used for trail improvements and sidewalks along Federal Aid eligible roadways. Unlike roadway funds, these funds can be used on buildings as well. Many rail depots in the United States have been converted to rail museums using enhancement funds. The Oregon Trail Museum was funded through the use of enhancement funds. Likewise, a museum that commemorated the trek that Lewis and Clark took could be a candidate for these funds. These funds are very flexible and the process to get them is typically highly competitive.

Congestion Mitigation/Air Quality (CMAQ)

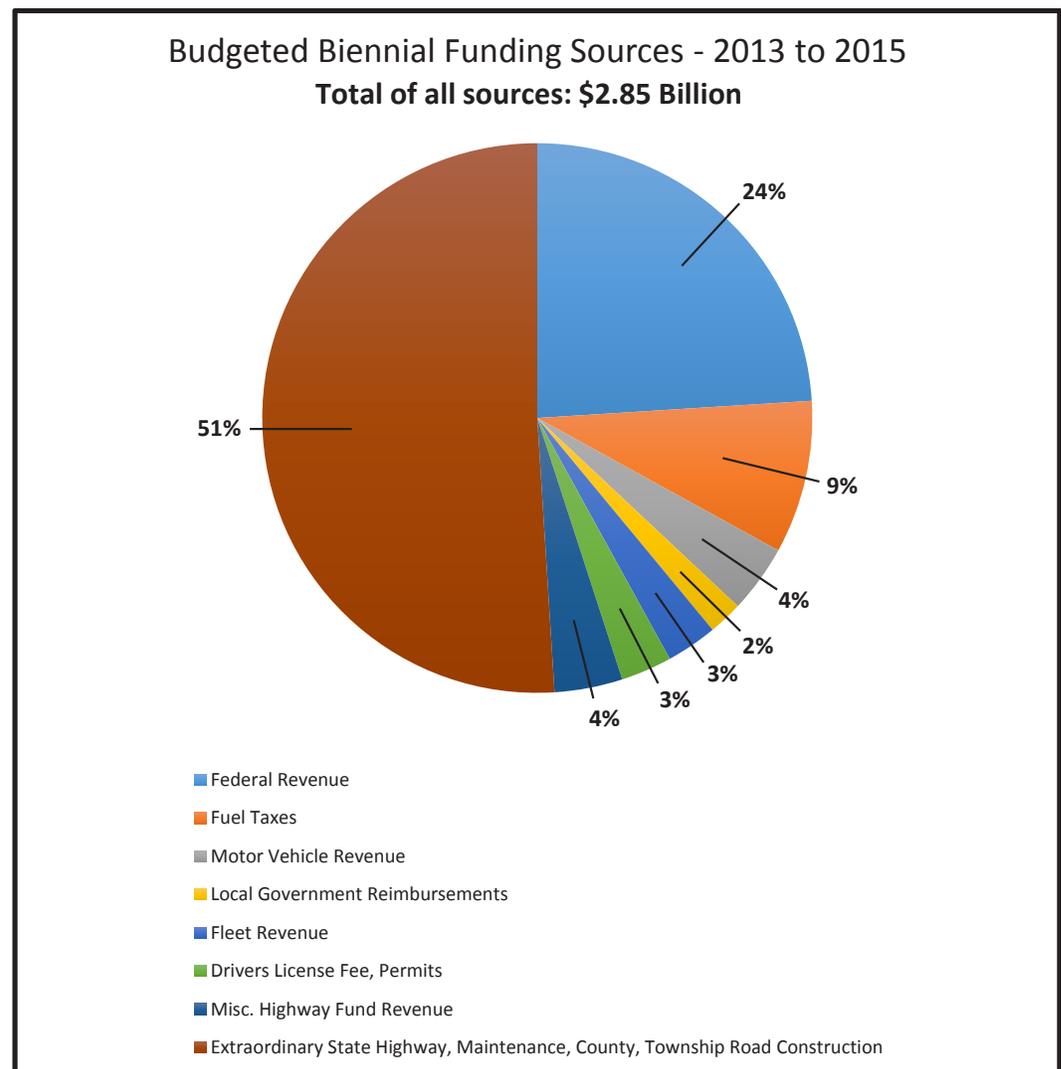
Every state in the union is distributed their portion of CMAQ funding. In states without air quality non-attainment areas like North Dakota this funding goes to projects specifically designed to reduce congestion. The manner in which funds are categorized makes it difficult for counties to participate directly in this funding source, however, these funds can

be used on the state highway system within the county. In addition, a case could be made for using these funds on projects like the proposed frontage road facilities around the Watford City bypass, as the sole purpose for these roadways is to preserve the operations and function of the bypass, thus eliminating congestion.

Federal Rail Improvement Funds

While there are not a lot of miles of railroad tracks in McKenzie County, in and around the community of East Fairview there are several at-grade roadway crossings. Federal funds may be available to improve some of the rail crossings. Improvements like planking and flashing cross bucks as well as gates can be available through the federal funding the state receives for rail crossing improvements.

State Funding



The chart above is a summary of all revenues the State administers and uses for roadway and transit projects throughout the State of North Dakota. It should be noted that for the years of 2013-2015, approximately 24 percent of all revenues were from federal sources. It

is equally important to note that “Extraordinary State Highway” funds made up over half the budget. These funds are not guaranteed on an annual basis and the state does not allow municipalities to plan for those funds to be available in long-range planning efforts. This source of revenue includes the oil money receipts that get apportioned for transportation upgrades in oil producing counties. When these funds are removed from consideration, federal funding increases to 50 percent of total funding coming into the state, making this funding source very important to the overall building, improvement, and maintenance for state and local infrastructure.

Other state funding sources include State Gas Tax, licensing fees, motor vehicle registration, and fleet revenue. These sources make up the whole picture of funding that the state uses for maintenance and construction of state highways and some local roadways.

Local Funding

Transportation projects rarely get done without local participation. Local funding comes in many different ways from many sources. The following are some of the ways that local project funding is derived for transportation projects.

Developer Funding

Right of Way Donation

For larger projects like arterial and collector roadways, often property owners and developers will be asked to donate the right of way. These projects benefit the developer greatly by moving traffic to and from the development, so it is in their best interest to facilitate the project.

Cash in Lieu of Property

At times, right of way is already secured for a project. What the project sponsor may need is a funding partner to get the project constructed. In these types of arrangements, the local government typically tries to acquire funding support from private project developers. Developer contributions must be proportional to the potential impact new developments have on the road system.

Developer Build

Local or circulation roadways within a development are typically the responsibility of the developer. The local sponsor has roadway standards that must be adhered to and the developer builds to those standards. Sometimes the local sponsor has roadway maps for undeveloped areas and the developer and local government negotiate the layout of local roads within the development as part of the development proposal.

City Participation

Roadways routinely cross jurisdictional boundaries. Oftentimes when one jurisdiction decides to build or upgrade a facility the adjacent jurisdiction will participate on their side. This saves mobilization and design costs. It can also yield cost savings by purchasing larger amounts of material at reduced rates.

Home Rule

The topic of Home Rule is a powerful yet sensitive subject. Establishing McKenzie County as a Home Rule county would open up several new funding options, however

there is a process to becoming a home rule county that requires a vote of the electorate. Establishing McKenzie County as a Home Rule County requires a simple majority of the established county voters voting in a general election. If McKenzie County were a home rule county, this would give the county the power to establish funding initiatives that require voter approval. Then county voters would be able to vote to tax themselves for county needs. Many counties in North Dakota have used this financing tool to improve roadways, construct infrastructure projects or to augment the general fund of the county. Securing voter approval to become a Home Rule county may be challenging depending on the overall perception of need, but this could be a very useful tool to develop and improve county infrastructure.

Local Taxes

Should Home Rule be established, it would give the county the option of to levy a local option sales taxes. The State Sales Tax in North Dakota is 5 percent, however many jurisdictions throughout the state vote in additional sales taxes for local budget needs. For example, the City of Williston's sales tax rate is currently 8 percent, with the city adding 2 percent and the county adding 1 percent to the state tax. Other taxes that are commonly levied include local hotel taxes, taxes on rental vehicles, and airport taxes and fees. Counties also collect property taxes into the general fund.

Special Assessment

Home Rule counties have the ability to levy special assessments to properties which directly benefit from the improvement. Many jurisdictions use this for utility upgrades, street improvements, sidewalk construction, and major maintenance. This works well in areas with greater development density, because the cost can be distributed over a larger pool of property owners. In rural areas of the county with large expanses of agricultural or undeveloped land, this option isn't a good one as it puts far too great a burden on individual property owners, so it should be applied selectively.

RECOMMENDATIONS

Roadway

What has been introduced in this comprehensive plan is a conceptual roadway network configuration. It is not intended to be an exhaustive list of all potential roadway projects that could be developed over the life of this plan. These roadway concepts are in the very early stages of planning and are subject to modification.

The conceptualized roadways need further analysis to be included as part of an overall County Capital Improvement Plan. No analysis has been done to establish these concepts as viable projects, and this step must be completed prior to promoting any projects for development. The conceptual network responds to the list of factors that were presented earlier to produce a more robust and complete transportation network.

The conceptual network also responds to forecasted future land uses within the development areas. In some cases the existing roadway configuration will serve future land uses without modification or augmentation. In others, like around the Watford City Bypass, an extensive network of roadways will need to be developed.

Given the scope of this chapter, no project recommendations are being made. Further analysis is necessary to understand the feasibility of projects in the conceptual network.

Land Use/Transportation

The County Comprehensive plan has identified land use development areas throughout the county. These areas do not anticipate radical changes from surrounding land uses, rather an augmentation of development patterns as growth takes place. As growth happens, roadway improvements need to follow suit. The conceptual roadway network accounted for the development that was forecasted for these locations and looked to provide the local arterial network for their development as growth occurs.

While development areas were identified, it is difficult to know at what pace growth will occur. Thus it is important to monitor the rate of growth and ensure that projects come to fruition in a timely manner to serve transportation needs and avoid periods of sustained congestion.

Many of the areas identified will be served well by the arterial network, however the principles identified by the roadway development concepts should be followed to promote connectivity and circulation in local roadway networks that are developed to serve land uses.

Bypass Protection

The impact of the oil economy on the transportation network happened quickly and was extreme in its effects. Towns where highways had become local main streets were inundated with heavy truck traffic, the results of which were sometimes tragic. In quick response to these conditions the NDDOT developed several bypasses around North Dakota communities to take this separate this mix of heavy trucks, automobiles, pedestrians and bicycles and to increase safety within the local communities. Two of these bypasses have been constructed in McKenzie County to date, one around the south part of Watford City, and one around the west side of Alexander.

These fixes were extremely important to improve safety and were very expensive to construct. They represent a significant investment in the safety of the local communities and must be preserved to ensure their function long into the future. Bypasses are particularly vulnerable to break down and development of land uses that compromise their function and purpose. By their nature they route traffic around population centers, but it is this very fact that can lead to their function being compromised without controls on both land use and access.

Bypasses provide a relative constant stream of traffic and represent a lot of pass-by trips for land uses that thrive on that market. Truck stops, restaurants, gas stations, and fast food all cater to this type of customer. So when a community is bypassed by the major highway these types of land uses tend to migrate out to the new facility. This can result in leap frog development that is disconnected from existing development, which results in a pattern of inefficient land use. Ultimately, the function of the bypass is degraded if urban development creates congestion that the bypass was constructed to alleviate.

Recommendation:

McKenzie County should put in place both land use and access controls around bypass facilities in the county. Limiting access to bypass facilities to side access roads or frontage road facilities should be required, and land use around the bypass should be carefully planned to limit commercial development along the bypass. The Watford City Growth Focus Area focuses future commercial development at bypass intersections, rather than along the entire frontage of the bypass.

Future Planning

McKenzie County has just recently seen the value in planning for the future development of the county. First came the Strategic Transportation Plan that was developed in response to the overwhelming increase in traffic. This tool created the County Capital Improvement Plan (CIP) to prioritize roadway needs and improvements throughout the county.

This 10-year Comprehensive Plan is the next manifestation of the county's intention to guide future growth. Establishing policies and land use plans for future development allows the county to grow in an orderly and measured way.

There is one major planning process that has yet to occur in McKenzie County that goes hand in hand with the planning that has come before it.

Transportation Plan

Through the development of this Transportation chapter, it has become clear that the county needs a more thorough analysis of its transportation needs over the long term. Transportation projects are expensive and typically take a long time to develop. Now that much of the oil revenues have been reduced, projects will need to compete for state and federal funds, which enhances the need for a planning process that prioritizes needs and is based on a rational and logical approach to serving the long-term needs of McKenzie County.

There are many benefits of developing a Long Range Transportation Plan (LRTP) for the county. The planning process sorts out project needs and goals and rationalizes decision making where transportation improvements are concerned. It should be noted that the plan does not make decisions about project needs, but provides a rational framework for county decision makers in determining funding priorities for the county roadway network based on the mobility needs of county residents. The following are some of the needs that an LRTP would address for McKenzie County.

Safety Analysis

McKenzie County has a problem with crashes, and moreover crash severity. A county with this population should have far fewer crashes, the severity of which should be much lower. The crash rate for McKenzie County is over twice that of the average for the State of North Dakota. A top priority of the Transportation Plan should be to analyze the frequency and cause of crashes and determine what can be done to improve safety on roadways within the County.

Functional Classification

Currently the county only has two roadway classifications for its system of county roadways. County major collectors and local roadways are further stratified by pavement surface, but there should be further refinement of these classifications. The county needs to begin to establish a system of local arterials and collectors that provide mobility for county residents. This can also help with project prioritization, and roadway standards can be developed that are appropriate for the roadway classifications.

Roadway Operations

Due to McKenzie County's low population, most facilities experience very little if any congestion. However, that does not mean that there are not facilities with geometric improvement needs, or substandard elements that need improvement. An operations analysis can pinpoint these areas now and in the future.

Comprehensive Project List

This Transportation chapter has developed a conceptual roadway network, but stops short of developing project recommendations. An LRTP would identify an exhaustive list of needed transportation improvements, and could suggest project phasing to manage costs and cash flow.

Other Benefits

There are many other benefits that would accrue to the county with the development of an LRTP. Projects would have planning level cost estimates, which then could be put into a financial framework to manage resources and ensure funds are available when needed.

It is rare that transportation needs don't outpace resources, thus project priorities need to be established so the most important projects can be developed with limited resources. A transportation planning process will help county decision makers develop these priorities and a framework for adjusting priorities as conditions change.

TRANSPORTATION IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	Prepare a County-wide Transportation Improvement Plan and Long- Range Transportation Plan (20 years) that sets the stage for the County Capital Improvement Plan. The Plan shall establish priorities and help decision makers make the best use of their limited transportation resources.	Planning and Zoning/ Public Works Departments	Yes	Short-term
2	Continue to work with NDDOT on the design of US 85 widening project from Watford City to I-94 including a bicycle facility from Watford City to Theodore Roosevelt National Park North Unit to develop right of way and engineering of a separated grade bicycle and pedestrian facility adjacent to the improved roadway alignment.	Public Works	No	Ongoing
3	Identify areas on the County road network that have heavy truck movements, and identify projects to facilitate travel such as accel/decel lanes, hill climbing lanes, and paved aprons.	Public Works	Yes	Short-term
4	Coordinate with local oil exploration companies and phase appropriate roadway improvements based on forecast heavy truck movements.	Public Works/ Planning and Zoning	Yes	Short-term
5	Determine the potential benefits to transportation of establishing McKenzie County as a Home Rule County.	County Commission/ Planning and Zoning/Public Works	Yes	Short-term
6	Protect and Preserve town bypasses by establishing land use and access control policies for the highway reroutes.	Planning and Zoning Department	No	Ongoing
7	Implement a McKenzie County Transportation Safety Improvement Plan to address significant crash history on State and county roadways by developing recommendations for safety improvements	Public Works/ Planning and Zoning Departments	Yes	Short-term

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
8	To promote controlled access around State Highway facilities, County roads that intersect State Highways, the first access off of the County road should be no less than 750 feet from the mid-point of the intersection. The exception to this standard would be for a truck stop that wants to segregate traffic between passenger vehicles and heavy trucks. For this specific land use and site circulation for the business a driveway for passenger vehicles would be allowed at 500 feet from the mid-point of the intersection.	Public Works/ Planning and Zoning	Yes	On- Going
9	Complete the section line grid in the northern part of the county where topography is not a barrier to construction.	Public Works	Yes	Long- term

**Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.*

CHAPTER 4: ECONOMIC DEVELOPMENT ELEMENT

The oil and gas industry has been the dominant economic force in Western North Dakota since the energy boom after 2006. The energy industry will continue to have a significant presence in McKenzie County even under cycles of low prices for oil and natural gas, because the high productivity of the county's oil and gas resources provides a lower price point for industry profitability. However, the county recognizes the need to diversify its economic base. There are a number of local industry areas that, while employing a smaller labor force and generating less income than the energy sector, have nonetheless continued to thrive in recent years. These other industries will need to be more noticeable and vital to the region's economic well-being in the long term in order to weather fluctuating demand for domestic production of fossil fuels. These other industries include agriculture, tourism, commercial, retail, and services.

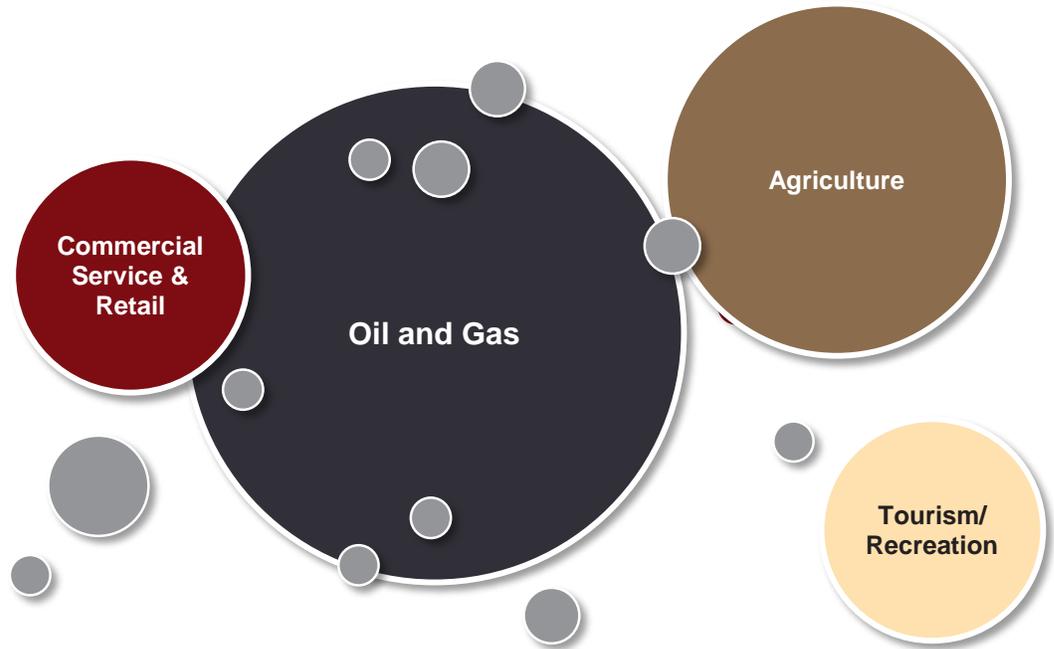
The McKenzie County Economic Development Strategic Plan was developed in June of 2013. It focused on five main areas:

- Education,
- Health Care,
- Commerce,
- Recreation, and
- Affordable Housing.

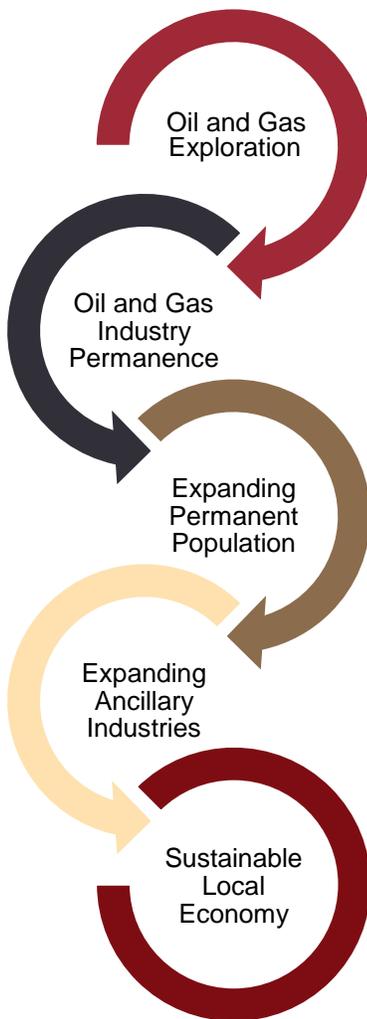
This plan was developed by Vision West North Dakota and is still actively being implemented throughout McKenzie County as opportunities are created. This plan is incorporated into this chapter by reference and is included in the appendix in its entirety.

OVERARCHING GOAL: LOCAL ECONOMIC SUSTAINABILITY

The overarching goal of the county is to strengthen local industry sectors ancillary to the energy industry in an effort to create a more sustainable economy overall, while alleviating the impact of the slowdowns inherent to the cyclical nature of the energy industry. Major cities, such as Calgary, Alberta, and Houston, Texas, owe much of their economic success to the oil and gas industry, but have developed a much more dynamic economy in the long term. Five key points are essential to this process (see the following page):



Caption: County's Economic Base – Local Industries



1. **Continuing Oil and Gas Exploration.** Current projections provided by the State Department of Mineral Resources indicate that, roughly, an additional twenty years of oil and gas exploration is in store for McKenzie County and the surrounding Bakken. This means more wells to be drilled and fracked, especially as oil prices rise.
2. **Oil and Gas Industry Permanence.** A continued and strengthened focus on operations support, corporate offices, and product processing will help cement the county's position as North Dakota's oil and gas hub in the long term. The county is already #1 in North Dakota in both oil and gas production and gas processing – this proves that the county is already “where the action is” in the Bakken.
3. **Expanding Permanent Population.** The permanent population base has continued to grow in recent years as the oil and gas industry transitions to an operation and maintenance phase.
4. **Expanding Ancillary Industries.** A permanent population base fuels and attracts growth in other industry sectors. For example, a permanent population demands a certain level of commercial retail and service opportunities and recreational outlets.
5. **Sustainable Local Economy.** This demand for growth in other industries only grows as the permanent population grows. As the labor force grows, there is increased demand for housing, commercial, and quality-of-life services, which in turn attracts more labor. This is a cycle of more sustainable economic growth that is highly desired in McKenzie County.

GOALS AND OBJECTIVES

Goal ED.1: To aid the long-term focus and expansion of the oil and gas industry.

Objectives:

- A. Analyze the oil and gas industry within the county to understand industry segments (i.e. refining, transmission, fertilizer manufacturing, etc.) that are currently weak or missing and could be strengthened.
- B. Market the county to oil and gas companies as a legitimate location for corporate offices and services.
- C. Actively encourage research and demonstration projects within the county.

The comprehensive plan survey showed most respondents overwhelmingly see McKenzie County as the “center of Bakken energy development” (as opposed to an outdoors area or farming and ranching area).

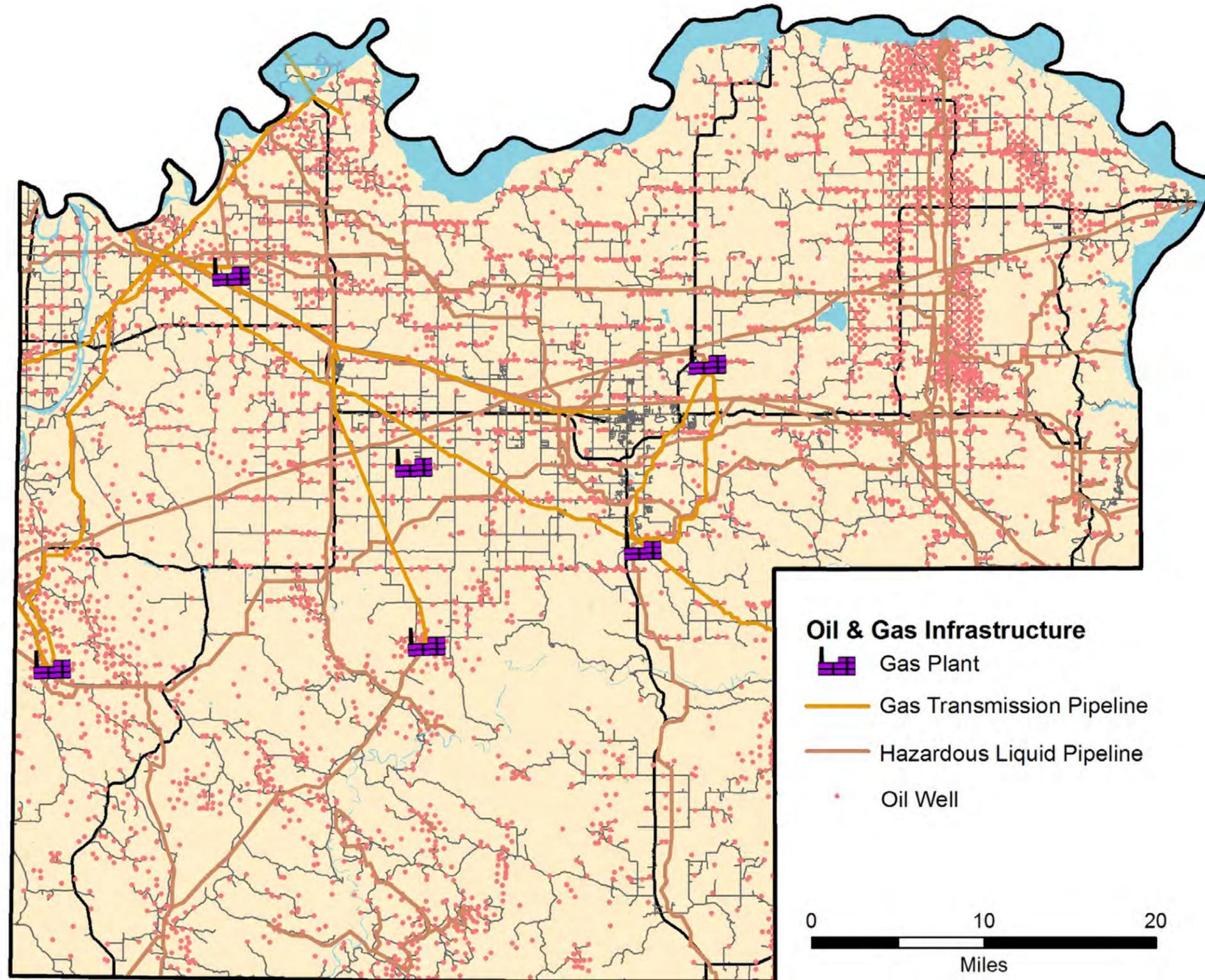
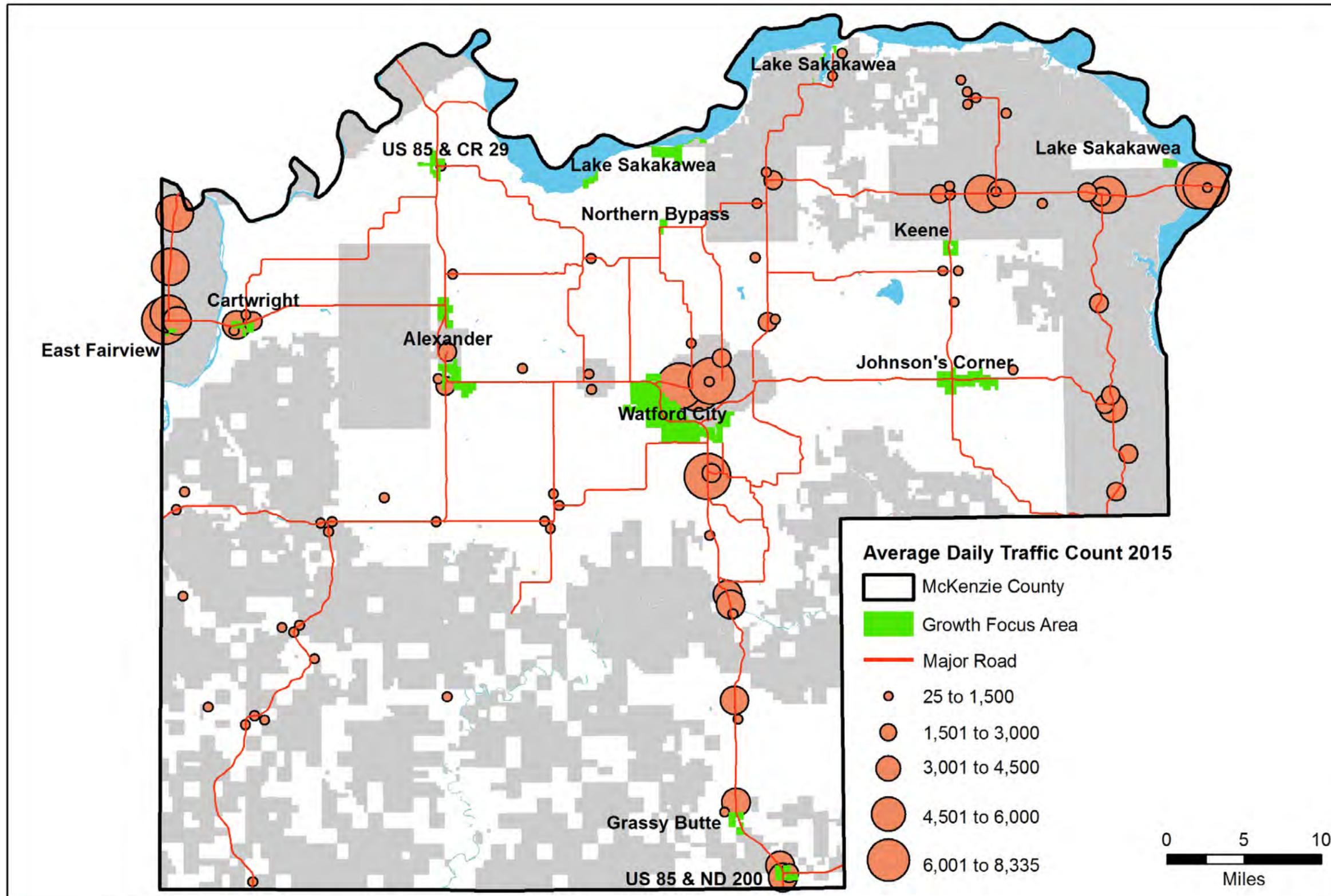


Figure 4-1: Oil & Gas Infrastructure

Goal ED.2: To foster highway commercial opportunities.

Objectives:

- A. Coordinate with local real estate agencies and target companies to market specific locations that have the greatest potential to attract highway commercial development.



McKenzie County ADT Count 2015



Figure 4-2: 2015 ADT Count Compared to Locations of Growth Focus Areas



Goal ED.3: To make the county an attractive place to live and visit.

Objectives:

- A. To promote the county's highways as attractive corridors, ensure that new development along all US, State and County roads follows county zoning ordinance requirements pertaining to buffers and screening.
- B. Utilize all means available through the North Dakota Century Code and local ordinances to gradually improve the quality of existing development along US Highways, State Highways, and major county roads.
- C. Review the county's sign regulations to ensure they are easy to interpret, practical to industry needs, and respectful to scenic corridors within the county.
- D. Work proactively with the state to establish avenues in reclaiming sand and gravel pits and to enforce North Dakota Century Code provisions pertaining to pre-zoning ordinance sand and gravel pits.

Goal ED.4: To capitalize on opportunities as “North Dakota’s Playground”.

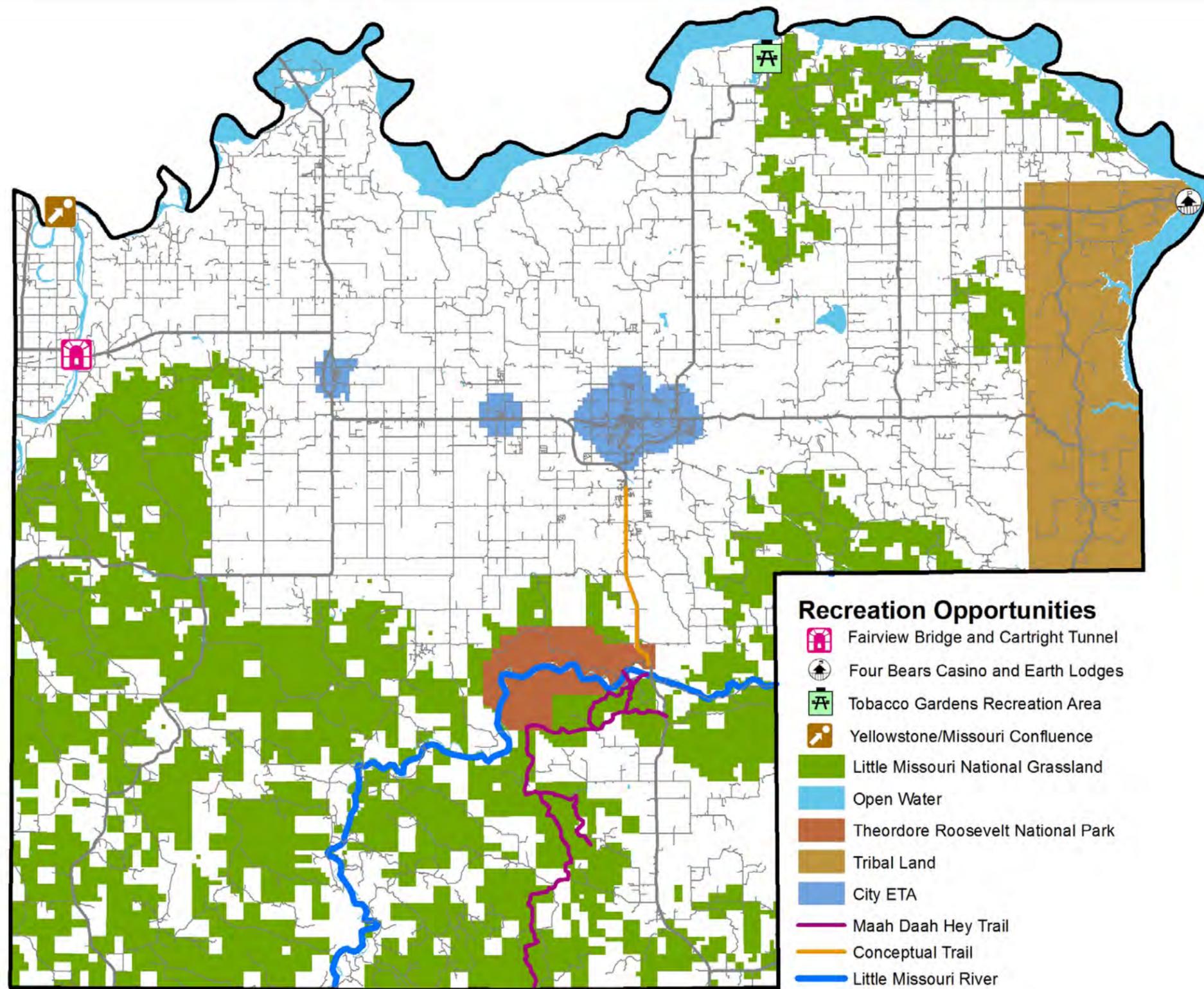
Objectives:

- A. Maximize the many opportunities available at Tobacco Gardens for fishing, boating, camping, hiking, and vacation homes.
- B. Better advertise the North Unit of Theodore Roosevelt National Park outside of McKenzie County.
- C. Increase emphasis on National Grassland access and recreational uses as another recreational resource and added benefit to visiting the National Park.
- D. Continue to reach out to the mountain biking industry in advertising biking opportunities in McKenzie County.



Caption: Example of mountain biking trail.

Recreation is a big part of what makes the county unique not only in the state, but in the Upper Midwest. Hunting, fishing, mountain biking, hiking, birding, and numerous other activities abound in the county and are unparalleled in their concentration and availability elsewhere in the state. The county must continue to find ways to further capitalize on these opportunities, which are central to the local tourism industry. Such an abundance of recreational opportunities is also a significant quality of life factor that influences people’s choice in making McKenzie County their home.



Recreation Opportunities

-  Fairview Bridge and Cartright Tunnel
-  Four Bears Casino and Earth Lodges
-  Tobacco Gardens Recreation Area
-  Yellowstone/Missouri Confluence
-  Little Missouri National Grassland
-  Open Water
-  Theodore Roosevelt National Park
-  Tribal Land
-  City ETA
-  Maah Daah Hey Trail
-  Conceptual Trail
-  Little Missouri River



McKenzie County Recreation

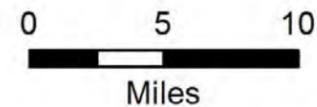


Figure 4-3: Recreation Opportunities

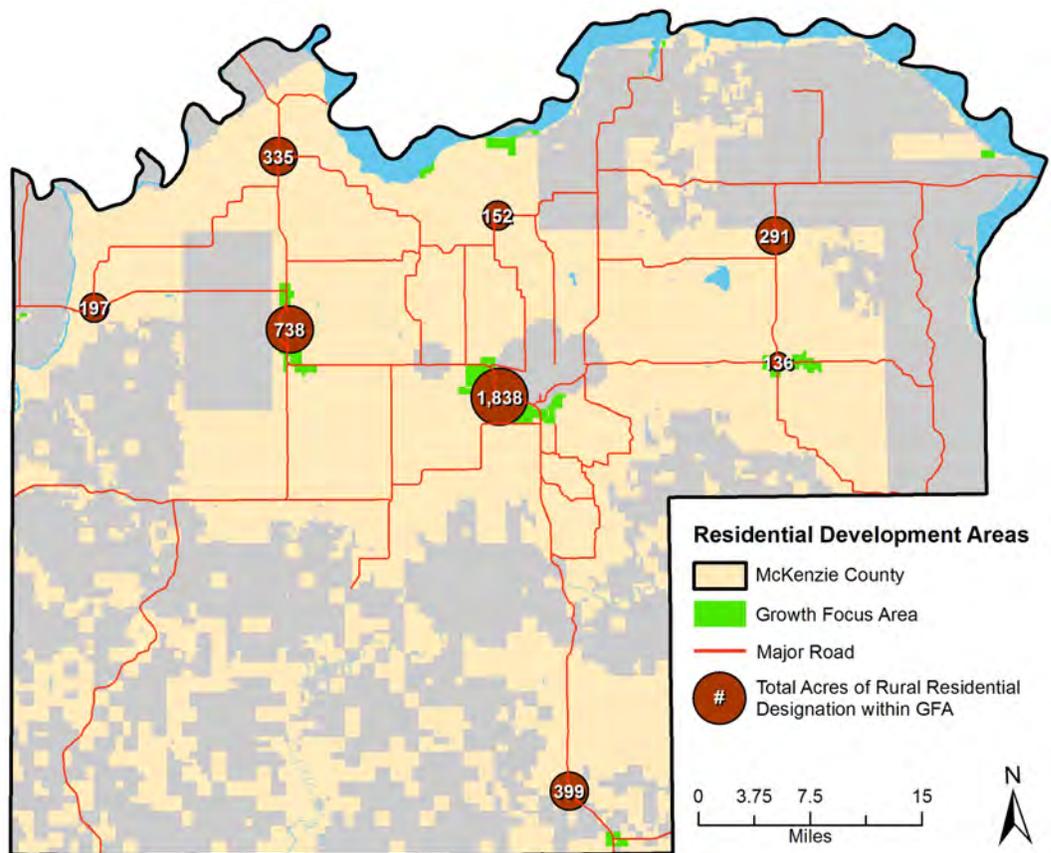


Goal ED.5: To enhance rural residential living through quality of life improvements.

Objectives:

- A. Pave roads within and providing access to rural residential subdivisions in the county in an effort to reduce dust impacts.
- B. Work with developers to protect natural features within new residential developments.
- C. Ensure that new developments take advantage of the multiple uses afforded though the protection of natural areas, utilizing such areas for additional uses such as storm water control or multiuse trails.

Figure 4-4: Residential Development Areas Derived from the Plan



Caption: GFA Locations where Rural Residential Development is Encouraged.

Goal ED.6: To keep tax revenue local.

Objectives:

- A. Continue to lobby the state government for a larger local share of the oil and gas gross production tax revenue.
- B. Evaluate alternative means to raise tax revenues locally in order to fund transportation, recreation, and other county-wide beneficial services.
- C. Support Watford City's sales tax implementation to upgrade city recreational, healthcare, affordable and senior housing, and airport services.

Goal ED.7: Develop support for a regional airport.

Objectives:

- A. Work jointly with Williston Economic Development Commission to locate regional airport in McKenzie County.
- B. Use airport development as a significant attractor for other economic development goals and activities.

ECONOMIC DEVELOPMENT IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Oil, Gas, & Mining				
1	Continue to document the impact of oil and gas production in the county and identify the cost of the impact as a tool for lobbying efforts to increase the local share of gross production tax revenue.	Economic Development	No	Ongoing
2	Collaborate with the county's cities to market the county to oil, gas, and related energy companies as a legitimate location to locate more permanent professional services.	Economic Development	Yes	Ongoing
3	Collaborate with local oil and gas companies and the State Department of Mineral Resources to encourage research and demonstration projects within the County. Involve the Planning and Zoning Department to ensure that research and demonstration projects are compliant with local regulations.	Economic Development Planning and Zoning Department	Yes	Ongoing
4	Prepare an oil and gas economic development strategy that involves a comprehensive analysis of the industry in McKenzie County and identifies specific value-added segments (i.e. refining, transmission, fertilizer manufacturing, etc.) that can be performed locally.	Economic Development	Yes	Short-term
5	Coordinate with the State Soil Conservation Committee (NDSCC) as the state agency charged with the regulation and enforcement of sand and gravel mining pursuant to NDCC 38-16. In addition to the NDSCC, include the county Soil Conservation District in seeking ways to reclaim abandoned pits and follow up on enforcement of state, and where applicable, local reclamation provisions.	Planning and Zoning Department	Yes	Short-term

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Agriculture				
1	Coordinate with State Department of Agriculture as needed to promote and market the County's agricultural products within the rest of North Dakota and the greater region (Montana, South Dakota, Minnesota). Take advantage of opportunities to promote and market county agricultural products at local events (i.e. downtown Watford City events).	Economic Development	Yes	Ongoing
Recreation				
1	Collaborate with the National Park Service, State Department of Commerce (Tourism), and the hiking, backpacking, and wildlife-watching industries to advertise the North Unit of Theodore Roosevelt National Park and adjacent National Grassland areas on a national and international level.	Economic Development	Yes	Ongoing
2	Coordinate with the County Park District to identify ways to better advertise Tobacco Gardens outside of McKenzie County as a place for multiple uses along Lake Sakakawea. Prepare a strategic plan that identifies short term, fiscally constrained facility improvements and a "wish list" or vision of illustrative improvements (not fiscally constrained) that could set the area apart as a one-of-a-kind destination on the Lake.	Park District Economic Development Planning and Zoning Department	Yes	Mid-term
3	Continue to showcase the County's mountain biking opportunities (Maah Deh Hey Trail, Cartwright Tunnel & Fairview Bridge, etc.) in addition to its vision for new biking routes.	Economic Development	No	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Retail Commercial				
1	Create an inventory of specific future highway commercial development locations based on annual average daily trips (AADT, measure of traffic). For each site, develop a preliminary list of public infrastructure needs, such as highway safety improvements, water, and sewer services. Collaborate with NDDOT and the county's cities for any sites identified within the area of county/city shared jurisdiction.	Economic Development Planning and Zoning Department	Yes	Short-term
2	Include an amortization period for all operations within the High Overlay District to come into compliance with county screening and buffer requirements.	Planning and Zoning Department	Yes	Short-term
3	Reach out to the billboard industry and local highway commercial businesses to assess their attitude regarding the county sign regulations.	Planning and Zoning Department	Yes	Mid-term
4	Work with local stakeholders concerned with scenic highways to identify areas within the county where off-premise signage should be restricted.	Planning and Zoning Department	Yes	Mid-term
5	Share the results of Priority 3 and 4 above with County leaders to determine changes needed (if any) to the county sign regulations.	Planning and Zoning Department	Yes	Mid-term
Residential				
1	Require new residential subdivisions to protect areas with slopes above 30 percent, bluff-tops, streams, and wetlands. Encourage the protection of wooded areas to the maximum extent feasible. Strive to have new development utilize natural areas as part of the development's storm water control system and recreational system.	Planning and Zoning Department	No	Ongoing
2	Explore ways to pave roads within existing residential subdivisions. Amend the County Subdivision Resolution to establish thresholds from which new subdivisions shall pave internal roads and access roads from the nearest paved road.	Planning and Zoning Department Road Department	Yes	Short-term
3	Evaluate the advantages and disadvantages of becoming a Home Rule County in the context of carrying out economic development programs.	Auditor Economic Development	Yes	Short-term

*Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.

CHAPTER 5: AGRICULTURE ELEMENT

INTRODUCTION

Agriculture is the prominent historical and economic segment of the county which continues to be a vital component of the county's economic base. More importantly, agriculture accounts for almost 99 percent of all land area in the county, excluding areas of city, federal, and state government jurisdiction. Agriculture in McKenzie County is defined by both cattle ranching and row crop production. Ranching is more or less concentrated in areas with more difficult topography and mediocre to moderate soils, whereas row crops are concentrated in areas with more gentle topography and moderate to prime soils. A top priority for the county is to protect the existing agricultural economy, find ways to expand the economy in the future, and to protect the resulting agricultural heritage.



Caption: Example of Agricultural Use in McKenzie County. Courtesy of Vawnita Best.

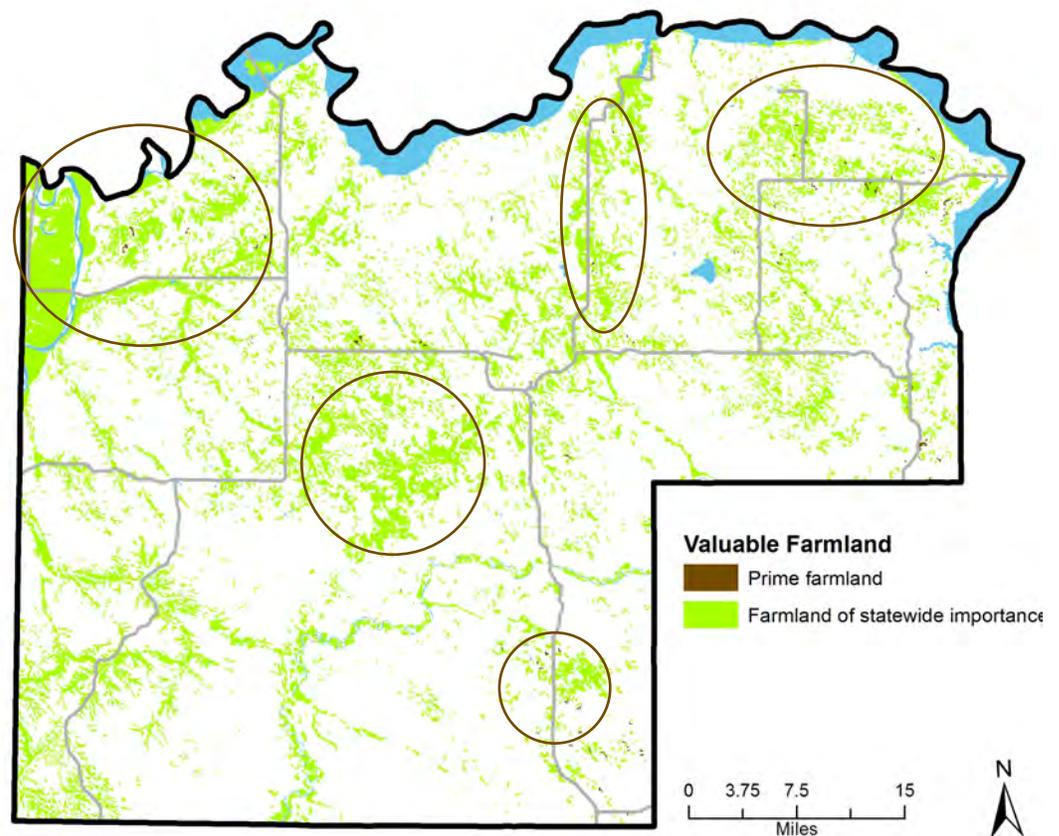
GOALS AND OBJECTIVES

Goal A.1: To conserve valuable farmland.

Objectives:

- A. Increase awareness of areas of prime farmland and farmland of statewide importance (see definitions in the Glossary).
- B. Emphasize the importance of maintaining and improving the soil health of the county's agricultural land uses.
- C. Avoid or minimize impacts to existing conservation practices or systems on private lands.

Figure 5-1: Valuable Farmland within McKenzie County, 2012



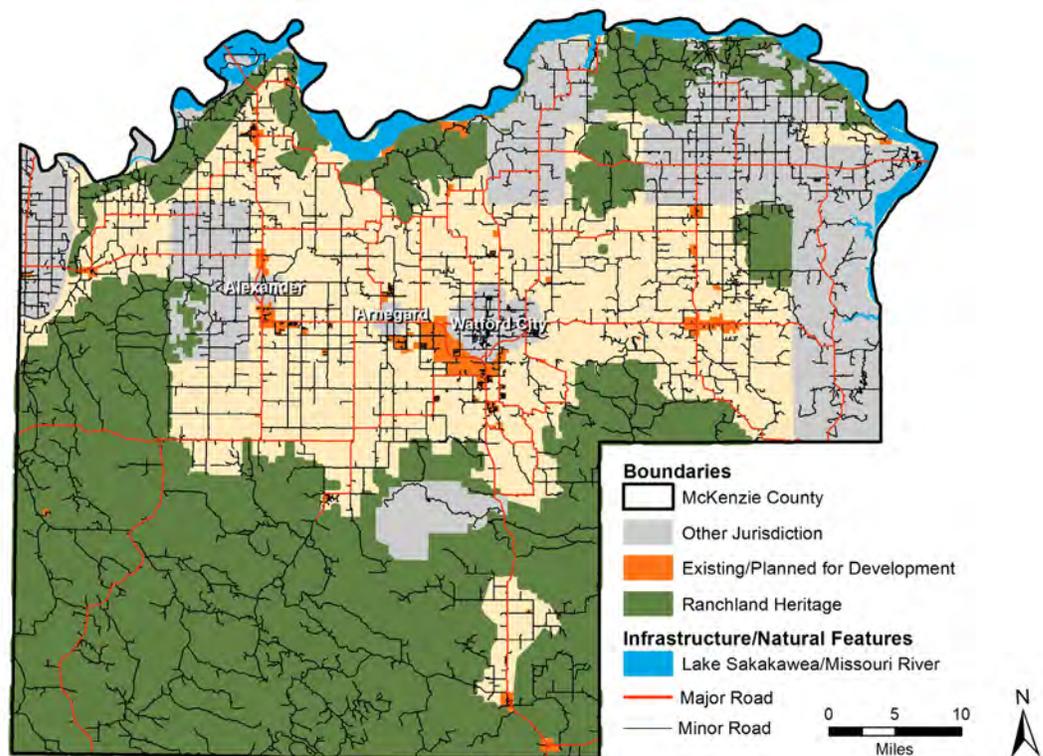
Note: The circles identify general locations with high density of areas with valuable farmland (by soil type).

Goal A.2: To support and strengthen the county's ranching industry.

Objectives:

- A. Foster awareness of important cattle ranching areas that have historically sustained significant ranching operations and continue to do so today. Refer to the "Ranchland Heritage" map in Figure 5-2 that documents important ranching areas and utilize this map to protect the ranching industry from the encroachment of incompatible uses in the development review process.
- B. Consider the potential impact that non-farm development might have on ranching operations adjacent to a development proposal.

Figure 5-2: Ranchland Heritage

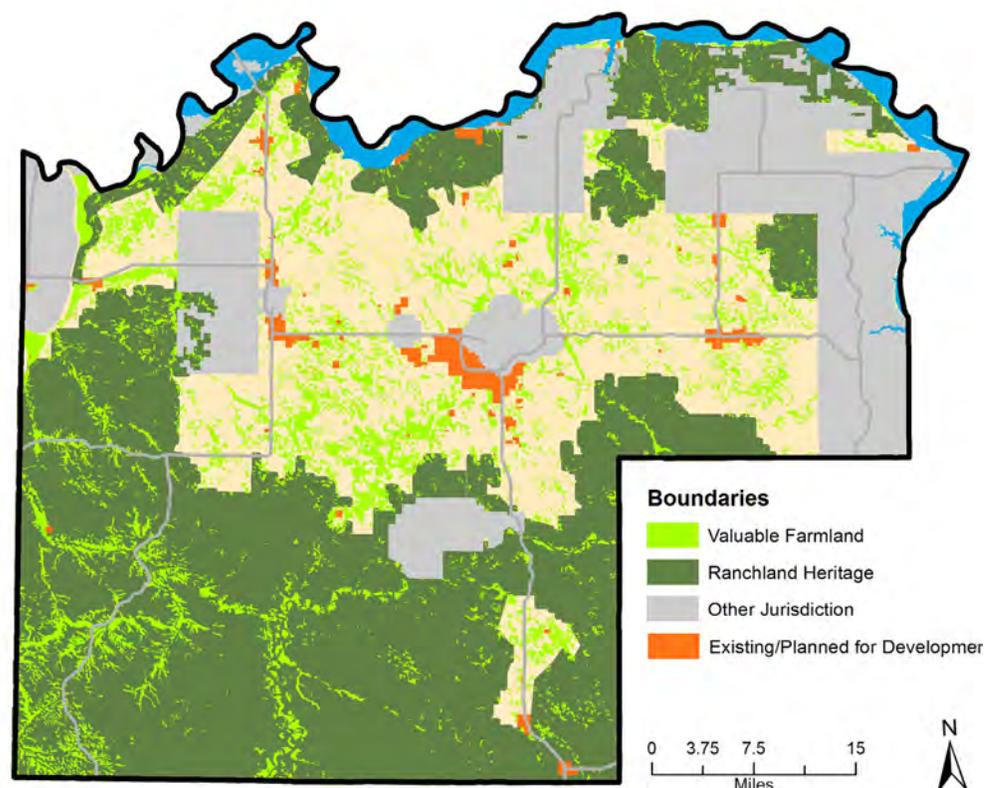


Goal A.3: To preserve the county's agricultural heritage and economy.

Objectives:

- A. Protect the rights of operators of areas cultivated with row crops and ranching properties to continue their agricultural and ranching practices (a "right to farm and ranch") even where established non-farm uses in the general area may foster complaints against those agricultural and ranching practices. The "right to farm and ranch" encompasses the processing of agricultural and ranching products and other activities inherent to agricultural and ranching activities.
- B. Protect parcel sizes that are viable for agricultural use.
- C. Eliminate and prevent illegal dumping in agricultural areas.
- D. Where possible, revert "paper subdivisions" back to agricultural use.
- E. Ensure that land use regulations do not arbitrarily restrict potential agricultural-related enterprises which could provide supplemental sources of income for farm operators.
- F. Promote and market agricultural products grown or processed within the County.
- G. Buffer and screen agricultural areas from new development areas to reduce the potential negative effects (such as dust and trespass) upon agricultural operations.
- H. Closely monitor federal changes to species listed under the Endangered Species Act, evaluate potential impacts to ranching and/or other agricultural practices, and coordinate with the federal government when possible to reduce impacts to ranching/agriculture.

Figure 5-3: Important Agricultural Areas



AGRICULTURAL IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	Limit minimum parcel sizes in the agricultural zone to 40 acres (1/16 section).	Planning and Zoning Department	No	Ongoing
2	Consider areas of prime farmland and farmland of statewide importance as part of the review of non-farm development applications outside of Transition Areas and Growth Focus Areas. Document this review in Planning and Zoning Commission staff reports.	Planning and Zoning Department	Yes	Ongoing
3	Consider important ranching areas in the review of non-farm development applications outside of Transition Areas and Growth Focus Areas. Consider how a development proposal might impact ranching operations located adjacent to a project site. Utilize the Ranchland Heritage Map as provided in the Agriculture Chapter, which delineates areas of particular importance. Document this review in Planning and Zoning Commission staff reports.	Planning and Zoning Department	Yes	Ongoing
4	The County shall require all subdivisions approved for locations in or adjacent to productive agricultural areas and ranching areas to include a “right to farm and ranch” policy. The policy shall be recorded with the subdivision plat. The County shall require the program to be disclosed to buyers of property within subdivisions where the “right to farm and ranch” policy has been recorded.	Planning and Zoning Department Recorder	Yes	Ongoing
5	Ensure that new zoning regulations and all code enforcement actions do not arbitrarily restrict potential agricultural-related enterprises.	Planning and Zoning Department	No	Ongoing
6	Enforce zoning ordinance screening and buffer requirements on new development (requirements placed on new industrial, commercial, and residential development).	Planning and Zoning Department	No	Ongoing
7	The County shall work with property owners, waste collection providers, and law enforcement to find solutions to illegal dumping on agricultural properties such as offering free trash drop-off days and increased penalties for illegal dumping. This could also be a special focus of code enforcement activities.	Sheriff's Department Planning and Zoning Department	Yes	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
8	The County shall work to facilitate the merging or reversion to acreage of substandard lots in “paper subdivisions” that are designated in the Comprehensive Plan as Agriculture and are zoned as Agricultural. Target areas under the same ownership and not being used as separate parcels. Allow property taxes to default on such lots and legally revert to county ownership over time. Sell resulting property back to private agricultural interests.	Auditor Tax Equalization Planning and Zoning Department	Yes	Long-term
9	Strengthen coordination with the United States Department of Agriculture – National Resource Conservation Service (NRCS), the McKenzie County Soil Conservation District (MCSCD) and private landowners. Better advertise assistance to private landowners to maintain and improve soil health and to address existing resource concerns of soil, water, air, plants and animals (SWAPA) through existing best-practice programs and related opportunities already available.	Board of County Commissioners	Yes	Ongoing
10	Closely monitor all federal actions that have the potential to impact agricultural and/or ranching practices. Where potential impacts may exist, utilize all available avenues to provide County input and to ultimately eliminate or reduce the potential impact on agricultural and/or ranching practices.	States Attorney Board of County Commissioners	Yes	Ongoing

**Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.*

CHAPTER 6: HOUSING ELEMENT

INTRODUCTION

Housing demand during the plan horizon (2025) will need to cater to a maturing oil and gas industry presence and the significant growth of different segments of the population, such as families and seniors. While demand for housing in unincorporated areas of the county will not be as great as in the county's cities (especially Watford City), the experience of the past five years (2010 – 2015) has shown that there is still significant demand for housing throughout the county for both permanent rural residential living and temporary workforce housing.

PERMANENT HOUSING DEMAND

As is documented in the population, housing, and employment projections provided in the appendices, the planning area is expected to demand between 2,022 and 3,445 additional housing units by 2025. These additional housing units are separate from those expected in the cities of the county. These additional units will primarily consist of permanent single-family households.

LONG-TERM NEED FOR WORKFORCE HOUSING

North Dakota State University (NDSU) recently completed a study of the state's oil and gas industry workforce. The study involved 15 oil and gas firms and over 8,000 employees. The study showed that a majority of the non-resident workforce (those who identified as residing out of state) do not want to move to the state and prefer living in temporary workforce housing establishments (employer provided housing). The need for some level of temporary workforce housing was brought to light as a result of non-resident workforce desires. Further, temporary workforce housing does provide a relief valve to meet the desires of the non-resident workforce when development activities escalate. The provision of some temporary workforce housing also relieves demand for city apartments and therefore keeps supply and demand price adjustments in real estate in check. This helps keep the cost of housing more affordable for permanent residents and lower-wage workers.



Caption: Example of Workforce Housing in McKenzie County.

ATTRACTING WORKERS WHO WOULD LIKE TO MOVE TO THE BAKKEN

The NDSU study did show that 20 percent of workers from out of state did want to move to the Bakken. Housing cost and price risk were the main factors that influenced this group from deciding whether or not to move to the Bakken. The benefit of this finding is that the county and state can work to reduce both housing cost and price risk through governmental programs and other existing forms of assistance. Further, the improvement of quality of life elements (schools, recreational opportunities, commercial services, etc.) will only help attract those who do want to move to the Bakken and make it their home.

HOUSING PREFERENCE

The Comprehensive Plan survey was helpful not only in collecting data related to land use, but also in regards to identifying housing preferences in the county. Over two-thirds of the survey respondents noted that detached single-family housing is needed in the county. As the oil and gas industry transitions to the operations and maintenance phase through 2025 and beyond, detached single-family homes will offer a suitable residence for a more permanent workforce with an increasing number of families. Detached single family homes will also provide an alternative to the recent and ongoing development of multifamily living options available in Watford City.

Notable Survey Responses – Housing

67% chose detached single family housing as needed

77% chose either senior housing or assisted living as needed

Respondents to the Comprehensive Plan survey also chose assisted living and senior housing at relatively high percentages (35 and 43 percent respectively). The county is likely incapable of providing either senior housing or assisted living options at urban densities due to a lack of fire flow, sewer capabilities, and a lack of emergency services. In many cases, assisted living and senior housing will be better placed in an area with the appropriate infrastructure and services, such as Watford City. However, senior housing that focuses on independent living may be an appropriate development product in a county Growth Focus Area. Independent living options may be feasible at low, rural densities and with limited emergency services as is available in many unincorporated areas.



Caption: Detached single family home in a recent rural residential subdivision of the County.

GOALS AND OBJECTIVES

Goal H.1: To accommodate the demand and desire for single family households.

Objectives:

- A. Encourage the development of single family housing in growth focus areas as identified in the Land Use Element chapter.
- B. Serve as a resource to the development community in helping reduce the cost of developing single family housing.
- C. Lower the cost of single family housing to increase homeownership.

Goal H.2: To maintain high quality workforce housing developments and other housing opportunities for the temporary workforce.

Objectives:

- A. Encourage workforce housing developments to locate in Transition Areas as defined in the Growth Management chapter.
- B. Create and enforce new standards for all existing and future workforce housing developments that ensure a safe, clean, and attractive environment for development residents and the public.
- C. Collaborate with Alexander, Arnegard, and Watford City to provide a consistent, unified message to local industry and workforce housing developers and operators.

“Premium” or High Quality Workforce Housing not just a Regulatory Solution

Many temporary workforce housing providers focus on providing “premium housing” as a strategy that will focus on the other 12 hours when workers are off the job site. At a recent industry talk in San Antonio, Texas, a solutions company executive said his advice to oil and gas companies active in the Eagle Ford Shale is to think more creatively when trying to find ways to keep employees happy and on the payroll, beyond just offering them more money. Finding ways to make their lives more comfortable after a day spent working in the hot South Texas sun could be one approach, he said.

(Gronewold, Nathaniel, “Man camps’ go upscale in response to ‘absolutely abhorrent’ housing situation.” EnergyWire July 2, 2012. <http://www.eenews.net/stories/1059966723>)

Goal H.3: To recognize the need and accommodate an increasing demand of senior housing.

Objectives:

- A. Collaborate with Alexander, Arnegard, and Watford City to identify means by which each jurisdiction plans to provide senior housing opportunities.
- B. Identify and showcase Growth Focus Areas that have the potential to provide development opportunities for independent living, rural residential senior housing.

What is the difference between independent living and assisted living options?

Independent living options may be compatible with rural growth in the unincorporated county where the level of emergency services is relatively low compared to a city. Assisted living facilities require a higher level of emergency service availability and are more appropriate to be located in a city rather than an unincorporated community.

HOUSING IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	Utilize Growth Management Checklist C (temporary workforces housing) in pre-application meetings with temporary workforce housing developers. Checklist C is provided within the Land Use Element.	Planning and Zoning Department	No	Ongoing
2	Amend the Zoning Ordinance's temporary crew housing standards by working with local industry, local jurisdictions, workforce housing operators, elected officials, and the public to set new standards.	Planning and Zoning Department	Yes	Short-term
3	Work diligently to bring existing, substandard workforce housing developments into compliance with the revised workforce housing standards.	Planning and Zoning Department	Yes	Ongoing
4	Creatively utilize all planning and zoning tools necessary to work with substandard workforce housing operators to achieve compliance with the revised workforce housing standards.	Planning and Zoning Department	Yes	Ongoing
5	Provide and assist the development community with state and federal housing program information geared towards reducing the cost of single family home development. Advertise available programs, such as: <ul style="list-style-type: none"> • NDHFA Rural Housing Development Loan Program • Construction Loan Guarantee Program • Law Enforcement Housing Pilot Program • Community Development Block Grants for community water and sewer 	County Housing Authority (County Housing Coordinator)	Yes	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
6	<p>Provide and assist home owners and prospective home owners with state and federal housing program information geared towards reducing the cost of single family home ownership. Advertise available programs, such as:</p> <ul style="list-style-type: none"> • USDA Single Family Home Ownership Direct Loans • USDA Single Family Home Ownership Guaranteed Loans • HOME Program 	Housing Authority (Housing Coordinator)	Yes	Ongoing
7	Work with the cities and continuously track the availability of permanent construction rental properties available in the county (including the cities) to provide local industry with options in providing housing for their workforce.	Housing Authority (Housing Coordinator)	Yes	Ongoing
8	<p>Meet with the cities on at least an annual basis to discuss the following:</p> <ul style="list-style-type: none"> • Industry workforce housing needs and strategies. When a demand is identified, devise a strategy that considers all jurisdictions in addressing the demand. • Ways in which the cities and the county can work together in providing housing for the elderly population. For example, assisted living options are likely most feasible with municipal infrastructure and service, whereas independent living options may be feasible without municipal infrastructure and services. 	Housing Authority (Housing Coordinator), Planning and Zoning Department	Yes	Ongoing
9	Devise the means through which opportunities in the county for independent living, rural residential senior housing development can be advertised to the development community.	Housing Authority (Housing Coordinator), Planning and Zoning Department, and Economic Development	Yes	Mid-term

*Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.

CHAPTER 7: INFRASTRUCTURE SERVICES ELEMENT

INTRODUCTION

This chapter covers the infrastructure necessary to service existing and new growth, with the exception of roads (see the Transportation Chapter). Focused on the unincorporated county, these services largely include public water, individual sewer/septic, electric transmission, fire protection, law enforcement, and schools. Many of these services are provided by the county and have faced significant challenges in the past few years as record growth has tested the capacities of services such as rural water (Water Resource District) and law enforcement. Privately-owned services have also faced similar challenges, including providers such as McKenzie Electric. The slowdown in oil and gas development beginning in 2015 allows the county to better plan and coordinate future growth so that the infrastructure services necessary for such growth can be organized to meet future needs.

LONG-TERM WASTEWATER ISSUES

The expansion of individual wastewater systems, in addition to small community systems, has had to keep pace with recent growth. The proliferation of wastewater collection systems is most concerning from a maintenance perspective—such a high number of privately owned systems places the responsibility for maintenance on individual homeowners. The state, through the Upper Missouri District Health Unit, is charged with the enforcement of state law relating to the proper installation and use of private septic systems. Both the state and the county currently do not actively monitor private septic systems. In the long-term, the proper maintenance of private septic systems will need to be achieved in order to ensure that local groundwater supply quality is not jeopardized.

Notable Survey Responses – Wastewater Services

Over two-thirds of the Comprehensive Plan survey respondents utilize private septic systems for wastewater disposal.

Community wastewater package treatment systems have also been utilized in the county to accommodate the wastewater demands of temporary workforce housing facilities. The state Department of Health is responsible for the enforcement of state law relating to proper installation and use of community wastewater systems. Ongoing enforcement of state regulations regarding community wastewater treatment will be very important through 2025 in order to ensure these large privately-owned systems are properly maintained. For temporary workforce housing facilities that do face the possibility of closure, the proper removal of these private community wastewater systems will also be vital.

PUBLIC WATER SYSTEM LIMITATIONS

Even with the extensive growth and the system that is now in place, the Water Resource District (WRD) still is a rural water system with limited water pressure for fire protection needs, and there are many areas with limited capacity for new development. Near-term improvements will help provide capacity to previously unserved areas, but new subdivisions of significant size will still need to be strategically placed to be provided with sufficient capacity or will need to provide system improvements to support the demands of new development. The WRD has no plans to provide fire flow in any service areas, thus new development must provide adequate provisions for fire suppression, such as local “bladders” (storage tanks) for fire truck use. It should be noted, however, that all of the Growth Focus Areas identified in the Comprehensive Plan Land Use Plan are currently served or will be served in the near future by either WRD or Southwest Water Authority (SWA) water.

Long-term needs for Western Area Water Supply Authority (WAWSA), WRD, and SWA were recently outlined by Comprehensive Plan Update Steering Committee members. The following issues were noted:

- The two top long-term funding priorities for the WRD are pipe upgrades and additional storage.
- WAWSA’s only connection to McKenzie County is a single pipeline underneath the Missouri River from the treatment facility in Williams County. A second pipeline is needed to augment capacity and to safeguard against the risk of infrastructural failure.
- SWA capacity in McKenzie County is very limited. The addition of new growth and certainly the build-out of the Comprehensive Land Use Plan in the southeastern portion of the county may require significant SWA capacity improvements.

RURAL FIRE PROTECTION AND NEW DEVELOPMENT

The county’s ability to provide fire protection services is greater in and near major population centers, such as Watford City or East Fairview. As distance from the regional fire stations increases, fire district has less ability to serve development—this is true for areas such as Tobacco Gardens or along the county’s northern bypass of US 85. The level of fire protection provided relates to insurance rates for homeowners. The Insurance Service Organization (ISO) grades communities on their fire protection on a scale of 1 to 10, where a Class 1 rating is superior and a Class 10 does not meet standards. The lower the rating, the lower the insurance cost. The ISO rating reviews fire station locations, response times, emergency dispatch centers, fire department resources, and water system capabilities. The adoption and enforcement of fire codes is also reviewed to ensure that safety standards are being applied appropriately. It is estimated that the majority of unincorporated McKenzie County currently has an ISO rating of 8 or 9. Watford City is currently rated ISO 7.

In regards to fire protection, new development in McKenzie County is primarily reviewed to ensure emergency access can be reasonably accomplished and, depending on the scale of development proposed, water storage is provided in lieu of fire hydrants for fire suppression. Building codes are also reviewed to ensure building/structure construction

considers fire safety issues.

GOALS AND OBJECTIVES

Goal IS.1: To collaborate with the state to ensure proper wastewater disposal.

Objectives:

- A. Increase engagement with the Upper Missouri District Health Unit to enhance compliance with state regulations of individual septic systems.
- B. Increase engagement with the Upper Missouri District Health Unit to encourage residents' long-term care of individual septic systems.
- C. Enhance coordination with the State Department of Health to ensure that all private wastewater disposal systems (defined by NDCC as serving 25 persons or more) are effectively regulated to protect local groundwater and private property.

Goal IS.2: To ensure that non-oil and gas development is served by rural water providers to the greatest extent feasible.

Objectives:

- A. Rural water providers must provide verification regarding whether or not the provider can service the proposed development at build-out.
- B. The cost of additional rural water capacity necessary for new development should be borne solely by the developer.
- C. New development should be encouraged to be located no more than one-half mile from an existing rural water connection.
- D. New development and new home owners are encouraged to reduce water demand and maximize efficiency through the use of water-conserving devices (appliances, plumbing fixtures, etc.) and irrigation practices (drought-hardy lawns, drip-irrigation, etc.).
- E. Existing development currently served by individual wells is encouraged to be added to a rural water system.
- F. Continue to pursue grant funds from the federal and state governments to expand County rural water systems and to reduce the cost to individual users.

Goal IS.3: To protect the county's primary source of public water, the Missouri River, from negative impacts of intensifying development.

Objectives:

- A. Coordinate with all applicable state agencies and the federal government as necessary to protect the watershed from illegal development activities that may negatively impact the watershed.



B. Pursue the maximum extent of punishment allowed by law of any illegal activity that may result in a negative impact upon the Missouri River watershed.

Goal IS.4: To ensure that new development maintains or improves upon the planning area's fire protection service capabilities.

Objectives:

- A. Ensure that new development provides fire suppression capabilities in coordination with the rural water provider and meets the needs of the proposed development.
- B. For new development that cannot be reasonably serviced by local fire protection service providers, the developer shall prove that the proposal includes measures to mitigate the risk of explosions and fire, as well as includes adequate measures to respond to potential emergencies.

Goal IS.5: To create communities that are safe and family-friendly.

Objectives:

- A. Promote implementation of Crime Prevention through Environmental Design principles.

Crime Prevention through Environmental Design is a multi-disciplinary approach to deterring criminal behavior through development design. Development design strategies include facets such as:

- Natural surveillance – focus residential development to face public places, such as schools.
- Natural access control – control the point of entry to public places, such as making multiuse path entrances obvious and unique.
- Maintenance – enforce ordinance provisions that help ensure property maintenance, thereby increasing the expression of property ownership.

INFRASTRUCTURE SERVICES IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	As part of the planning and zoning application process, require that applicants strive to obtain comments from the appropriate rural fire district. Ensure that all planning and zoning applications include a stand-alone emergency response plan that accounts for potential hazards and emergencies. Rural water supply does not provide fire suppression capabilities. Alternative means of fire suppression is needed, typically achieved through onsite storage.	Planning and Zoning Department	No	Ongoing
2	As part of the subdivision application process, require that applicants strive to obtain comments from the appropriate rural water provider on the provider's ability to service the proposed development at build-out. Do not approve subdivisions that are unable to prove the ability to service the entire development at build-out with public water supply. All will-serve letters that guarantee a certain amount of water supply will have an expiration date.	Planning Zoning Department McKenzie County Water Resource District	No	Ongoing
3	Prioritize ordinance enforcement activities on illegal activities involving impacts to streams and lakes. Illegal activities in close proximity to streams and lakes should also be prioritized. Where practicable and where different jurisdictions may be involved, involve state and federal agencies in enforcement activities.	Planning and Zoning Department	No	Ongoing
4	Subdivision applications that involve recreational aspects, school sites, school bus stops, and/or other school access must incorporate Crime Prevention through Environmental Design (CPED) principles. Work with applicants prior to application submittal to incorporate CPED principles in development design.	Planning and Zoning Department	No	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
5	Utilize Development Agreements as a tool to ensure necessary water system improvements are made in order to service new development.	Planning Zoning Department McKenzie County Water Resource District	No	Ongoing
6	Provide with issuance of the Occupancy permit information on low-cost and low-water use landscaping practices.	Building Department	Yes	Ongoing
7	As much as feasible, support efforts by the Western Area Water Supply Authority, McKenzie County Water Resource District, and Southwest Water Authority to access grant funding to expand rural water systems, capacity, and to reduce the cost on individual homeowners.	Board of County Commissioners	Yes	Ongoing
8	To cover wastewater concerns, reach out to the State Department Health to involve the Department with ongoing monitoring and enforcement of temporary workforce housing establishments.	Planning Zoning Department	Yes	Ongoing
9	Incorporate individual septic system maintenance information with issuance of building occupancy permits. Coordinate with the Upper Missouri District Health Unit for the provision of materials.	Building Department	Yes	Ongoing

*Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.



CHAPTER 8: IMPLEMENTATION ELEMENT

RESPONSIBILITY TO IMPLEMENT

In order for the Comprehensive Plan to be useful and relevant, it must be implemented. It will be the responsibility of county staff and leaders to systematically align/update county regulations, processes, and intergovernmental relationships to carry out the goals and objectives of the Comprehensive Plan. In carrying out this effort, the built environment of the county will, over the long term, be further realized as envisioned in the Plan.

GUIDE FOR DAILY DECISION-MAKING

The county should consider the 2025 Comprehensive Plan in its decisions, such as decisions regarding infrastructure improvements, zoning ordinance amendments, and projects and programs to implement relating to the use of land. The development community should incorporate the broad concepts and policies of the plan so that their efforts become part of a meaningful whole in planning and developing in the county.

A SOUND, YET FLEXIBLE GUIDE

The 2025 Comprehensive Plan is intended to be a dynamic planning document for McKenzie County — one that responds to changing needs and conditions. The full benefits of the plan can only be realized by maintaining it as a vital, up-to-date document. As changes occur and new issues within the county become apparent, the plan should be revised. By such action, the plan will remain current and effective in meeting the county's decision-making needs.

Plan amendments should be made after thorough analysis of immediate needs, as well as consideration for the long-term effects of proposed amendments. The County Commission and other county officials should consider each proposed amendment carefully to determine whether or not it is consistent with the plan's intent and whether it will be beneficial for the long-term health and vitality of the county.

IMPLEMENTATION ACTIONS

The Implementation Table found at the end of each chapter outlines specific actions necessary to implement the Plan. The table identifies each implementation action, the county entity or entities responsible for carrying out the action, whether or not the action will require new costs or an increase in staff time, and the priority for each action item. There are three different types of implementation actions listed and can be categorized as outlined in Table 8-1.

Table 8-1: Types of Implementation Actions and Examples

TYPES OF ACTIONS	EXAMPLES
County Programs, Regulations, Studies, and Other Plans	<ul style="list-style-type: none"> ▪ Zoning ordinance amendments, ▪ Economic development strategies, ▪ Home Rule county benefit analysis, ▪ Highway bypass preservation program/policies, ▪ Plan for heavy truck movements, and ▪ Enforcement program to protect water resources

Many Plan objectives and action items focus on the need to amend existing county regulations, such as those found in the Zoning Ordinance or Subdivision Resolution. Other objectives and actions items focus on the need to create new strategies or plans with a specific goal, such as an economic development strategy focused on attracting specific segments of the oil and gas industry.

Planning and Zoning Process	<ul style="list-style-type: none"> ▪ Pre-submittal meetings with planning and zoning applicants to review growth management checklists, ▪ Developer assistance with state and federal grant opportunities, ▪ Analysis of potential development impacts on agriculture/ranching areas, ▪ Reversion of “paper subdivisions” to working agricultural land
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Carrying out many of the objectives and action items of this Plan will require changes in how the business of the county is conducted by county staff and leaders. For example, Planning and Zoning Department staff will need to meet often with applicants prior to application submittal to convey the importance of development location and consistency with Plan objectives. Different county departments will need to work together efficiently to accomplish many tasks, such as the eventual reversion of “paper subdivisions” back to working agricultural lands.

Relationships with other Governmental Entities	<ul style="list-style-type: none"> ▪ Rural water provider coordination ▪ City-County temporary housing committee ▪ State coordination related to sand and gravel mining ▪ State and federal coordination to advertise recreational assets ▪ State coordination related to private wastewater system maintenance
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Relationships outside of the county courthouse will be invaluable in furthering the goals and objectives of the Plan. The fact is that many governmental entities other than the county either control or have a strong influence on the use of land in McKenzie County. Therefore, in order to carry out this Plan, county staff and leaders need to consistently reach out and build lasting relationships with these entities to bring about the change desired by the county. These entities include numerous state and federal agencies, along with the local cities and townships.

Goal IM.1: To ensure that the Comprehensive Plan serves as a relevant, practical guide to future growth and related change in the county.

Objectives:

- A. Uphold the integrity of the Plan by limiting Plan amendments to the Comprehensive Plan Map and the Policy Document and ensuring that each amendment undergoes considerable evaluation and scrutiny.
- B. Regularly review the Plan to assess the progress of Plan implementation.
- C. Make adjustments to the Plan as necessary to ensure that the Plan is relevant to changing conditions, such as growth cycles, regulatory changes, and environmental conditions.
- D. All planning and zoning applications, as well as Zoning Ordinance amendments, must be consistent with the Comprehensive Plan Map designations and the goals and objectives of the Plan.

IMPLEMENTATION ACTIONS

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
1	On an administrative basis, the Planning and Zoning Department shall establish and update as necessary a checklist that evaluates development applications based on consistency with the Comprehensive Plan Map and Plan goals and objectives (see the Growth Management Checklists at the end of Chapter 2).	Planning and Zoning Department	Yes	Ongoing
2	On an administrative basis, the Planning and Zoning Department shall establish and update as necessary a table that identifies which zoning districts are consistent with the Comprehensive Plan Map designations (the table is provided at the end of Chapter 2).	Planning and Zoning Department	Yes	Ongoing
3	Limit amendments to the Comprehensive Plan Land Use Map and the Policy Document to no more than two per calendar year.	County Commission, Planning and Zoning Department	No	Ongoing

PRIORITIZATION	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
4	<p>The Planning and Zoning Department shall conduct a review of the Comprehensive Plan in its entirety on an annual basis. The annual review shall consist of a formal report addressing the following items, at a minimum:</p> <ul style="list-style-type: none"> • The County's progress in implementing the Plan • Changes in the conditions that form the basis of the Plan • Changes to County's regulations or programs • Adjustments of Comprehensive Plan priorities • Internal consistency of the Plan • Changes in State laws <p>The annual Plan review report shall be presented to the Planning and Zoning Commission and County Commission for ultimate acceptance and direction.</p>	<p>County Commission, Planning and Zoning Commission, Planning and Zoning Department</p>	<p>Yes</p>	<p>Ongoing</p>
5	<p>The Comprehensive Plan shall undergo an in-depth review and update every five years. The process shall begin with the establishment of a Steering Committee. The Planning and Zoning Department shall coordinate with the Steering Committee at the beginning of the process to identify what elements, or components of the Plan should be recommended to the Planning and Zoning Commission, and ultimately to the County Commission for an update. The Comprehensive Plan should not be updated in its entirety unless deemed necessary by the County Commission after review by staff, the Steering Committee, and the Planning and Zoning Commission.</p>	<p>County Commission, Planning and Zoning Commission, Planning and Zoning Department, Steering Committee</p>	<p>Yes</p>	<p>Mid-term</p>

**Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.*

TOP IMPLEMENTATION ACTIONS BY ELEMENT

ELEMENT	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Land Use	Upon initial contact with project applicants, convey the importance of project location and encourage consistency with the Comprehensive Plan Map. Recognize the proposal location and inform applicants of any proximity concerns with important natural assets (i.e. National Park, Little Missouri River, etc.)	Planning and Zoning Department	No	Ongoing
Transportation	Prepare a County-wide Transportation Improvement Plan and Long- Range Transportation Plan (20 years) that sets the stage for the County Capital Improvement Plan. The Plan shall establish priorities and help decision makers make the best use of their limited transportation resources.	Planning and Zoning/ Public Works Departments	Yes	Short-term

ELEMENT	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Economic Development <ul style="list-style-type: none"> ▪ Agriculture ▪ Recreation ▪ Retail Commercial ▪ Residential 	Coordinate with State Department of Agriculture as needed to promote and market the County's agricultural products within the rest of North Dakota and the greater region (Montana, South Dakota, Minnesota). Take advantage of opportunities to promote and market county agricultural products at local events (i.e. downtown Watford City events).	Economic Development	Yes	Ongoing
	Collaborate with the National Park Service, State Department of Commerce (Tourism), and the hiking, backpacking, and wildlife-watching industries to advertise the North Unit of Theodore Roosevelt National Park and adjacent National Grassland areas on a national and international level.	Economic Development	Yes	Ongoing
	Create an inventory of specific future highway commercial development locations based on annual average daily trips (AADT, measure of traffic). For each site, develop a preliminary list of public infrastructure needs, such as highway safety improvements, water, and sewer services. Collaborate with NDDOT and the county's cities for any sites identified within the area of county/city shared jurisdiction.	Economic Development Planning and Zoning Department	Yes	Short-term
	Require new residential subdivisions to protect areas with slopes above 30 percent, bluff-tops, streams, and wetlands. Encourage the protection of wooded areas to the maximum extent feasible. Strive to have new development utilize natural areas as part of the development's storm water control system and recreational system.	Planning and Zoning Department	No	Ongoing
Agriculture	Limit minimum parcel sizes in the agricultural zone to 40 acres (1/16 section).	Planning and Zoning Department	No	Ongoing
Housing	Utilize Growth Management Checklist C (temporary workforces housing) in pre-application meetings with temporary workforce housing developers.	Planning and Zoning Department	No	Ongoing

ELEMENT	IMPLEMENTATION ACTIONS	PARTIES RESPONSIBLE	NEW COSTS/ STAFF TIME?	*TIME FRAME
Infrastructure Services	As part of the planning and zoning application process, require that applicants strive to obtain comments from the appropriate rural fire district. Ensure that all planning and zoning applications include a stand-alone emergency response plan that accounts for potential hazards and emergencies. Rural water supply does not provide fire suppression capabilities. Alternative means of fire suppression is needed, typically achieved through onsite storage.	Planning and Zoning Department	No	Ongoing
Implementation	On an administrative basis, the Planning and Zoning Department shall establish and update as necessary a checklist that evaluates development applications based on consistency with the Comprehensive Plan Map and Plan goals and objectives (see the Growth Management Checklists at the end of Chapter 2).	Planning and Zoning Department	Yes	Ongoing

**Short-term is 1-2 years, mid-term is 3-5 years, and long-term is 6-10 years.*

CHAPTER 9: GLOSSARY

INTRODUCTION

The Glossary contains an alphabetical listing defining terms as they are applied in the context of the Comprehensive Plan. These terms are not intended to be the same definitions as used in the county's Zoning Ordinance, but rather are intended only to explain terms used in the Plan.

Additional Area

Areas within the county's planning and zoning jurisdiction which are not established within either a Growth Focus Area or Transition Area.

Farmland of Statewide Importance

Farmland that is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.

Fire Protection Districts

A specific geographical area where a fire department or multiple departments are committed to providing services.

Growth Focus Area

Areas defined by the county where future permanent development will be directed in an orderly, contiguous, and cost-efficient manner.

Industry Establishment

A single physical location where a business is conducted or where services or industrial operations are performed.

Institutional-Type Uses

Religious institutions, non-profit facilities, museums, public and private schools, and all types of government facilities fall under this category.

Median Household Income

A division between the household income distribution into two equal groups, one having household incomes above the median, and other having household incomes below the median.

Oil and Gas Gross Production Tax

A tax imposed in lieu of property taxes on oil and gas producing properties. Currently, five percent is applied to the gross value at each well where oil is produced, except royalty interest in oil produced from a state, federal or municipal holding and from an American Indian holding within the boundary of a reservation. The tax on gas is an annually adjusted flat rate per million cubic feet of all nonexempt gas produced in the state. The annual adjustments are made according to the average producer price index for gas fuels.

Prime Farmland

Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. [SSM, USDA Handbook No. 18, October 1993]

Temporary Workforce Housing

One or more lodging units providing housing for more than two workers who are not related to the landowner by blood, marriage, or adoption, and that are intended to be used for a limited period of time. A temporary workforce housing may also be referred to as a man camps, crew camps, or work camps. Temporary workforce housing may include the use of skid units, travel trailers, recreational vehicles, campers, mobile homes, park models, modular homes or any combination of these.

Transition Area

Designated areas where existing and future light industrial and temporary workforce housing establishments may be allowed to operate.

