

Introduction

Vision

The vision for the Joint Jurisdiction area is to provide opportunities for the planned and thoughtful growth in the Joint Jurisdiction area. This will be accomplished by enhancing the visual quality of the County and the City, protecting natural resources, ensuring the health and safety of its citizens, and by providing and planning for growth infrastructure.

This Comprehensive Plan attempts to capture the essence of the vision for collaboration between the County and City. Future actions by the County, City, and landowners will mold and change the details of this vision over time, with this Comprehensive Plan as a framework to guide them.

Comprehensive Plan Overview

The Comprehensive Plan provides a framework for anticipated land-use and growth management policies and recommendations. It is designed to be a dynamic and flexible process to accommodate the changing needs of a population, yet steady enough to allow for reasonable long-term investment strategies by both public and private sectors. To the greatest extent possible, future planning for the Clay County/Vermillion Joint Jurisdiction area should involve the public and elected officials throughout the planning and implementation phases.

The Clay County Board of Commissioners and the City of Vermillion City Council have jointly adopted this document in accordance with state law. In developing this Comprehensive Plan, the Clay County and City of Vermillion Planning Commissions have used background research, detailed inventories and assessments, and discussion sessions at Planning Commission, County Commission, and City Council meetings and public hearings. This Comprehensive Plan is intended to guide Clay County and the City of Vermillion in their implementation of zoning regulations, subdivision regulations, capital improvement plans and other related policies as deemed necessary by the County Commission, City Council, and Planning Commissions.

The Comprehensive Plan is a general guideline. It is intended to guide the County, and the City, in the implementation of zoning regulations, subdivision regulations, capital improvements plans and other related policies. This shall not remove the requirements of SDCL 11-2-17.3, and SDCL 11-4-4.1 to consider the “... *stated criteria, the objectives of the comprehensive plan, and the purpose of the zoning ordinance and its relevant zoning districts when making a decision to approve or disapprove a conditional use request.*”

Purpose

There are three primary purposes of this document:

1. To address the planning requirements of state law while also providing a sound and logical basis for growth management strategies.

2. To provide some predictability about the potential land uses and timing of development so that both public and private sectors can make informed decisions in the area of real estate and capital investments.
3. To provide the Planning Commissions, County Commission, and City Council with policies for future planning decisions and the methods and justifications to control land use through the zoning and subdivision ordinance, the capital improvement programs, and other enforcement controls.

Additionally, there are five supplemental purposes of this document:

1. To improve the physical environment of the area as a setting for human activities and investments.
2. To promote the public interest of the area at large.
3. To facilitate the democratic determination and implementation of policies on physical development utilizing professional and technical knowledge.
4. To affect political and technical coordination in development of the area; to be effective, coordination must occur across governmental jurisdictions.
5. To balance short term decisions with long term considerations during the lifespan of this document.

Authorization Under State Law

Under 11-2-11 of South Dakota Codified Laws, the Planning Commission of a county is directed to *"prepare, or cause to be prepared a comprehensive plan for the county..."* pursuant to South Dakota Codified Laws 11-2-12 which *"... shall be for the purpose of protecting and guiding the physical, social, economic, and environmental development of the county..."*.

Under 11-6-14 of South Dakota Codified Laws, the Planning Commission of a municipality is directed to *"propose a plan for the physical development of the municipality, including any areas outside the boundary and within its planning jurisdiction which, in the commission's judgement bear relation to the planning of the municipality..."*

Under 11-6-11 of South Dakota Codified Laws, the governing bodies *"...shall meet jointly and hold at least one public hearing to consider the recommendations of the planning commissions on the comprehensive plan for the joint jurisdictional area. ..."* and the *"Adoption of the comprehensive plan shall be by resolution of each governing body."*

Area of Planning Jurisdiction

Land use decisions in the Clay County/City of Vermillion Joint Jurisdiction area shall, under South Dakota statutes, be heard during joint meetings of both governing bodies. The extent of the boundaries of the Clay County/City of Vermillion Joint Jurisdiction area is depicted in Figure 1-1.

Public Involvement

Hold section for information on public input meetings.

Appropriate Use of the Comprehensive Plan

South Dakota law requires that zoning districts must be in accordance with the Comprehensive Plan. It is the intent of this document to show the most appropriate use of land within the study area based on the potential for growth and development of the area.

The Comprehensive Plan recognizes the ever-changing marketplace and the need to remain poised to meet those changes. Major new development opportunities may arise during the planning period, which were not foreseen during the development of this plan. In addition, major economic development or social changes may arise within the planning period. Such significant developments or changes would likely impact many elements of the Plan. As land use decisions arise that deviate from the Comprehensive Plan, the Planning Commissions shall make recommendations to the Clay County Board of Commissioners and the City of Vermillion City Council, which shall jointly consider a resolution amending the Comprehensive Plan.

Demographic Conditions

This Chapter examines aspects of the demographic, social and economic characteristics of the joint-jurisdiction area. By understanding the makeup of its populations, local leaders are then better prepared to plan the future needs of its citizens.

Population and General Demography

The population for the Joint-Jurisdiction area was calculated by subtracting the City of Vermillion’s population from that of Census Tracts 9657 and 9659. This area does not perfectly follow the area encompassed by the Joint-Jurisdiction Area; however, it provides as accurate of a picture as was possible given the available data.

According to the calculated population the number of people living in the Joint-Jurisdiction area increased by 96 persons between 2000 and 2010. It is expected that the population will increase again in the 2020 Census as there have been several building permits issued for the area since the 2010 Census.

Table 2-1: Demographic Statistics (Source: U.S. Census Bureau)

	Joint-Jurisdiction Area	Vermillion	County	South Dakota
2000 Population	300	10,276	13,537	754,844
2010 Population	396	10,571	13,864	814,191
2000-2010 % Change	32.0%	2.87%	2.42%	7.82%
Median Age (2010)	-	23.4	25.0	36.9
Median Household Income (2010)	-	\$30,534	\$37,198	\$46,369

Table 2-2: Joint-Jurisdiction Area New Home Permits 2015-2015 (Source: Clay County Planning and Zoning)

	2015	2016	2017	2018	2019
New Home Permits	3	4	4	3	7
Estimated Construction Cost	\$ 66,475	\$ 1,287,773	\$ 1,392,835	\$ 1,042,486	\$1,425,813

Age

Table 2-3 below displays the age distribution of the Joint-Jurisdiction area residents in 2010. The largest age cohort is the 35 to 54 year olds followed by 5 to 17. This age distribution is to be expected in an area such as this since would be considered step-up homes that would be larger and more expensive. As such the inhabitants would need to be more financially secure, thereby being in the prime working-age group and would include their school-aged children.

Table 2-3: Population by Age (Source: U.S. Census Bureau)

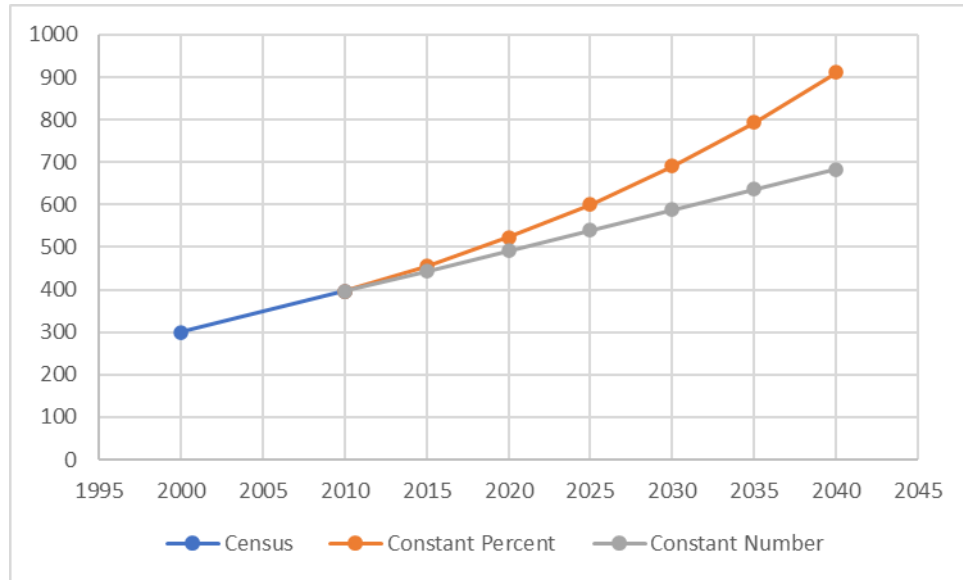
	2010 Population by Age	Percent of 2010 Population
Under 5	18	4.5%
5 to 17	86	21.7%
18 to 24	28	7.1%
25 to 34	48	12.1%
35 to 54	107	27.0%
55 to 64	51	12.9%
65 to 74	35	8.8%
75 and over	23	5.8%

Population Projections

According to the U.S. Census Bureau the population of the Joint-Jurisdiction area was 300 in 2000 and was 396 in 2010. This represents a population increase of 32.0% or 96 persons. To calculate the potential future population an assumption is being made that the population trend that existed between 2000 and 2010 will continue. With this assumption there are two methods to calculate future growth, constant percent or constant number increase. The average annual growth rate would be 2.82% while the constant number would be 9.6 persons. Given these methods the population in the Joint-Jurisdiction area could be between 684 and 912 by 2040.

Table 2-4: Population Projections

	Census	Constant Percent	Constant Number
2000	300		
2010	396		
2015		455	444
2020		523	492
2025		601	540
2030		691	588
2035		794	636
2040		912	684



Economic Conditions

The largest employment industry in the Joint-Jurisdiction area is manufacturing followed by agriculture, while education and health care are third. There are no major employers located within the Joint-Jurisdiction area, so most residents employed outside of the home likely work in the City of Vermillion.

Table 2-5: Employment by Industry 2010 (Source: U.S. Census Bureau)

Industry	Count	Percentage
Agriculture, forestry, fishing and hunting, and mining	68	23.94%
Construction	0	0.00%
Manufacturing	74	26.06%
Wholesale trade	0	0.00%
Retail trade	24	8.45%
Transportation and warehousing, and utilities	0	0.00%
Information	12	4.23%
Finance and insurance, and real estate and rental and leasing	0	0.00%
Professional, scientific, and management, and administrative and waste management services	47	16.55%
Educational services, and health care and social assistance	50	17.61%
Arts, entertainment, and recreation, and accommodation and food services	9	3.17%
Other services, except public administration	0	0.00%
Public administration	0	0.00%

Development Constraints

This Chapter examines the presence of environmental and man-made constraints to provide background reference information for County and City leaders which they may consult when making decisions regarding future development. It should be noted that environmental and man-made constraints identified in this Chapter, including but not limited to wetlands identified on the National Wetland Inventory, flood plains identified by the Federal Emergency Management Agency (FEMA), soil suitability, and location of gas lines will present constraints to future development. Some significant natural features/areas exist in the Joint-Jurisdiction area.

Physical Geography

The Clay County/Vermillion Joint-Jurisdiction area covers about 10,500 acres outside of the corporate limits of Vermillion. The area is primarily relatively flat agricultural land that is bisected by a steep ridge. The elevation on the north side of the ridge is around 1,240 feet above sea level and drops to 1,140 feet above sea level on the south side of the ridge.

Floodplains

Floodplains are areas adjacent to creeks, rivers and lakes that are subject to periodic inundation by flood waters. This inundation can be caused by rapid snowmelt, heavy rain, or a combination of both. Any development in floodplain or floodways, also known as special flood hazard zones, needs to be carefully considered so as not to increase the duration or extent of a potential flood event as well as to avoid damage to property or injury to people. FEMA has identified areas of special flood hazard in the Joint-Jurisdiction area. The areas of flood hazard area primarily in the valley of the Vermillion River. The floodplains of the Clay County/Vermillion Joint-Jurisdiction area are shown on Figure 3-1. This map shows the floodplains as identified in the 2019 FEMA model. The FIRM maps based on this model have not yet been officially adopted by the local government. However, it is important to show this information as the flood hazard areas are more extant therefore there needs to be more consideration of appropriate development locations.

Wetlands

The *National Wetlands Inventory* was used to identify the general location of wetlands. These are considered areas of high constraint and importance because of their value for habitat, groundwater recharge, and surface water storage and filtration. They are generally regulated by State and Federal agencies. These natural resources provide a number of functions that are important to the health and welfare of the community. The wetlands of the Clay County/Vermillion Joint-Jurisdiction area are shown on Figure 3-1.

Man-Made Constraints

There are certain features in the existing built environment that can be a constraint on future development. These features can include oil and gas lines that have an easement that cannot be

built on, telecommunication towers that have a setback from certain land uses for safety, or railroads that can have a larger right-of-way, cause noise pollution, and have limited ability to cross over. The man-made constraints of the Clay County/Vermillion Joint-Jurisdiction area are shown on Figure 3-2.

Soils

There may be some developmental concerns in the Joint-Jurisdiction area due to soil constraints. Development should be limited due to these constraints such as high water, poor drainage, and unstable soils. Poor surface drainage causes storm drainage and street maintenance problems, while the high-water table creates problems with basement sumps and septic drain fields. The soils data comes from the United States Department of Agriculture, Natural Resource Conservation Service via the Web Soil Service. Figure 3-3 shows the soil limitations of the area as they pertain to residential dwellings and small commercial buildings. Severe limitations are illustrated in red and represent those soils that would require special design to overcome. Most of these soils are impacted by likelihood of the location to flood. Somewhat Limited soils (yellow) represent soil properties or site features that are not favorable for the indicated use and special planning, design, or maintenance may be needed to overcome or minimize the limitations. Not Limited soils (green) indicate land that would likely encounter no development issues due to the soil's properties.

Infrastructure Assessment

A. TRANSPORTATION

Transportation planning for streets and roads begins with understanding the relationship between land use and road network. Streets and roads balance between the functions of mobility and land access. Mobility is the primary function of the interstate highway network. Land access to farms and residences is the primary service of local roads. In between these two extremes mobility and land access vary depending on the function of the road network.

Functional classification is the process of grouping streets and roads into classes according to the function they are intended to provide. Listed below is the functional classification system used by Clay County in the Joint Jurisdiction area. The classification is according to the rural systems classification as developed by the Federal Highway Administration. The City follows a similar classification method for streets within City limits.

1. Principal Arterials – Roads in this category usually serve longer trips, carry the highest traffic volumes, connect larger urban areas, provide minimal land access, and include both interstate and non-interstate principal arterial highways.
2. Minor Arterials - Roads within this classification generally connect centers of population with commercial/industrial centers. These interconnect the principal arterials, provide slightly less mobility and slightly more land access.
3. Major Collectors – These provide both land access and traffic circulation connecting areas not served by arterials and connecting traffic generators like schools, shipping points, county parks, and important mining and agricultural areas more directly to residential areas.
4. Minor Collectors – The purpose of this category is to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road.
5. Local Roads - Streets in this class offer the most access to properties with little regard to mobility. They provide direct access to adjacent land and to the highest classified roads and serve short trips. The majority of future development in the Joint Jurisdiction area would likely be served by local roads.

There are approximately 43 miles of roads in the Joint Jurisdiction Area. Approximately 15 miles belong to the State, 12 miles belong to the County, 16 miles belong to Townships, and about half a mile is a private road district. About 25 miles are hard surfaced with the remaining 18 miles are gravel.

B. WATER FACILITIES

Water service for the Joint Jurisdiction Area is currently provided by Clay Rural Water System (CRWS). Since its creation in 1975, CRWS has been providing water to areas of Clay County outside City limits, two-thirds of Union County (northwest portion), a portion of Yankton County and small parts of rural Lincoln and Turner Counties.

CRWS is composed of two Water Treatment Plants, with one in Clay County and one in Union County, one ground storage reservoir, six water towers, five booster stations and is interconnected with two other water systems. CRWS currently has three interconnections with the City of Vermillion municipal water system, two of these are active. The other interconnection is near Beresford. These interconnected systems serve as a back-up water supply should peak usage be reached or if there is a need to repair or replace portions of the rural water system.

The City of Vermillion obtains its water supply from underground aquifers. The City maintains five (5) functioning wells, all south of the bluff, which tap into the aquifer. The water is pumped from the wells to the Melvin D. Stieglmeyer Water Treatment Facility. The treatment facility was built in 1972 and has a firm treating capacity of 3.6 million gallons per day (MGD). The current system has the capability to support an increased demand since the average water usage in this system is 1.05 MGD. Additionally, the City has a one and a half million gallon ground storage reservoir, and two 500,000-gallon water towers.

C. WASTEWATER FACILITIES

There are no rural sanitary districts currently in the Joint Jurisdiction Area. All residences and other buildings with bathroom facilities would operate their own septic tank.

The City of Vermillion maintains an activated sludge wastewater treatment facility that opened in 1985 and has undergone significant improvements over the years. The treatment facility is designed to accommodate flows of 2.0 MGD, with peak flows up to 4.0 MGD. There is growth capacity in this system as the average wastewater flow is 1.2 MGD. To accommodate growth to the north and east of current City Limits a sanitary sewer lift station and trunk lines would likely be necessary.

D. ELECTRIC FACILITIES

Clay-Union Electric Corporation was established around 1935 by a group of rural residents and currently provides cost base services to members who are mostly residents of Clay, Union and Yankton counties. Clay-Union Electric's service area includes most of the Joint Jurisdiction Area with the exception of those areas in the City of Vermillion's service territory. Changes to the electric service territory are made in accordance with State statutes. Clay-Union Electric continues to convert its distribution network from overhead to underground while planning for future growth

within its defined service territory, specifically along the Missouri River and along highway corridors.

The City of Vermillion receives its power from Western Area Power Administration (WAPA) and Missouri River Energy Services (MRES). The power is delivered to the community from the Basin Electric Cooperative Spirit Mound Switchyard, via two 115 kV city owned transmission lines. During a system upgrade the City installed a 'closed-loop' transmission feed to provide uninterrupted power should one of the two transmission lines fail. To prepare for load increases the City constructed a new substation on the north east side of the City in 2017/2018. This substation allows the City to provide power to areas within the Joint Jurisdictional Area without major investments.

Except for the City owned transmission lines, the municipal electric distribution system is entirely underground. With each annexation of land into the City, the City Council will need to decide whether to acquire the electric service territory from Clay-Union Electric as allowed by state statutes.

E. SOLID WASTE MANAGEMENT

In 1976, a joint effort by Clay County and the City of Vermillion selected and developed a landfill site on the Bluff Road four miles north of Vermillion. In 1991/92, this site officially closed, and a new expansion site opened directly to the east of the first site. The new expansion site, engineered under Federal and State regulations, and is approved by the South Dakota Department of Environment and Natural Resources (DENR). The construction and operation of the current landfill site meets State of South Dakota rules and regulations as accepted for state primacy by federal EPA. The SD Department of Environment and Natural Resources inspects the site annually. The landfill expects to provide solid waste disposal until approximately 2080.

The Missouri Valley Recycling Center is a drop-off facility provided through the cooperative effort of cities and counties in southeastern South Dakota. The facility is available to the public and businesses located in Clay and Yankton County, as well as portions of Union County, and operated through the Joint Powers Solid Waste Authority. The sale of the materials and landfill fees supports the recycling center.

Land Use

Land use is one of the most important elements of the Clay County/City of Vermillion Joint Jurisdiction Comprehensive Plan. It addresses the location, type, and density of land uses throughout the area. From established goals and objectives, land use planning policies are developed that will be used to guide the physical development of the area, including zoning decisions. Without these goals, objectives and policies regarding land use, future development of the Joint Jurisdiction area would be left to chance and could potentially lead to property devaluation, inadequate public facilities and services, aging and deficient infrastructure, economic stagnation, and unmanageable local conditions.

The Land Use Plan is guided by a variety of factors, including:

- The current land uses within the Clay County/City of Vermillion Joint Jurisdiction area.
- Previous Comprehensive Plans adopted by Clay County and the City of Vermillion.
- Existing infrastructure capabilities, primarily sanitary sewer.
- Trends and projections for future growth.
- The vision for the future.

The Land Use Chapter of the Comprehensive Plan consists of the following components:

- The Current Land Use Map (Figure 6-1) shows a snapshot of land use in 2020.
- The Land Use Plan Map (Figure 6-2) shows the preferred future land uses.
- The land use categories describe the land uses depicted on the Land Use Plan and the goals and policies to be implemented.

Existing Land Use

Current land uses have been grouped into five categories for the Joint Jurisdiction area:

1. Agricultural and Open Space: Includes land that is tilled or grazed for agricultural purposes as well as other land that is not built upon.
2. Agricultural with Residence: Large land areas that or which a portion is tilled and includes a residential dwelling on the same lot.
3. Residential: Smaller lots used only for residential purposes.
4. Institutional: Land owned and used by a government entity.
5. Commercial: Includes retail businesses, offices, utilities, etc.

The Clay County/City of Vermillion Joint Jurisdiction area contains about 9,945 acres excluding street and railroad right of ways. The map in Figure 6-1 is a physical land use inventory that was prepared by SECOG in 2020. Table 6-1 contains the estimated area in each land use category. The primary purpose of this map is to illustrate the overall pattern of development in the Joint Jurisdiction area.

Some key aspects of the existing land use pattern include:

- Agricultural and open undeveloped space is the largest land use by acre.
- The limited commercial uses are located along major roads.

Table 6-1: Area by Land Use (2020)

	<u>Acres</u>	<u>% Total</u>
Agricultural and Open Space	7,899	79.42%
Agricultural with Residence	1,268	12.75%
Residential	645	6.49%
Institutional	84	0.84%
Commercial	49	0.50%
Total Acres	9,945	100%

It is anticipated that over time the Joint Jurisdiction area will start to develop, and that land will be converted from agricultural into other uses. Currently, residential is the third largest land use in the area. Residential land use is expected to expand as population in the area it expected to increase to 684 to 912 people based off the estimates developed in Chapter 2. Table 6-2 explores how much additional land may be needed to accommodate the population growth expected in the area given different development densities that were based off existing and potential lot sizes. The number in the table below would be in addition to the 645 acres existing in the 2020 land use inventory.

Table 6-2: Residential Land Consumption

Residential Acre Consumption					
Average Existing Lot Size (3.09 acres)		Rural Residential Minimum Lot Size (1 acre)		City Average Residential Lot Size (0.28 acre)	
Population of 684	Population of 912	Population of 684	Population of 912	Population of 684	Population of 912
312.1 acres	630.4 acres	101 acres	204 acres	28.3 acres	57.1 acres

Land Use Plan

The Land Use Plan Map (see Figure 6-3) shows the preferred land use for all property in the Joint Jurisdiction area. The estimated land area contained in each category is shown in Table 6-3.

The Land Use Plan Map is the graphic representation of the County’s and City’s land use goals and policies. Furthermore, this map lays the foundation for land use controls that are used by the County and City to jointly implement the Comprehensive Plan.

Table 6-3: Anticipated Land Use Calculations

	<u>Acres</u>	<u>% Total</u>
Residential-Single Family		
Residential- Multiple Family		
Commercial		
Industrial		
Institutional		
Park/Open Space		
Total Acres	9,945	100%

DRAFT 8-24-20