

# What is Envision 2035?

## Minnehaha County and Envision 2035

The purpose of the Envision 2035 Comprehensive Plan is to set the goals and priorities recommended by a multitude of stakeholders including county planning staff, task force members, advisory board, Planning Commission, County Commission, and members of the general public. The plan will provide direction in making land use and development decisions throughout the rural area of Minnehaha County. It will communicate your collective values, goals, and policies for current residents and future generations.

The future of Minnehaha County presents a unique challenge with the constantly changing complexity of the urban/rural dichotomy. The County must support growth management techniques that preserve the foundation of the local economy in order to maintain a high level of efficiency as the state's leading agricultural producer. The County will be expected to address issues relating to the economic growth potential of the Sioux Falls' Metropolitan Statistical Area and effectively managing this outward pressure, rural character and housing density, natural resource conservation and open space planning, transportation, public safety, and intergovernmental cooperation.

Envision 2035 represents an opportunity to engage the stakeholders involved in the planning process and allow for improved communication across forms of government. The process identified a general consensus among members of the public and plan committee members that there should be a strong focus on supporting agricultural production and local farms. The plan is neither a beginning nor ending point, but a continual process for engaging the public in all land use and development decisions.

The revision and adoption of the comprehensive plan represents the first step in a continually evolving planning process. Envision 2035 provides a framework consisting of goals and policies to assist in shaping the physical development of the county. The plan is intended to be a policy guide for decisions about the future spatial distribution of rural land uses and visualization of how these patterns should occur.

Envision 2035 is a cooperative effort to effectively balance Minnehaha County's historic and natural resources with municipal growth and development forces on the unincorporated area. The comprehensive plan is neither a beginning nor an ending point, it is a continual public process to identify the needs of the community and its citizenry.

A majority of the goals and policies set forth in this plan cannot be achieved without the support of many different partners across local, regional, and state boundaries. Leveraging a combination of efforts with knowledge and human power will create opportunities for increased collaboration among the different levels and branches of government. Although Minnehaha County has the largest and fastest-growing population in the state, there will be a much larger push to do more with less resources available. A growing population for the County represents the challenge to continue to seek innovative solutions that stretch funding further to provide all county residents with responsible public service.



## Introduction

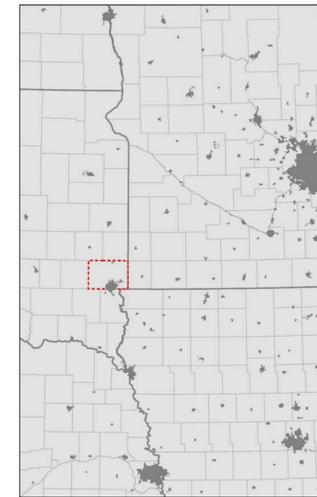
Minnehaha County, located in southeastern South Dakota, is nestled in a diverse region among the Midwestern and Central Plains landscape of the United States. The county is located at the crossroads of Interstates 90 and 29. Major cities in the region include Fargo, Minneapolis, Des Moines, and Omaha.

The boundary for Minnehaha County encompasses 814 square miles, includes 11 cities and towns, 23 townships, and 3 unincorporated towns with over 178,000 people. The County exercises jurisdiction over approximately 736 square miles to manage orderly growth and development of the rural area. Currently, there are an estimated 14,585 people living in the unincorporated towns and rural area.

Envision 2035 is long-range planning document that offers a vision for the preservation and development of Minnehaha County for the next 20 years. This plan details policies and strategies including but not limited to elements for guiding the County on land use, parks, agriculture, environment, transportation, and intergovernmental support to enrich the lives of its' citizens while maintaining and preserving its' rural character. As the landscape continues to change, planning in Minnehaha County must evolve to continually provide responsible service for members of the general public.

## Vision

**ENVISION 2035 AIMS TO ENSURE OPTIMUM GROWTH AND DEVELOPMENT OF THE RURAL AREA WHILE PROVIDING CITIZENS WITH INCREASED OPPORTUNITY FOR A BETTER QUALITY OF LIFE ALONG WITH ENHANCED ECONOMIC AND PHYSICAL VALUE.**



## Community Principles

### Growth & Conservation

- Support the development of sustainable agricultural practices
- Balance rural housing with existing and new agricultural operations
- Consider costs and benefits of all new development proposals

### Environmental Stewardship

- Protect & Encourage wildlife habitats, patches, and corridors
- Promote low impact development to maintain rural character
- Provide for the needs of a growing population while protecting the safety and security of the general public

### Transportation & Land Use

- Coordinate efforts with Local, State, and Federal entities
- Encourage growth near major railroads and highway intersections
- Expand access to utilities and infrastructure for new businesses

# MOVING FORWARD Planning Ahead

## Plan Elements

Economic Development	Rural Character & Housing Density	Land & Water Resources	Transportation	Future Land Use	Intergovernmental Cooperation
<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Agricultural economy</li> <li>*Tax climate</li> <li>*Entrepreneurial atmosphere</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Density zoning preserves farmland</li> <li>*Good balance for differing land uses</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Availability of natural resources</li> <li>*Strong rural quality of life</li> <li>*Well defined drainage network</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Crossroads of two major interstates</li> <li>*Convenience to major railroads</li> <li>*Proximity to Sioux Falls growth center</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Prime farmland</li> <li>*Existing Rural Service Areas</li> <li>*Park amenities</li> <li>*School facilities</li> </ul>	<p><i>Strengths</i></p> <ul style="list-style-type: none"> <li>*Joint planning with municipalities</li> <li>*Effective dialogue with State/Federal/Other Entities</li> <li>*Update services as necessary</li> </ul>
<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Mitigate impact of competing land uses</li> <li>*Support existing operations and businesses</li> </ul>	<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Manage population growth effectively and efficiently</li> <li>*Potential conflicts with CAFOs &amp; Ag. operations</li> </ul>	<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Mitigate impact of economic growth</li> <li>*Support individual landowner rights</li> </ul>	<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Expand access to major services</li> <li>*Provide for the needs of a growing population</li> </ul>	<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Housing demand</li> <li>*Agricultural preservation</li> <li>*Development corridors</li> </ul>	<p><i>Challenges</i></p> <ul style="list-style-type: none"> <li>*Growth management</li> <li>*Transition area development</li> <li>*Limited funding opportunities</li> <li>*Opportunities for consolidation of government</li> </ul>

## The Planning Process

In Late December 2011, the County Commission appointed fourteen members to the Envision 2035 Task Force. The members included rural residents, business owners, and agricultural producers. In addition to the task force an advisory board was created encompassing state, regional, and local governments, as well as large industry representatives. Over a two to three year period, the task force met monthly.

The process began with educational and fact gathering task force meetings, which brought various speakers of important topics to enhance the task force's knowledge on a variety of subject matter. This was followed by a period of brainstorming, discussions and debates, and idea production. From these sessions, many different land use scenarios were created and contemplated.

A series of community meetings were held throughout the county to involve the county's residents and business owners in the development of this plan. The final months were spent drafting the Envision 2035 plan to exemplify the future of Minnehaha County.

Four community open houses were held in the fall of 2012. In addition, a workshop was held in October 2014 to generate feedback on a few of the chapter topics. A public open house was held in March 2015 to gather feedback on a comprehensive plan draft document. The meeting sites were spread throughout the county to ensure maximum participation.

The open house meetings helped to build understanding of the project and credibility for the process while also allowing staff and task force members to gain an understanding of the needs and interests of the County's constituency.

Five different stations were erected, each focusing on different aspects of the County's future. Through activities and in visiting with staff and task force members, participants were able to make detailed comments, suggestions, and criticisms.

- Task force was formed with representatives from the business, agricultural, and rural resident communities.
- An advisory committee had delegates from government agencies and local businesses.
- A website was created for the public to review draft documents and provide feedback.
- Monthly updates were presented to the Minnehaha County Planning Commission.
- Planning staff had a booth at the county fair to solicit public input and feedback.
- Six community open house meetings were held throughout the county to provide opportunity for public comment on draft documents, plan elements, and maps.



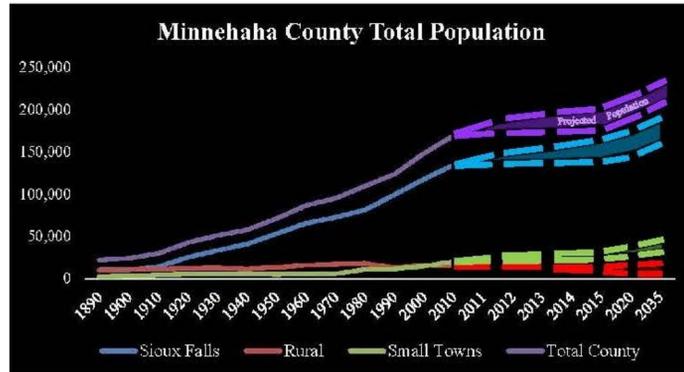
# Population, Employment, and Existing Land Use Analysis

## Population Analysis

Minnehaha County will be expected to address quality of life and public expenditure issues resulting from a growing population and economic base. Therefore, it is crucial that an up-to-date process be in place to ensure that proper and timely decisions are made in allocating the county's finite physical resources among competing land uses.

Growth presents an abundance of opportunities but it comes with a certainty of change. Rural water systems have been constructed, supplying safe and dependable water to farms and rural residences. In some instances, concentrations of faulty septic systems have been replaced by sanitary districts to eliminate groundwater contamination and health risks. Township supervisors are confronted with the complexities of urban growth, including demands for improved roads and better maintenance. The combined effect of building expansion and municipal facilities such as well fields, sanitary landfills, and wastewater treatment operations have expanded into the rural area while posing significant impacts on traditional agricultural lands.

Uncontrolled growth is usually accompanied by scattered and haphazard development, conflicting land uses, costly public services and improvements, and environmental damage. Significant strides have been taken to minimize the negative impacts associated with growth. This plan is intended to strengthen the county's planning efforts by providing information and direction to decision makers for managing anticipated growth and making change a positive experience for county residents.



Historically, a majority of the population has been concentrated within Sioux Falls. Other incorporated areas comprise a small, but growing portion of the number of residents. Currently, over 90 percent of the total county population resides in a municipality. As you can see from the graph, at bottom left, unincorporated population has been influenced by several factors including but not limited to the following: farm consolidation, annexations, and municipal incorporation.

Even with a dramatic increase in housing construction in the rural area, population has actually been decreasing over the past thirty years due to annexation of fringe developments around Sioux Falls along with the incorporation of Crooks and Brandon. As indicated by a slight dip in the line, after reaching a high of over 17,600 residents in 1980 the population declined to just under 13,000 by 1990. In 2000, the rural population was about 15,857 persons. Recently, there has not been such a dramatic change in rural population from 2000 to 2010 as was realized 35 years ago. Approximately 80 percent of the 2010 county population lived in Sioux Falls and this trend will likely grow over the planning period. The 2035 Minnehaha County Total Population chart, bottom left, shows a low to high population projection range accounting for various factors associated with the growth of the local, state, and regional economies of scale over the past twenty years. The number of residents projected to live in Sioux Falls is estimated between 76 and 79 percent of the total county population by 2035. The number of residents estimated to be living in one of the small towns will be from 14 to 19 percent and about 1 to 10 percent of the total population residing in the unincorporated area by 2035, respectively.

By the year 2035, the population of Minnehaha County is projected to grow to over 207,000. It is expected that Sioux Falls will contribute substantially, about three-fourths, to the county's future population base; however, the small town population will also increase at a steady rate with Brandon and Hartford contributing the largest share. Dell Rapids and Crooks should also experience strong growth due to proximity to Interstate 29 along with other important growth indicators. Baltic, Garretson, Valley Springs, Humboldt, and Colton will comprise a smaller percentage of total growth among all of the small towns.

It is expected that the combined population of the small towns will surpass that of the rural area during the next couple of decades. It is also unlikely that the unincorporated areas of Ellis, Lyons, Renner, and Rowena will account for any significant growth due to the lack of urban services; however, Corson's industrial development potential may lead to the town's annexation by the City of Brandon.

Figure 1.1 - Minnehaha County Population Projection Source: Census.gov

## Employment Analysis

The expansion of employment opportunities are expected to grow during the planning period based on several factors including but not limited to the following: favorable tax climate, high quality of life, and sound work ethic. As the population both expands and ages, the demands upon the service sector will grow. The community's position as a regional health care center will also contribute to the expansion of service related employment. The growth of regional air and highway transportation systems will lead to an increase in economic development potential within the county.

The percentage of the population employed in the work force has nearly doubled since 1970 to about 72% in 2013. The increase in two income families, baby boomers in the work force, and more high school students with jobs all contributed to this trend. The percentage of the population in the work force will be expected to slow or may even begin to decline due to the majority of baby boomers set to retire over the next decade.

While preserving a strong agricultural economy, Minnehaha County must continue to adapt to current and emerging trends in development in order for the top industry clusters to remain competitive along with retaining strong job growth of the local economy. The Change in Occupational Cluster Concentration chart, below, shows a comparison of economic specializations in each industry between Minnehaha County and the five-state region of South Dakota, North Dakota, Nebraska, Minnesota, and Iowa from 2002 to 2012. The location quotient (LQ) for a particular industry is a ratio comparing the percentage of employment for an industry in the local economy to the percentage of employment for the same industry in the regional economy.

The industry clusters with a location quotient greater than one have a greater concentration of local area employment in the county than the region (likely exporter); whereas, an LQ of less than one indicates a lower concentration of employment in the county (potential importer). If the LQ is equal to one, then the particular industry has the same share of employment in the county as does the region. The industries with an LQ between 0.75 and 1.25 are likely producing enough to meet local economic demand.

Note: The size of the bubbles indicate the total employment in each industry cluster within the county.

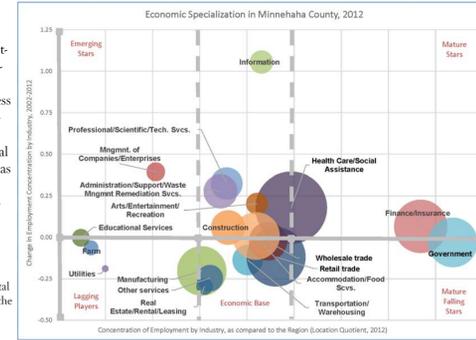


Figure 1.2 - Change in Occupational Cluster Concentration Chart (2002-2012)

The chart, below, indicates that the top industry clusters with the highest economic growth in relation to the regional economy are the following:

- Arts/Entertainment/Recreation
- Health Care/Social Assistance
- Professional/Scientific/Technological Services
- Administration/Support/Waste Management Remediation Services
- Information
- Management of Companies
- Finance/Insurance
- Construction

It is important to note that the City of Sioux Falls is the primary employment and economic development generator within Minnehaha County. The city will continue to drive commercial and industrial development both within the incorporated

Industry	Minnehaha County		SD, ND, NE, IA, MN		2012 Industry Percentage	Location Quotient 2002	Location Quotient 2012	Location Quotient Growth
	2002	2012	2002	2012				
Farm	920	936	289,945	266,612	0%	0.24	0.17	-0.06
Mgmt. of Companies/Enterprises	195	1,491	118,836	142,828	1%	0.12	0.52	0.39
Manufacturing	6,413	10,605	730,823	690,387	2%	0.96	0.76	-0.20
Utilities	217	183	37,062	36,383	1%	0.44	0.25	-0.19
Transportation/Warehousing	2,902	4,016	190,194	198,203	2%	1.14	1.00	-0.14
Construction	3,304	5,147	293,676	282,974	2%	0.84	0.90	0.06
Retail trade	11,331	15,269	665,410	654,740	2%	1.27	1.15	-0.12
Wholesale trade	4,330	6,362	285,177	283,488	2%	1.14	1.11	-0.02
Educational Services	809	1,343	493,567	554,342	0%	0.12	0.12	0.00
Health Care/Social Assistance	10,148	22,466	718,414	900,776	2%	1.06	1.23	0.18
Real Estate/Rental/Leasing	1,019	1,169	71,090	74,656	2%	1.07	0.78	-0.30
Arts/Entertainment/Recreation	1,063	2,046	92,596	96,325	2%	0.85	1.05	0.20
Professional/Scientific/Tech. Svcs.	1,554	4,418	204,261	245,065	2%	0.57	0.89	0.32
Finance/Insurance	7,525	12,368	303,363	318,817	4%	1.85	1.92	0.07
Information	1,570	2,335	143,249	107,355	2%	0.02	1.08	1.06
Administration/Support/Waste Mgmt. Remediation Svcs.	1,992	4,984	255,407	286,952	2%	0.58	0.86	0.28
Government	7,000	10,687	248,719	253,030	4%	2.12	2.09	-0.03
Accommodation/Food Svcs.	5,791	9,776	416,082	461,566	2%	1.04	1.05	0.01
Other services	2,480	3,009	177,418	185,364	2%	1.05	0.80	-0.25
<b>Total</b>	<b>73,623</b>	<b>118,616</b>	<b>5,603,682</b>	<b>5,872,726</b>	<b>2%</b>			

Figure 1.3 - Total Employment by Industry Cluster

Source: South Dakota Department of Labor and Regulation; Labor Market Information Center; North Dakota Workforce Intelligence Network; Iowa Workforce Information Network; Nebraska Department of Labor; Minnesota Department of Labor; and Economic Census

# MOVING FORWARD

## Planning Ahead

## Existing Land Use Analysis

Land Use Category	Number of Parcels	Number of Acres	% of Total Area (520,758 Total Acres)
<b>Residential</b>			
Single Family (< 5 Acres)	3,513	5,689	1.09%
Single Family (≥ 5 Acres)	1,401	16,772	3.22%
Multi-Family Residential	10	164	0.03%
<b>Subtotal</b>	<b>4,924</b>	<b>22,625</b>	<b>4.34%</b>
<b>Agricultural Land</b>			
Farmstead with Farmland	1,056	99,749	19.15%
Agricultural (<40 Acres)	2,028	30,471	5.85%
Agricultural (>40 Acres)	2,873	283,178	54.38%
Ag Tourism & Local Food	16	840	0.16%
<b>Subtotal</b>	<b>5,973</b>	<b>414,238</b>	<b>79.55%</b>
<b>Non-Residential</b>			
Commercial	98	203	0.04%
Industrial/Utilities	354	2,974	0.57%
Mining/Mineral Extraction	51	3,410	0.65%
<b>Subtotal</b>	<b>503</b>	<b>6,587</b>	<b>1.26%</b>
<b>Parks &amp; Open Space</b>			
County Parks	12	65	0.01%
Other Parks	24	392	0.08%
Commercial/Private Recreation	34	1,308	0.25%
State Parks	16	855	0.16%
Protected Land	89	5,268	1.01%
<b>Subtotal</b>	<b>175</b>	<b>7,888</b>	<b>1.51%</b>
<b>Public/Institutional</b>			
School	3	117	0.02%
Church/Cemeteries	64	201	0.04%
City of Sioux Falls Landfill	2	614	0.12%
USGS EROS Data Center	2	310	0.06%
Other Government Lands	6	59	0.01%
<b>Subtotal</b>	<b>77</b>	<b>1,301</b>	<b>0.25%</b>
<b>Other Land Categories</b>			
Unparceled Lakes	4	1,300	0.25%
Right of Way & Other Unparceled	NA	9,182	1.76%
<b>Subtotal</b>	<b>4</b>	<b>10,482</b>	<b>2.01%</b>
<b>Total Unincorporated Area</b>	<b>11,656</b>	<b>463,120</b>	<b>88.93%</b>
<b>11 Incorporated Cities</b>	<b>NA</b>	<b>57,638</b>	<b>11.07%</b>
<b>Total County Area</b>		<b>520,758</b>	<b>100.00%</b>

Figure 1.4 - Existing Land Use Survey

An accurate depiction of Minnehaha County's current land use pattern is an important step in planning a desirable future land use pattern. To illustrate the distribution of land uses throughout the unincorporated area of the County, a land use inventory was conducted using our Geographic Information System (GIS) and our taxpayer information. Figure 1.4 titled "Existing Land Use Summary" divides Minnehaha County's 24 townships into several categories (see sidebar).

To manage growth and guide land use decision-making in Minnehaha County over the next 20 years, this chapter contains background information on existing land use patterns, development trends and future land use planning. The purpose of this is to identify areas, intensities, and timing for potential future development as well as for long-term preservation. This chapter concludes with goals, policies, a new 2035 Future Land Use Map and growth management strategy recommendations.

Along with Sioux Falls and Brandon, many of the small cities within the County have adopted their own comprehensive plans to guide development. The County shares a joint zoning authority with the City of Sioux Falls & the City of Dell Rapids in areas extending from one to three miles beyond the city limits. The County also has a joint platting area with the Cities of Brandon and Hartford.

The land use pattern in the unincorporated areas of the County is primarily agricultural or undeveloped lands. When the land area of cities (incorporated areas) are excluded, approximately 81.6% (384,789 acres) of the County has an agricultural designation. The majority of the larger farm holdings are located to the north and west of the Sioux Falls Metro Area.

As illustrated in Map 1.2 titled "Distribution of Residential Dwelling Units" much of the residential land uses in the unincorporated portions of the County are located within close proximity to the City of Sioux Falls. Most of this population can be found within the Wall Lake, Wayne, Benton, Mapleton, Brandon and Split Rock Townships. Single Family uses make up approximately 25 percent of the County's unincorporated land area, with most of the development in the 0 to 2 acre lot size range. There are also very few areas with Multi-Family Residential units in the unincorporated areas and 4 Manufactured/Mobile Home parks (Soo Dell, Peterson, Coachman's Manor and Pleasant Valley).

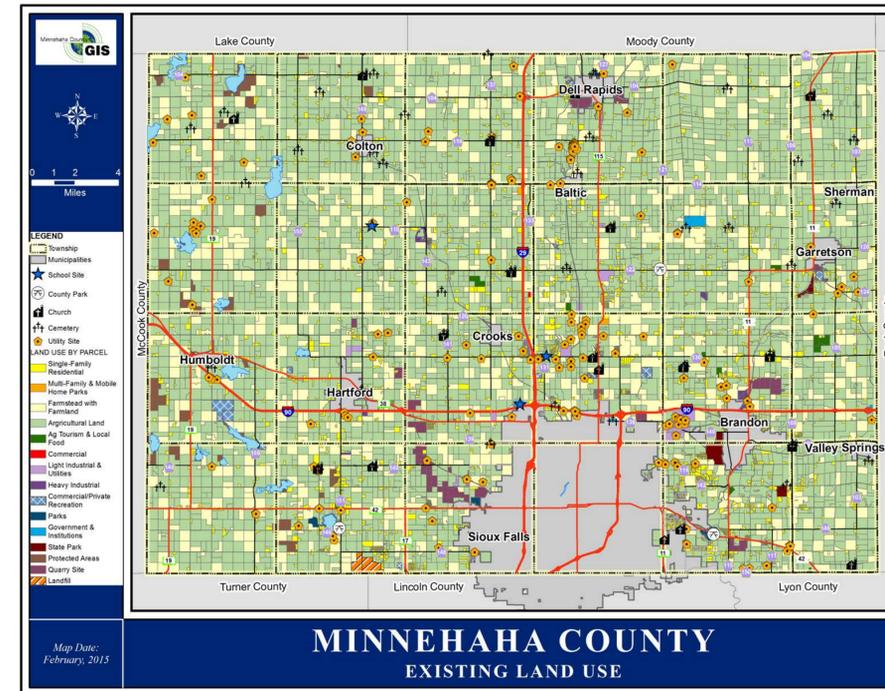
The Commercial and Industrial land uses are mainly concentrated along Interstate 29, Interstate 90, State Highway 42, State Highway 115 and State Highway 11. The uses in these particular areas make less than 1 percent of the unincorporated land base. Commercial and Industrial areas include uses such as offices, retail sales and trade professions, personal services, warehousing, contractor shops, showrooms, logistics, manufacturing, and other similar highway-oriented businesses.

The majority of the Mining/Mineral Extraction uses are located along Skunk Creek, Willow Creek and Split Rock Creek. However, there are other sand, gravel and rock extraction sites spread throughout the County. Three quarries currently operate within Minnehaha County. The Sioux Falls quarry (Sweetman), Dell Rapids quarry (Everist) and the Rowena quarry (Myrl & Roys).

Mapped as Public/Institutional uses include schools, churches, cemeteries, and recreational areas, which represent less than 1 percent of the unincorporated land base. There are approximately 8,000 acres of Parks/Open Space owned or managed by local, regional, state, or federal agencies.

Overall, the existing land use pattern reflects the continued direction of growth of the Sioux Falls Metro Area. Minnehaha County has continued to experience strong growth within a 5 mile radius of Sioux Falls where proximity of major highways and access exists. Map 1.1 illustrates the all Existing Land Uses of Minnehaha County.

Map 1.1 - Existing Land Use Map



Agriculture is by far the largest land use category in the County and is a vital part of the regional economy. The industry has experienced significant changes over the past few decades, resulting in the consolidation of agricultural land into larger farming enterprises, and the increase in hobby farms and local food production on small parcels of land.

The character and identity of the rural area has been altered due to an increase of non-farm uses. Agricultural land in close proximity to the Sioux Falls Municipal Area has experienced pressure to convert to residential, commercial, industrial, and recreational uses. Recent trends suggest that non-farm development is pushing even further into traditional rural areas because of an expanding regional population and the willingness of workers to commute from greater distances. Another contributing factor is that people are searching for more isolated sites where scattered nonfarm development has not occurred.

Minnehaha County amended its Zoning Ordinance in 1988 to limit residential density on agriculturally zoned property to one dwelling unit per quarter-quarter section of land. However, the continuing increase of non-farm residents in the unincorporated area of the County will increase land use conflicts; this is especially true for complaints base on animal agriculture. The limitation of urban and rural conflicts is important to all citizens quality of life.

While most of the residential construction has occurred within the incorporated areas of the County, over 1,240 housing units were built in the unincorporated area since the adoption of the last comprehensive plan in late 1998.

It is anticipated that the incorporated areas within Minnehaha County will continue to provide sufficient land area for the majority of residential growth. The County will still continue to provide residential housing opportunities in the rural area, per the adopted Density Zoning Ordinance regarding housing eligibilities.

The County is also anticipating that as the existing subdivisions in the unincorporated area are built out, pressure will be received from developers and land owners to approve new subdivisions in the unincorporated area. In order to deal with this perceived pressure the County will encourage clustering of building eligibilities per the Density Zoning Ordinance. The clustering of building eligibilities/single family residences will promote sustainability by preserving tillable farm ground.

# Growth Management

## Economic Development

Historically, Minnehaha County has held a long tradition of being an agriculturally-dominant economy. It should be expected that this trend will continue over the next twenty years and beyond. There may be an increased focus on supporting the family farm identity in order to maintain a rich rural quality of life and provide for the needs a growing population.

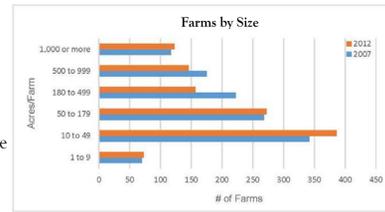
Commercial and industrial development will also undoubtedly continue to play a major role in shaping key areas of the county. The locations most suitable for this type of economic growth are identified in the Future Land Use Plan as nodal patterns around the eleven interstate exits, the intersection of two major arterials, and within the unincorporated areas of Lyons, Ellis, Renner, Corson, and Rowena.

The interstate exits for Dell Rapids, Baltic, Crooks/Renner, Corson, and Hartford are prime locations for business development due to the ease of access and close proximity to the municipalities experiencing a majority of the population growth in the county. While these locations will continue to attract development, there should be a focus on identifying necessary improvements in order to maintain competitiveness in the regional market.



Agriculture is an integral part of Minnehaha County's economy and land base. According to the United States Department of Agriculture (USDA), agriculture is the dominate land use in the County with approximately 1,157 farms encompassing 407,896 acres. Agricultural crops and livestock contribute to the stable and diversified economy in the County. Agribusiness services and facilities supplement and support the farm economy by creating jobs in cultivation and harvesting, equipment sales and services, fertilizer and seed sales, finance and insurance industries, and in food processing related activities. A continued threat to agriculture is the encroachment of development which leads to conflicts between agriculture and non-agricultural uses.

The chart, below at right, indicates that there was an increase of about 50 farms ranging in size from 10 to 49 acres over the most recent five-year period according to the 2007 and 2012 Census of Agriculture published by the United States Department of Agriculture (USDA). Comparatively, there were decreases in farm sizes ranging from 180 to 999 acres. This trend may be an indication that small hobby farms are becoming more common and directly correlated hobby farms, local food, and the process of estate divisions of land owned by farm families. Despite being the most populated County in South Dakota, Minnehaha County continues to be one of the most agriculturally productive counties in the State. About 58 percent of farm income in Minnehaha County is derived from the sale of livestock and livestock products (U.S. Department of Commerce).



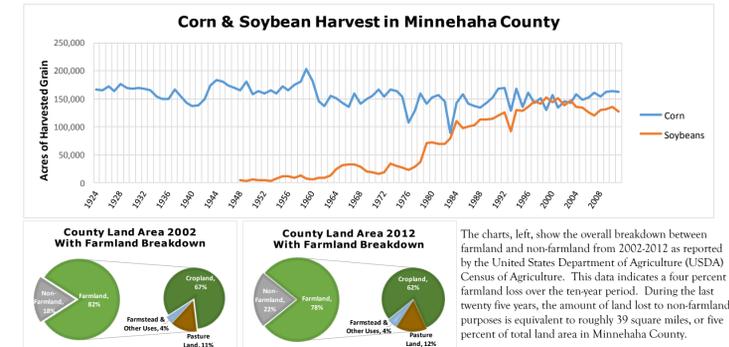
Corn and soybeans are the primary row crops produced in the county. Since 1924 there have been a consistent number of acres of corn harvested, averaging approximately 159,000 acres (USDA). Less detailed information is available about soybeans prior to 1949, but the average number of soybeans harvested has been in decline since 1997. The chart, at right, indicates that soybean acres harvested has rebounded by a small margin since 2007. Livestock production is dominated by cattle/calves operations as well as milk and other dairy products from cows. Hogs are also well represented in Minnehaha County from nursery stock to finisher swine. While not as prominent, an increasingly significant number of sheep, horses, and bees are raised within the county. According to the USDA Census of Agriculture, the number of farms raising poultry increased by more than twice the amount in 2002 to a total of 75 farms in 2012. About one-third of this total is made up of farms ranging in size from 1 to 49 acres. Of course, this number does not include the increasing demand for county residents to raise domesticated chickens in rural residential subdivisions for the convenience of enjoying fresh, local produce while maintaining a commitment to healthy lifestyles.

**Goal 1. Conserve agricultural land for long-term agricultural use in order to protect the productive natural resources of the County and maintain the farm and farm-related economy of the County.**

- Action 1.1 Create more restrictive standards for residential building eligibility transfers outside of municipal growth boundaries.
- Action 1.2 Reinforce that residential eligibility transfers are not a permissive use.
- Action 1.3 Continue requiring the right-to-farm notice covenant on all residential building sites.

**Goal 2. Discourage rural residential development in agricultural production areas.**

- Action 2.1 Allow the clustering of residential structures on non-productive agricultural land through the use of density zoning in the A1 Agricultural and R/C Recreation/Conservation zoning districts.
- Action 2.2 Adopt setback standards which would limit new dwellings from locating in close proximity to concentrated animal feeding operations.



**Goal 3. Develop a local food study in support of the agricultural industry and maintaining healthy lifestyles.**

- Action 3.1 Initiate public outreach through education and awareness to assess priorities.
- Action 3.2 Identify policies directly affecting the promotion and implementation of local food systems.

**Goal 4. Stem the premature and unnecessary conversion of agricultural land to urban uses.**

- Action 3.1 Ensure that municipal utilities are available or planned for the area prior to conversion.
- Action 3.2 Create a Farm Advisory Board to advocate for the future of farm operations in Minnehaha County.

**Goal 5. Recognize that agricultural lands have a definite public value as open space, and the preservation in agricultural production of such lands, constitutes an important physical, social, aesthetic and economic asset.**

- Action 4.1 Promote sustainable use of productive landscapes.
- Action 4.2 Maintain economic links to the value of rural land other than development uses.

# MOVING FORWARD Planning Ahead

Minnehaha County supports agricultural tourism by providing for uses which help to promote and maintain local farming operations, are complementary to agriculture, help maintain an agricultural heritage and rural character, and help to sustain the local farming community.

The interest in tourism was initiated by the agricultural community who recognized that there were secondary opportunities for economic development involving agricultural and assorted related activities. To assist and guide agricultural tourism the zoning ordinance was amended, adding a section based on three principals.

- Selection of the types of activities and experiences that are farm based or support farming and should be permitted uses in an agriculturally zoned district.
- Ensure that the public health, safety, and welfare concerns would be met by County regulations.
- Creation of an administrative review process which would still allow an opportunity for public input.

Allowing agricultural tourism development enhances the viability of the farm and provides an additional opportunity to create an income source on site. It also is a means of educating urban and visiting populations on the importance of agriculture to the local and state economy. As there becomes a further disconnect between the rural and urban populations of Minnehaha County, these interactions and educational opportunities become increasingly important.

To ensure that agricultural tourism is a benefit and not a detriment to the farming community, proposed uses must have their operating procedures reviewed. Issues that are taken into consideration during the application process include visitor management, use of agricultural

products, hours of operation, impact on transportation system, availability of parking, safety and health issues, impact on neighboring properties, and management of special or large events.

The adopted definition for agricultural tourism encourages farming related activities such as wineries, on-site farm experiences, farmer's markets or u-pick operations, corn mazes, or events anchored in traditional farming practices such as thrashing bees. These land uses help maintain a rich agricultural heritage and rural character while promoting sustainable development of the local, regional, and state economy.



**Goal 1. Promote the development of agricultural tourism.**

- Action 5.1 Create a webpage, brochures and other means to advance agricultural tourism businesses in Minnehaha County.
- Action 5.2 Develop a marketing plan to promote agricultural tourism.
- Action 5.3 Design directional signage unique to agricultural tourism operations.

**Goal 2. Collaborate with other agencies to advertise County agricultural tourism.**

- Action 6.1 Establish connections between County and State tourism websites.
- Action 6.2 Produce an assistance guide for new agricultural tourism operators.

**Goal 3. Develop historical and educational information to publicize the importance of agriculture to Minnehaha County.**

- Action 7.1 Instigate an "adopt a farmer" education program with local schools.
- Action 7.2 Work with the Siouxsland Heritage Museums to research and publish the history of agriculture in Minnehaha County.

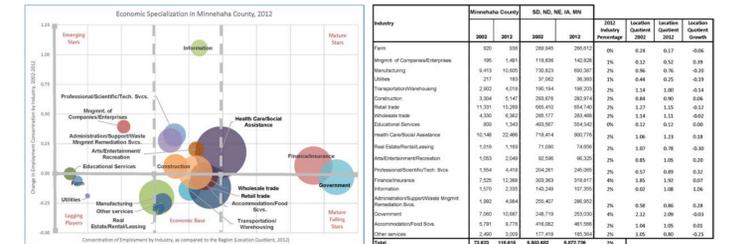
While it is expected that a majority of commercial and industrial growth will occur within municipalities; there are several sites in the rural area, especially at interstate exits, suitable for this type of growth due to their location and proximity to existing economic growth centers. For example, the Dell Rapids, Baltic, Hartford, Crooks/Renner, Corson, and Sioux Falls exits offer attractive industrial park-like settings with the convenience of high connectivity to national markets. Minnehaha County should identify opportunities for public/private partnerships, financial assistance, and incentive programs in coordination with the Minnehaha County Economic Development Association to promote economic growth in existing rural service areas. The links between agencies, both public and private, are critical in developing areas for business growth and employment retention in the prime commercial/industrial development locations in the rural area.

**Goal 1. Support and encourage growth of the county's economic base and promote the retention/expansion of job creation.**

- Action 1.1 Coordinate the siting of industrial uses with the Minnehaha County Economic Development Association.
- Action 1.2 Enhance industrial development by restricting incompatible land uses where rail access is available.
- Action 1.3 Discourage strip development along transportation arteries, particularly those which serve as gateways to municipalities and major activity centers.
- Action 1.4 Locate commercial uses at interstate highway interchanges and high traffic intersections to support highway users.

**Goal 2. Enhance communication and cooperation among the several governmental and quasi-governmental entities who have the potential to impact and influence development patterns.**

- Action 2.1 Encourage a pattern of development in transition areas that can be integrated into municipal planning areas without the need for costly and inefficient public infrastructure expenditures.
- Action 2.2 Promote cooperative efforts with municipalities in dealing with growth and development issues.



Change in Occupational Cluster Concentration Chart (2002-2012) Total Employment by Industry Cluster Source: Dept. of Labor & Census.gov

Note: The industry clusters with a location quotient (LQ) greater than one have a greater concentration of local area employment in the county than the region (likely exporter); whereas, an LQ of less than one indicates a lower concentration of employment in the county (potential importer). If the LQ is equal to one, then the particular industry has the same share of employment in the county as the region.

**Action 2.3 Encourage annexation of potential development sites within municipal fringe areas before development plans are approved.**

**Goal 3. Ensure maximum efficiency in the provision of public services and facilities to promote cohesive and attractive development in the rural area.**

- Action 3.1 Work with Minnehaha Community Water Corporation to ensure that future water system improvements do not conflict with county development policies and the long term viability of agricultural operations.
- Action 3.2 Limit rural densities so that current service levels are not exceeded to avoid the creation of additional special purpose districts (i.e. sanitary, water, and road districts).
- Action 3.3 Utilize the planned development zoning district to accommodate a mix of land uses, promote the arrangement of uses on a comprehensive rather than piecemeal basis, and address problems related to existing land use patterns.
- Action 3.4 Identify opportunities to provide support for the improvement of existing substandard infrastructure in the form of public/private partnerships.

# Rural Conservation

## Introduction

Minnehaha County expresses at least two very different styles of character. The City of Sioux Falls provides a strong urban atmosphere because of its size and regional status, and the unincorporated area has remained strongly rural in character. Agriculture trends and increasing populations are, however, changing the rural area. Large parcels of row crops, pastures, and family farmsteads are still a common sight in the country while many of the county's natural areas provide habitat for wildlife and recreation for visitors. Small towns and service centers still cater to the rural lifestyle with various amenities and gathering places. The rural area of Minnehaha County includes a wide range of qualities that distinguishes the character of the landscape. The history of the county is as diverse as the people living in it. The natural character of the county is becoming increasingly important as urban and rural development encroach on what is remaining. The family farm is changing as hobby farms, agricultural tourism, and acreages continue to expand in quantity and significance. The growth and density of residential houses change the county's landscape and character. Preserving and enhancing the rural character of the unincorporated area of Minnehaha County benefits everyone now and into the future.



## Historic Preservation



Historic resources, like living objects, require thoughtful care and maintenance to enjoy a long, useful life. Each historic object is a reflection of a specific time in history. Over time, a collection of these specific resources can define an area's social, stylistic, cultural and economic heritage. The historic buildings, sites, districts, and objects of a place weave together to form a fabric that connects multiple generations, provides sense of place, and creates a community. The obvious historic resources are highly visible including sites of historic events, historic town sites, historic gathering places such as churches and public buildings, cemeteries and burial mounds, etc. Many more pieces of history, however, are used in daily life such as houses, barns, and storage structures for grain or equipment. These historic places form a base for the rural character of the county.

Historic Images Source: Siouxland Heritage Museums

Every year many historic structures such as houses and barns are neglected as new styles and methods of farming evolve. Sound preservation planning and implementation offer benefits in a variety of ways.

One of the primary methods of maintaining historical structures is the adaptive reuse of buildings. This means that an existing building, especially one that is historical or architecturally significant, is converted to a use other than the original intent while the exterior of the structure retains its integrity. This strategy also allows new uses of the land to be more compatible with surrounding existing land uses.



## Natural Character

The land cover of Minnehaha County is dominated by agriculture and the developed land of incorporated municipalities. This does not, however, diminish the importance of the natural and semi-natural landscapes within the county. These landscapes can be found in the un-farmable wetland areas, slopes, and flood plains. Other natural areas take the form of shelter belts around farmsteads and publicly owned land for parks and preserves.

These natural landscapes provide a variety of benefits. Native plants and animals utilize these spaces as habitat and corridors for migration. Recreational opportunities for hunting, fishing, boating, and nature watching can be found along rivers and multiple public land and parks within the county. As more people from Sioux Falls and surrounding area look to escape the 'concrete jungle', the need to preserve and possibly create more natural areas such as parks and trails will grow.



# MOVING FORWARD Planning Ahead

## Farming & Community



The country lifestyle, is often associated with hard work, land stewardship, and sense of community. This is especially applicable among the family run farms that fill the rural area. Over the years the business of farming has changed, causing the many farm operations to either consolidate or shrink. Since 1997, the number of farms larger than 2,000 acres and smaller than 70 acres have greatly increased; while the number of farms between 100 to 1,000 acres have noticeably decreased (USDA 2012 Census of Ag). Small farms remain possible because the growing popularity of 'hobby farms' that are owned by operators who simply want the farm lifestyle and by increasing use of agricultural tourism. Both of these farm types are influenced by the increasing population and proximity of Sioux Falls. It is important to recognize the changes in rural lifestyles and farming to ensure the viability of modern agricultural land uses.

Agricultural production is a vital part of the rural character. It also produces dust, smoke, noise, odors, and uses pesticides, fertilizers, odd hours of operation, and other items that may be considered offensive to residents not well acquainted with life in the rural area. In order to inform property owners of this potential conflict, the Right-To-Farm Notice covenant has been required for all new houses since 2006 and continuation of this requirement should continue into the future.

The residents of rural communities utilize small towns and rural service centers as gathering spots, employment, and convenience shopping. The character of these contribute to the rural sense of place through local activities, gathering places, and community pride. Rural service centers are changing as commercial and industrial districts expand services to include customers from Sioux Falls.

Expansion of these service centers and towns will occur and the Comprehensive Plan should assist in the orderly development of these important places of rural character. Several rural service areas have populations greater than small incorporated towns. Homeowners in these service centers increasingly desire more urban like amenities such as roads, sewer, and nuisance enforcement. Regulations and ordinances should be evaluated as to their appropriateness and effectiveness.



## Housing Density

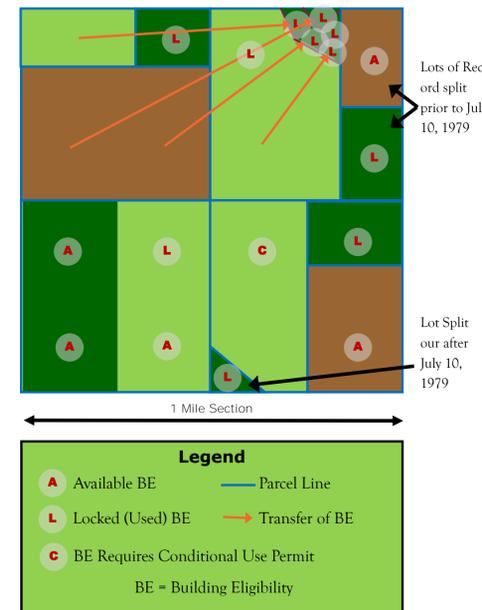


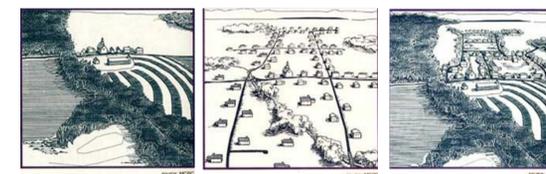
Figure 4.1 - Density Zoning Diagram: This diagram demonstrates the building eligibility assignment for a fictional county section including lots of record and transfers to create a cluster of building eligibilities.

Rural character with its country lifestyle and natural landscapes attract many people to live in the unincorporated area of the county; however, the continual development of new houses threatens to diminish the very aspects of rural character that many residents seek. Once farm and natural land is converted to a higher intensity use, such as residential housing, it is highly unlikely to return to its previous farm or natural use. Low densities of residential houses maintain the visual character of the rural area. It also preserves large tracts of farmable land rather than fragmented segments between residential parcels.

Density zoning restricts the total number of residential houses allowed in the county. The limiting of residential dwellings has caused each BE to be regarded as a highly valuable 'commodity' for land owners. There are still approximately 9,295 building eligibilities within the unincorporated areas of the county. If the average development rate continues as it has in the last 25 years, then 1,813 new housing units will be built through the year 2035.

Even at a low density, the loosely defined pattern of growth can create unnecessary and costly sprawl. Conversely, further growth in some areas of the county is welcome and desirable. One option for satisfying both of these requirements may be permitting the transfer of development rights (TDR).

The TDR process would allow a building eligibility to be transferred (sold) from a sending zone (productive farmland, environmentally sensitive land, etc.) to a receiving zone (growth area usually with a certain level of infrastructure). The total number of county wide residential houses would not increase, while agricultural land and character will be preserved in the sending zone. This and other land preserving techniques should be explored for potential feasibility.



Existing Rural Village / Rural Service Center      Conventional Pattern of Development      Development Pattern with TDR

Figure 4.2 - Transfer of Development Rights Examples  
Source: Massachusetts Smart Growth / Smart Growth Toolkit

# Environmental Stewardship

## Land & Water Resources

Direct and indirect development impacts on natural resources makes it vital that full consideration is given in land use planning decision-making efforts. Natural resources found throughout the county are water, productive soil, sand and gravel, and Sioux quartzite. The protection of native flora and fauna along with the corresponding ecosystems in which all things live is as important as ever before to maintain ecological biodiversity. In the years ahead, runoff and soil erosion will be a major problem that needs to be addressed properly for agriculture to remain strong in a growing economy. Wildlife habitat is supported by the density, diversity, and productivity of vegetation.

Soil can be considered the most important natural resource as it provides a growing medium for crops and for the grasses grazed by livestock. The entire county was glaciated but in the eastern two-thirds of the county the glacial till is covered in most places by loess (NRCS).

Sand and gravel deposits can be found in the aquifer basins. Intermixed with rock fragments, the sand and gravel is not suitable for concrete aggregate or as construction material. It is used as a sub-grade material for roads and as bituminous aggregate. Sioux quartzite has been quarried since the county was settled by Europeans. Results of the quarrying can be found in many of the early building construction projects around the area. Quartzite is now used for concrete aggregate, railroad ballast, road construction and sanding, rip-rap for dams and riverbank stabilization, and as a portion of ferro-silicon for the steel industry (NRCS).

Soil is one of the most important natural resources in Minnehaha County because of the large presence of agriculture production. Before settlers came to the area, tall grass prairie dominated the landscape and assisted in creating some of the most fertile soils of the nation. Now, much of the prairie is gone and the hundreds of thousands of acres of fertile soil is utilized in producing crops. About 300,000 acres in Minnehaha County are considered 'prime farmland' by the U.S. Department of Agriculture, and soil characteristics are the primary factor in the determination of prime farmland. Every year, development and land degradation threatens prime farmland. Sprawling and fragmenting land development should be avoided to protect this vital resource. Good farming practices are critical in preventing soil degradation. These practices are becoming more common as agriculture becomes more precise. The health of Minnehaha County soils is vital to maintain and improve in order to provide greater productivity for increasing local and global populations.



Managing for soil health, improved soil function, is mostly a matter of maintaining suitable habitat for the myriad of creatures that comprise the soil food web. Managing for soil health can be accomplished by disturbing the soil as little as possible, growing as many different species of plants as practical, keeping living plants in the soil as often as possible, and keeping the soil covered all the time.

Sand, gravel, and quartzite are among Minnehaha County's major natural resources. The mining industry is significant to the county and is likely to continue to be so in the future. Most of the sand and gravel deposits are found along river and stream beds where the porous material allows for groundwater to accumulate into shallow aquifers. Quartzite is the bedrock for the entire county and can be found sporadically near the surface in the eastern half of the county.

The process of extracting sand, gravel, and quartzite disturbs the land surface more than any other land use. This disturbance is evident in aerial photography of the area surrounding Skunk Creek to the west of Sioux Falls. The vast disturbance of land through quarry operations necessitates a reclamation process for returning the land to a useable state. The proposed use of reclaimed land should match up with this plan. Naturalized reclamation areas should include provisions to create viable habitat such as slope alterations, soil replacement, vegetation, and wetland creation where applicable. Development may be done in some instances such as the Cherry Lake Reserve on the northwest corner of SD Highway 42 and Ellis Road in Sioux Falls.

The potential for surface and ground water alteration and contamination is also a concern. The permitting process for new and expanding quarry operations should continue to require a hydrologic study to ensure that no adverse effects will be made to surface and ground water.

Extraction operations generate sizable amounts of truck traffic. Truck traffic problems are a key concern to county residents in regards to this industry. The hauling of mineral resources on County, State, and township roads necessitates additional maintenance costs. Noise and safety on public rights-of-way are also serious concerns associated with truck traffic. Some operations are restricted to certain roadways while other operations are required to spray gravel roads to reduce the limit of dust generated by the trucks.



Minnehaha County recognizes the value and importance in providing our citizens with opportunities for the use and appreciation of the county's natural resources. Our parks provide a place for healthy outdoor recreation, cultural education, and interaction with nature. Each of the County's three parks exist due to acts of generosity in the donation of land.



Wall Lake Park

Wall Lake Park is a 25-acre public use area and the county's oldest park. It lies adjacent to Wall Lake and has the county's only public swimming beach. In 1917 a sandy strip of land was dedicated for the beach. The park encompasses property that was willed to Minnehaha County in 1949 to be used for public park and recreational purposes. It wasn't until 1985 that the county took steps to develop the park and improve the beach. Picnic tables and grills are provided at several sites and a picnic shelter overlooks the lake from a hilltop. Children can enjoy the playground equipment and a spacious open area is available for field sports. This is the busiest of the

County parks because of the swimming beach. Future improvement considerations for this park should include potential activities for open spaces and demonstrations of sustainable practices such as beach front restoration.

Bucher Prairie

The tract of land that became Bucher Prairie was dedicated with the request that the park be a reflection of the prairie that would have been historically present on the site. Eastern South Dakota once was a tall grass prairie, the wettest prairie ecosystem. Grass and flowers of this ecosystem would have included bluestem, switch grass, Indian grass, pasque flower, goldenrod and purple coneflower. Many of these native plants have been re-introduced into the 20 acre park. The park includes a trail system, intermittent streams with pond, and a picnic shelter. This prairie restoration park provides a good opportunity to include educational materials of the native flora and fauna of Minnehaha County.



Perry Nature Area

The Perry Nature Area encompasses 23 acres of diverse ecosystems including woodlands, upland grasslands and riparian areas that are home to a wide variety of native plants and numerous species of wildlife. In addition to these natural features, the area is linked to a rich community history. The nature area is the former East Sioux Falls town site, a community established in the late nineteenth century in relation to the nearby quarrying of Sioux quartzite. The stone from these quarries was used in many historic buildings in the region. Perry Nature Area is dedicated to the preservation of the wonderful natural treasures of the site and the storied history of this once bustling city. The Perry Nature Area is currently operated in conjunction with the Mary Jo Wegner Arboretum and the City of Sioux Falls.



Minnehaha County contains three state parks. All three are located in the diversified terrain found on the eastern side of the county. Each state park offers varied opportunities for recreation and education.

Beaver Creek Nature Area

Beaver Creek Nature Area was developed to increase environmental awareness of visitors and to highlight natural and historical resources in the vicinity. Pioneers named the creek for the numerous beaver they found along the winding spring-fed stream. The stream flows year-round, supplying numerous plants and animals with water, and in turn, supplying visitors with opportunities to observe nature up-close.

Big Sioux Recreation Area

Big Sioux Recreation Area lies on the banks of South Dakota's Big Sioux River near the City of Brandon. This park is popular among campers, canoeists, history buffs, and archers. Volleyball courts and a disc golf course are also available.

Palisades State Park

Palisades State Park is one of the most unique places in South Dakota. Split Rock Creek, which flows through the park, is lined with Sioux quartzite formations varying from shelves several feet above the water to 50-foot vertical cliffs. The quartzite cliffs differentiate Palisades State Park as perhaps the best rock climbing location on the east side of the state.

### Public Lands

The South Dakota Game, Fish & Parks (GF&P) operates thirteen game production areas in Minnehaha County. This land encompasses 2,531 acres with the majority of it composed of water. In addition, the U.S. Fish and Wildlife Service preserves 4,202 acres of wetlands and associated uplands in Waterfowl Production Areas. The preserved lands of both types of production areas dominate the western portion of the county which consists of more pothole lakes that are conducive for wetland and grassland dependent species. The primary focus of preserving this land is to provide opportunities for game production and for public hunting and fishing.

Parks and conservation land provide valuable habitat for natural resources and recreation opportunities for the public; however many of these locations are spread out and fragmented making it difficult for wildlife to utilize multiple green spaces and difficult for the public to visit without a personal vehicle for transportation. Naturalized greenways consisting of natural landscapes with little to no development could be utilized to act as corridors for wildlife to move freely between the pockets of parks and conservation lands. The most appropriate places to locate greenways and bike trails would be to begin near rivers and streams where wildlife and ecosystems services are naturally present. Greenways can provide benefits to the county through promoting ecosystem services, such as water filtration and flood control, and providing locations for activities such as multi-use trails. Multi-use trails can connect green spaces and communities with each other, and provide recreation and transportation benefits as well.

### Rivers and Streams

The Big Sioux River, along with the Skunk and Split Rock Creek tributaries, form the major surface drainage features in the county. The Big Sioux begins in the northeast part of South Dakota flows through Dell Rapids, Baltic, loops around Sioux Falls, and near Brandon on its journey to the Missouri River. In the eastern two-thirds of the county the stream network is well defined. The remainder of the county has more poorly defined drainage.

Significant natural features are apparent in Garretson, Dell Rapids, and Sioux Falls. For example, the Dells of the Sioux is characterized by steep, vertical quartzite walls where it splits from the river. Dell Rapids, Garretson, and Sioux Falls utilized an essential natural resource to promote the area as a major tourist destination.

Skunk Creek and its west fork tributary drain the western portion of the county, joining the Big Sioux in western Sioux Falls. Split Rock Creek, which drains into the Big Sioux south of Brandon, forms the dominant drainage feature in the eastern part of the county. The natural beauty of the stream is prominently displayed in Garretson within the city park and south of the city at Palisades State Park, where steep quartzite walls and ledges accent these recreational amenities.

### Lakes and Wetlands

Numerous prairie lakes were created in eastern South Dakota by the last glaciation period. While they are most prevalent in the northeastern part of the state, a few prairie lakes were formed in the western portion of Minnehaha County. When the last glacier retreated from this area, glacial till filled many depressions formed by earlier glaciers leaving shallow pot holes and wetland areas rather than well defined, deeper lakes. Wall Lake, with a surface area of 220 acres, is the only significant lake in the county. The lake was dredged of silt nearly twenty years ago and now has a depth in excess of 20 feet. Other water bodies include, but are not limited to Grass, Beaver, Lost, Clear, Buffalo, and Diamond Lakes which are exceptionally shallow and function primarily as large wetland areas.

Wetlands are predominantly located in the western part of the county, but are incrementally disappearing due to the demands of agricultural and drainage tile practices. They perform several key functions by serving as natural water purifiers by filtering out pollutants; therefore, enhancing surface and groundwater quality, increasing wildlife and fish habitat, and providing recreational opportunities. Wetlands are also essential agents in reducing siltation and flood control by slowing runoff during rapid snow melt and heavy rainfall, releasing water gradually to minimize erosion and downstream flooding.

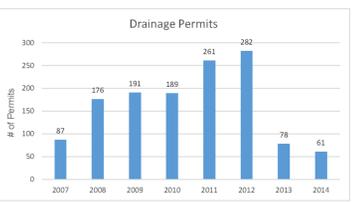


### Agricultural Drainage

Agricultural drainage is the removal of excess water from fields through the use of ditches and subsurface pipe often called "drainage tile". The installation of tile drainage is a very common land improvement practice in Minnehaha County. Corrugated plastic tubing, clay and concrete drain tile are installed beneath the surface of agricultural land to drain excess water from the crop root zone. If soils are too wet, there are more risks of soil compaction and reduced plant growth and crop yields. The benefits of tile drainage are increased crop productivity, farm efficiency, and protection of roads and property.

The South Dakota Legislature assigned the responsibility for drainage matters to counties in 1985. Drainage is governed by Minnehaha County Drainage Board under the policies and regulations established by the Drainage Plan and the Drainage Ordinance. A community taskforce was enlisted to rewrite the ordinance in 2010.

Overall, the requirement for drainage permits has been well accepted by the agricultural community. Notification requirements prevent the outlet of water onto neighboring properties without warning and encourages adjacent landowners to work together on drainage problems. Coordination between landowners has led to many new tile projects that drain hundreds of acres. The chart to the right shows a dramatic decline in the amount of drainage permits obtained for the previous two years, which might be correlated with a drop in crop yield prices.



### Stormwater Management Program

Minnehaha County was identified as meeting the Environmental Protection Agency's requirements for needing to address stormwater. Stormwater discharges are often a significant contributor to local water quality impairments as they can carry high levels of sediment, oil, toxics, and other pollutants that flow into local waterways.

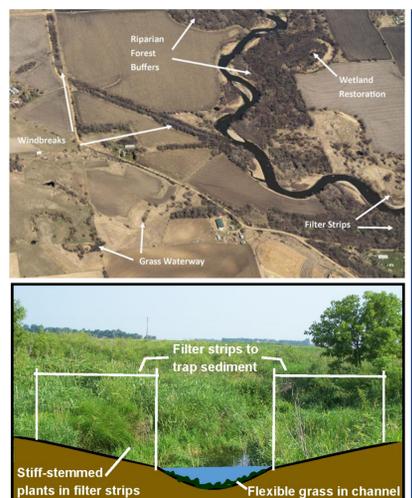
As a result of this need to address stormwater, Minnehaha County is expected to develop a Stormwater Management Program (SWMP) by 2019, which should include milestones for implementing each aspect of the program and by the end of the first five-year MS4 permit term the program will need to be fully developed and implemented. The process for establishing the program is to select Best Management Practices (BMPs) including but not limited to vegetated filter strips, permeable pavement, riparian areas, and open space design that prevent stormwater pollution from entering our waterways.

Although overall awareness and interest in environmental protection exists at the local government and citizen level, the County's water resources continue to experience degradation from stormwater runoff. A concerted effort to establish a Stormwater Management Board, made up of public citizens, will be vital in protecting water resources.

Low Impact Development (LID) offers several strategies to minimize the impact of surface runoff on downstream property owners, reduce the risk of flooding, and restore the hydrologic and ecological functions of our waterways.

### LID Strategies to Minimize the Impact of Land Development

- \*Riparian area buffers
- \*Bioretention facilities
- \*Vegetated filter strips
- \*Permeable pavement



### Municipal Separate Storm Sewer (MS4)

Conveyance or system of conveyances

- Designed or used to collect or convey stormwater that discharges to waters of the state.

### MS4 (Six Minimum Control Measures)

1. Public Education and Outreach
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination (IDDE)
  - \*detect/eliminate illicit discharges
4. Construction Site Runoff Control
  - \*site plan review/inspections
5. Post Construction Runoff Control
  - \*Best Management Practices
6. Good Housekeeping
  - \*pollution prevention guidelines

# Transportation

## Introduction

Transportation plays a vital role in providing for the needs of the general public through moving goods, resources, and people. The transportation system, a critical component of Minnehaha County's development pattern and backbone of the economy, exerts a strong influence on the placement of land uses such as agricultural, residential, commercial and industrial, and institutional facilities.

The transportation system consists of roadway classifications, which are determined based on anticipated traffic volume, access, and service areas.

**Principal Arterials**—These are primarily interstates designed to move high volumes of traffic at high speeds with limited access. (Example: Interstate 29, 90, and 229)

**Major Arterials**—These are highways designed to move vehicle and truck traffic throughout the county to many of the smaller municipalities. (Example: South Dakota Highway 11, 17, 19, 42, 100, & 115)

**Minor Arterials**—These are roads that link cities, towns, and destinations within a reasonable distance of a highway. (Example: Ellis Road., Six Mile Road, and 41st Street.)

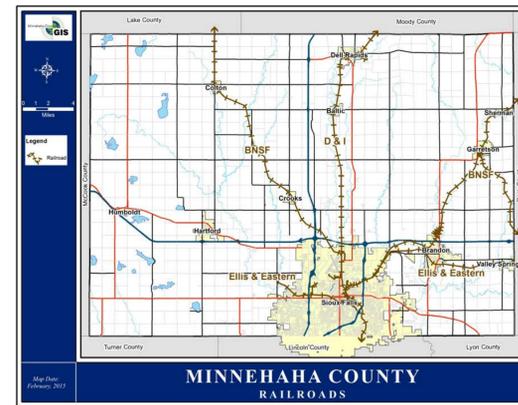
**Collectors**—These are used to route traffic between local streets and arterials, which consist of a few township roads.

**Local Roadways**—These roads provide direct access for all land uses.

Rail transportation has served a variety of industries in delivering shipments of goods, materials, and humans contributing to the livelihood of economic centers in the region. The significance of freight rail transportation within Minnehaha County will remain an integral part of both the regional and national system. According to the South Dakota State Rail Plan, passenger rail service along the Minneapolis-Willmar-Sioux Falls Corridor on the Burlington Northern Santa Fe (BNSF) railroad was proposed by the National Association of Rail Passengers (NARP) in setting a vision for a complete national passenger train network (SD State Rail Plan, 2010). The potential of a passenger rail connection would be costly with significant upgrades projected along the Willmar-Sioux Falls corridor, but should be explored over the long

term as the region continues to experience economic growth. South Dakota is one of two states without passenger rail service.

BNSF operates a majority of the rail lines that run through Minnehaha County with connections to the national freight rail transportation system. In particular, these lines move a variety of agricultural products and industrial materials both domestically as well as abroad. Track extends from downtown Sioux Falls to Garretson for 17.4 miles and continues for 4.6 miles in the County leading to Willmar, Minnesota before connecting with the regional and in some cases, the national system. Track also runs south from Garretson towards Sioux City. There is an approximately 6 mile railroad spur off of the main BNSF track through Garretson



that heads southeast towards Manley, MN and travels through Iowa cities such as Sioux Center before traveling to Sioux City. The largest stretch of BNSF track runs out of Sioux Falls for 24 miles towards the northwest through Crooks, Lyons, and Colton along the way to Madison, South Dakota.

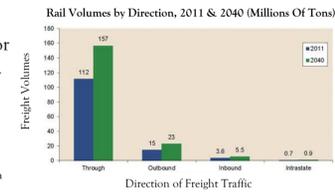
## Rail & Highway

L.G. Everist, Inc. owns and operates quarries in Minnehaha County as well as operates its own portion of railroad, D&I Railroad (DAIR). They have 18.8 miles of track that run between Sioux Falls and Dell Rapids and leases two other railroads from the State of South Dakota comprising 89.6 miles of track in the Big Sioux River Valley (South Dakota State Rail Plan, 2010). The DAIR has interchange connections with the BNSF railway and Ellis and Eastern Company in Sioux Falls. In addition to hauling rock, gravel, and quarried stone, the railroad also transports farm products.

The Ellis & Eastern (E&E) railroad was formed as a subsidiary of the Sweetman Construction Company for the primary purpose of transporting aggregate products for Concrete Materials. The railroad has 14.3 miles of track stretching from Brandon, SD through downtown Sioux Falls to North La Mesa Drive. This line not only carries aggregate products and raw materials for the Sweetman Construction Company; it serves several outside customers located on the line. Chemicals and scrap metal are also transported on this railroad.

According to the 2010 South Dakota State Rail Plan 2040 Rail Volumes by Direction chart, at right, a majority of the rail system demand statewide will consist of through movements at about 84 percent while outbound movements are expected to comprise 12 percent. These estimates represent a growth of about 1.2 and 1.5 percent each year, respectively. Inbound and intrastate movements make up a small percent of total projected demand (2010). The State Governor has set a major priority for improving rail transportation access in other areas of the state, which will provide numerous benefits for freight movements and businesses in the region.

Source: SD State Rail Plan



The transportation system is linked to land use patterns in a way that needs to be collaboratively addressed in order to prevent future conflicts and achieve the goals of this plan. Particularly near large economic centers, projected population growth and changes in land use and density will necessitate changes to the highway system. The South Dakota Department of Transportation (SDDOT) and County Highway Department routinely conduct traffic counts to provide helpful information on traffic patterns.

According to the SDDOT Long Range Transportation Plan, the projected shipment volumes by weight from 2002 to 2035 on trucks could see a 91% change within the state, 201% from the state, and 125% to the state (SDDOT, 2010). While a majority of the shipments will be primarily by the trucking industry, there is a growing importance to maintain and improve freight rail infrastructure for the benefit of producers, businesses, and railroad companies.



Access Management is the planning, design, and implementation of land use and transportation strategies that control the flow of traffic between roads and surrounding land. For example, highways influence land use patterns by providing access to land that enables development to occur. The resultant benefits of proper access management are postponing or preventing costly highway improvements, improving safety conditions along highways, reducing congestion and time delays, providing property owners with safe access to highways, and promoting optimal land use patterns.

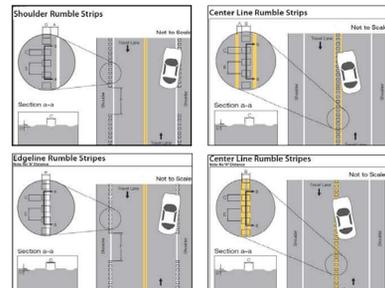
# MOVING FORWARD Planning Ahead

## Highway (continued)

### Transportation Improvements

Regional transportation planning is a coordinated effort of the Metropolitan Planning Organization (MPO), the South Eastern Council of Governments, SDDOT, Municipalities, Counties, the Federal Highway Administration, and the Federal Transit Administration. Direction 2035, the Sioux Falls Metropolitan Area Long-Range Transportation Plan, was developed to guide multi-modal transportation planning activities through 2035. Potential corridor projects identified through the transportation planning process within the MPO area include the following:

- \*Tea-Ellis Road
- \*SD Highway 115 & 11
- \*268th Street
- \*SD 38/60th Street North
- \*EROS Rd. Interstate Interchange (Highway 100)



Legend  
 → = Direction of Travel  
 ▬ = Rumble Strip  
 A = Offset  
 B = Length  
 C = Width  
 D = Depth  
 E = Spacing  
 F = Bicycle Gap

Potential improvements that can be accomplished in the near term and aid in all roadway users' safety could include the strategic design of wide shoulder widths in conjunction with rumble strips. Rumble strips have proven to be a helpful tool in the prevention of traffic fatalities on roadways across the country. The images, below, provide some examples from the United States Department of Transportation:

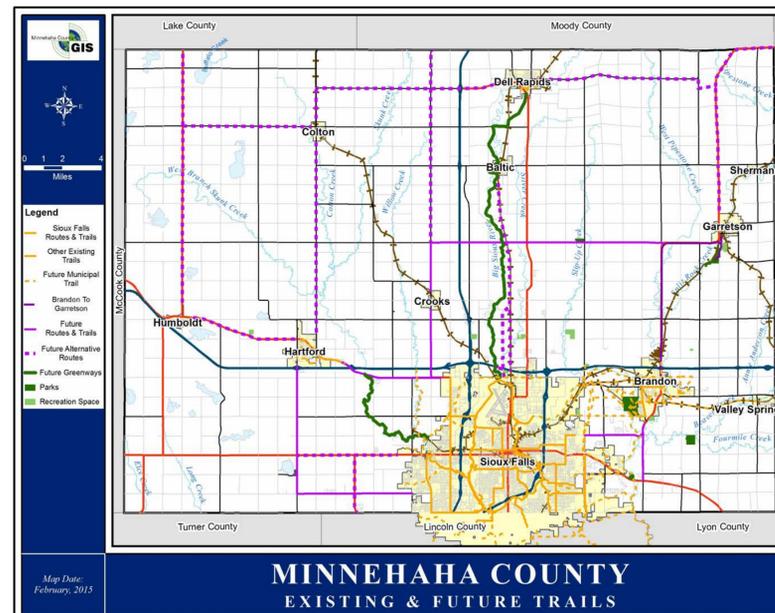
Federal Highway Administration on designing rumble strips to provide all roadway users with the comfort of a safe and convenient route to their destination. The Sioux Falls MPO Bicycle Plan identifies SD Hwy. 38, 115, and 11 as well as Rice St./Holly Blvd and Madison St. as primary bicycle routes. The secondary routes are County Hwy. 121, 133, 137, and 139/Ellis Rd. These suggestions were made in conjunction with the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, which notes that "adding or improving paved shoulders often can be the best way to accommodate bicyclists" as well as motorists and other road users (Sioux Falls MPO Bicycle Plan, 2009).

The following list is a highlight of a few guidelines for shoulder design in the MPO Bicycle Plan and should be major consideration in road maintenance operations:

- A shoulder below 4 feet should not be designated or marked as a primary bicycle facility.
- Consider 4 foot minimum shoulder widths (not including space treated with rumble strips) to accommodate bicycle travel and other road users.
- Frequent shoulder sweeping of any debris when rumble strips are installed is crucial on all bicycle routes to ensure roadway user safety.

There is an emerging trend nationwide casting focus on the importance of maintaining healthy lifestyles, reducing the strain on personal finances, lessening our overall ecological footprint, or a desire to spend more time outside on one of the oldest means of transportation. A majority of citizens in the Sioux Falls MPO area have recognized that bicycles should be ridden on county roads and almost the entire percentage of this population feels that paved multi-use trails are the best place for bicyclists.

## Non-motorized



The City of Sioux Falls multi-use trail system provides a safe route for both commuter and recreational bicyclists among other forms of non-motorized transportation linking many destinations. Sioux Falls is currently in the process of expanding this network to include on-street and multi-use pathway facilities to better promote bicycling and walking as a viable means of transportation. Other cities in the county that have expanded multi-use trail opportunities for residents include Hartford, Brandon, and Dell Rapids. Minnehaha County should explore a multitude of alternatives for safe, convenient, and accessible transportation and recreation. These potential routes should connect to existing and proposed facilities to promote the use of non-motorized transportation. These connections will help create opportunities for more positive lifestyle choices, better economic stability, and overall quality of life in the County while balancing the interests of widely disparate landowners. Minnehaha County should identify opportunities to retrofit existing county roads with four-foot minimum shoulder widths or implementation of a share-the-road campaign to accommodate for the safety and convenience of all transportation modes. While a majority of the multi-use trail and bicycle route planning will be conducted in the Sioux Falls MPO area, it is important to pursue opportunities for safe and convenient access among the small towns in Minnehaha County as well as throughout the region. The routes identified on the map, at left, are based on citizen input collected during the comprehensive planning process, the MPO multi-use trail study, and MPO bicycle plan in a coordinated effort to connect residents to a wide variety of recreation and transportation options. Most of the routes on this map can be achieved with careful thought and consideration to accommodate motorists, agricultural producers, bicyclists, walkers, runners, etc. within the public right-of-way. The alternative routes shown on this map will be based on community need and regional coordination to develop safe routes and trails statewide.

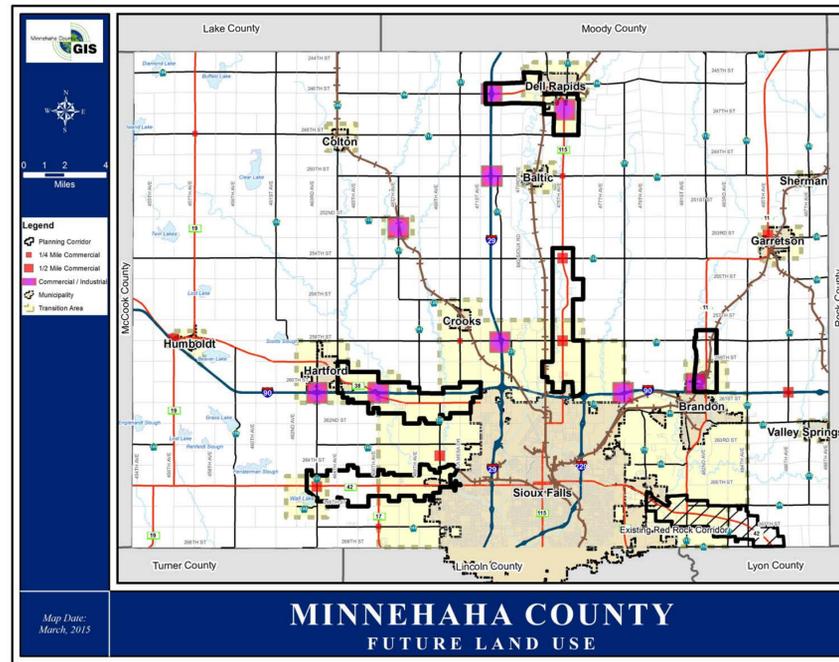
# Future Land Use Plan

## Introduction

To guide future land use development, this chapter includes the 2035 Future Land Use Map (Map on next page). The 2035 Future Land Use Map guides development for farming, housing, business and industry in the unincorporated area. It is intended to guide day-to-day development decisions, as well as provide the standards and principles for updating the County's ordinances and other official development controls. The 2035 Future Land Use Map shows agricultural production areas, transition areas, rural service areas, and development corridors along heavily traveled highways. The following pages include descriptions of the four different planning categories, the desired growth patterns, and land uses that correspond with each major land use area.



Map 7.1 - Future Land Use



## Agricultural Production Area

Agricultural production comprises the largest amount of land area within Minnehaha County. Even with urban expansion of Sioux Falls and other municipalities, the dominant land use of agriculture is expected to continue through 2035 and beyond. The land area that is not designated as transition or rural service area is considered agricultural production, because it is likely to continue as primarily farm land through the duration of this plan.

### Development Outlook

The purpose of this planning category is to protect, preserve, and promote agricultural uses and the economic viability of farming operations. Agriculture is recognized in this plan as an important part of the economy, history, and quality of life. As a result of the importance of agriculture as well as limited infrastructure in this area, non-agricultural development should be limited to other suitable areas and residential development should likewise continue at the limited density of one residential building eligibility per 40 acres. Agricultural uses within this area should be allowed to continue and expand where little or no conflicts exist.



### Typical Uses

- Larger-scale farms and related agricultural uses including feedlots, and livestock raising
- Small-parcel farms primarily for local food production and agricultural tourism
- Sand, gravel, and stone mining
- Single-family detached dwellings in agreement with density regulations
- Institutional/governmental uses
- Limited recreational open space uses

## Transition Area

Municipal and urbanized areas will continue to expand, and the expected expansion areas will require planning for the transition from predominantly agriculture to urbanized uses. This planning area closely corresponds with the future land use plans of incorporated communities and certain areas of residential concentrations such as Renner, Lyons, and Wall Lake. Much of the transition area around Sioux Falls and Dell Rapids is also regulated by the County's joint planning jurisdiction with each municipality. These joint planning jurisdictions help facilitate development that is compatible for future annexation by either city.

### Development Outlook

The transition areas within the county have the primary purpose of maintaining the rural landscape until the eventual development of residential and/or municipal development. Large-scale farming will still be permitted, but additional considerations should be given to the expansion of certain types of agriculture such as large animal confinement operations and agri-businesses to ensure that large investments are not made in areas of impending development. It is likely that small-scale farms will grow in number in the transition areas to take advantage of market proximity and smaller parcel sizes. Residential development should be limited unless adequate sanitary sewer and other utilities are available.

### Typical Uses

- Large-scale farms and related agricultural uses including small scale and existing feedlots, and livestock raising
- Small-parcel farms primarily for local food production and agricultural tourism
- Greenhouse and nursery type production
- Single-family detached dwellings in agreement with density zoning
- Existing Rural Residential developments
- Institutional/governmental uses
- Limited recreational open space uses

## Rural Service Areas

Rural service areas are generally small unincorporated centers of development that provide various services and conveniences primarily for rural residents, agriculture, and light industries. Most rural service areas are located near major street intersections such as Interstate exits and intersections between state and county highways. This provides easy access for both industry and residents. Community type rural service areas differentiate themselves because of the inclusion of residential neighborhoods that form in a town-like development pattern. Corson, Ellis, Lyons, Renner, and Rowena started settlement as towns, but have since become unincorporated parts of the county. In addition to the former towns, the close proximity of houses in the Wall Lake area also creates a community atmosphere.



### Development Outlook

Limited unincorporated development is desirable within rural service areas in order to provide for the needs of rural residents and certain types of businesses. Major intersections that are designated rural service areas on the 2035 Future Land Use

Map will expand with industrial and commercial uses through the duration of this plan. Expansion should be allowed and encouraged at these intersections, but limitations such as extent of area, storm water management, street access, and utilities should guide future growth. In some areas, mixed-use development can be considered as a way to minimize the development footprint and encourage growth of rural service areas. Community type rural service areas will experience growth in commercial, industrial, and residential uses. Planning for this growth should consider the existing land use, available utilities, and planning areas among other considerations. The availability of sanitary sewer has been and will be a primary concern for expansion of any rural service area.

## Rural Service Areas - Communities

The following segments include some further analysis of the six community type rural service areas. These paragraphs include references to current conditions as well as consideration for future growth.

### Typical Uses

- Agricultural support businesses
- Limited industrial
- Limited Convenience Commercial businesses
- Single-family detached dwellings in agreement with density zoning
- Rural residential developments where sanitary sewer and utilities are available
- Institutional/governmental uses
- Limited recreational and open space uses
- Small-parcel farms for local food production and ag tourism
- Greenhouse and nursery type production

### Corson

Much of the area of Corson is within the 2035 growth area of the City of Brandon. The Corson area is dominated by industrial land uses with some residential and commercial uses too. Its location near major highways and a railroad make it ideal for further industrial and commercial development; however this growth should not come at the expense of incompatibility with existing residences in the Corson area.

### Rowena (Image Right)

Rowena has recently undergone supplementary planning because of its location within the Red Rock Corridor. Rowena's location midway between Sioux Falls and Grand Falls Casino makes it a prospective location for convenience type establishments. The lack of a sanitary sewer system will limit the growth of the community.

### Lyons (Image Right)

Industrial and agricultural expansion has happened in Lyons and will likely continue. The additional employment opportunities in Lyons may attract other business and residential uses within the timeframe of this plan. As the Community of Lyons expands, considerations should be given for infrastructure improvements such as sanitary sewer, paved roads, and a drainage plan for all or part of the town.



### Wall Lake

The Wall Lake area currently has a small business presence at the corner of SD Highway 42 and 463rd Avenue. The primary residential areas encircle the lake and create a community feeling. The presence of this community, recreation, and a sanitary sewer district make this area a preferred location for future growth in the county. Even with prominent features, future growth of this area may be slow due to the lack of remaining lakefront property.



### Renner (Image Above Left)

Renner is perhaps the most established of the unincorporated communities, because it has characteristic such as a baseball field and amateur team, an American Legion Hall, restaurants, and even an annual community celebration weekend called Renner Days. Part of the community is located within the boundaries of the floodplain, but it's location near Sioux Falls and along both a State and County highway makes Renner a consideration for future development. Expansion of Renner should be encouraged to infill existing land and parcels and develop in a contiguous manner that does not simply line the highway.

### Ellis

Ellis has traditionally been a railroad town that served the rural area as a place to bring product to market and buy supplies. Today, the services have changed slightly, but the nature of rural service of the town has not. The future growth of the community is limited because of the proximity of flood plain in nearly all directions from the town.



## Development Corridors

Major transportation corridors surrounding Sioux Falls and nearby communities will continue to have development pressure that expands beyond municipal boundaries. Detailed planning of these corridors will assist in creating orderly and efficient growth patterns. Public participation of current residents, businesses, and property owners is paramount to the process of developing a plan for these corridors. This process will also require cooperation among various municipalities and agencies. The development corridors are shown on the 2035 Future Land Use Map.

### Development Outlook

Additional planning for development corridors will include public participation of area residents and interested citizens. Most corridor areas have some unique characteristics and land uses that will be identified and included in the planning process. Therefore, each corridor will be planned separately. A major goal of every development corridor plan is to avoid strip style development where all properties are accessed from the main street or highway. A corridor plan may be accompanied by variations in the zoning code such as a zoning overlay district. This sort of overlay may direct development by including minor corridor-wide ordinance changes that will adjust the requirements of each corridor.

### Typical Uses

Typical uses within each development corridor will depend on area designations as well as the completion of each specific corridor plan.

