COMPREHENSIVE PLAN

2016

Updated by:
The Murray County Comprehensive Planning Advisory Committee
With Assistance from:
The Southwest Regional Development Commission

Adopted: _____

COMPREHENSIVE PLAN PURPOSE

The County has a responsibility to protect its cultural, economic, and natural environments. Because of this, the Murray County Comprehensive Plan will identify goals, objectives, policies, and implementation strategies designed to appropriately reflect the needs of the County's citizens and natural environment. This plan will emphasize the importance of proper planning ensuring that decisions made are best for the citizens of the County as well as the environment.

COMPREHENSIVE PLANNING ADVISORY COMMITTEE

Bill Post
Bob Sandhurst
Brian Hamilton
Burend Cuperus
Craig Bangasser
Jamie Thomazin
Jason Schreier
Larry Dahl
Pam Schreier
Ralph Knapp
Ryan Verlinde
Todd Miller
Tom Hey
Kevin Vickerman
Dave Dorpinghaus
Duane Spartz
Doug Stewart
Keith Hakeneis
Roger Steinman
Gary Runkle
Troy Wehking
Dale Bergman

AGENCY REPREPRESENTATIVES 2016

Cathi Fouchi, Minnesota DNR Planning
Becky Balk, Minnesota Department of Agriculture
Marcy Barritt, Murray County Assessor
Jon Bloemendaal, Murray County Ag & Solid Waste
Jean Christoffels, Murray County Planning & Zoning
Randy Groves, Murray County Highway Department
Amy Rucker, Murray County Economic Development
Randy Hukriede, Minnesota Pollution Control Agency
Craig Christensen, Murray County SWCD
Chris Hansen, Murray County Water Resources
Heath Landsman, Murray County Emergency Management
Janet Timmerman, Murray County Historical Museum
Dominic Jones, Red Rock Rural Water
Jason Overby, Lincoln-Pipestone Rural Water
Robert Nielsen, Minnesota Department of Health
Lindsey Knutson, Minnesota Department of Transportation
Annette Fiedler, Southwest Regional Development Commission

MURRAY COUNTY BOARD OF COMMISSIONERS 2016

First District
James Jens

Second District
Robert Moline

Third District
Gerald Magnus

Forth District
Glenn "Corky" Kluis

Fifth District
Dave Thiner

The Murray County Family of Plans, Components of the Comprehensive Plan

Murray County's Comprehensive Plan is an amalgamation of separately created plans each focused on a specific topics: Land Use, County Facilities, Hazard Mitigation, Parks, Solid Waste, Water, Economic Development, Transportation, Aquatic Invasive Species have been adopted or are in the process of being developed and are referenced in the Comprehensive Plan.

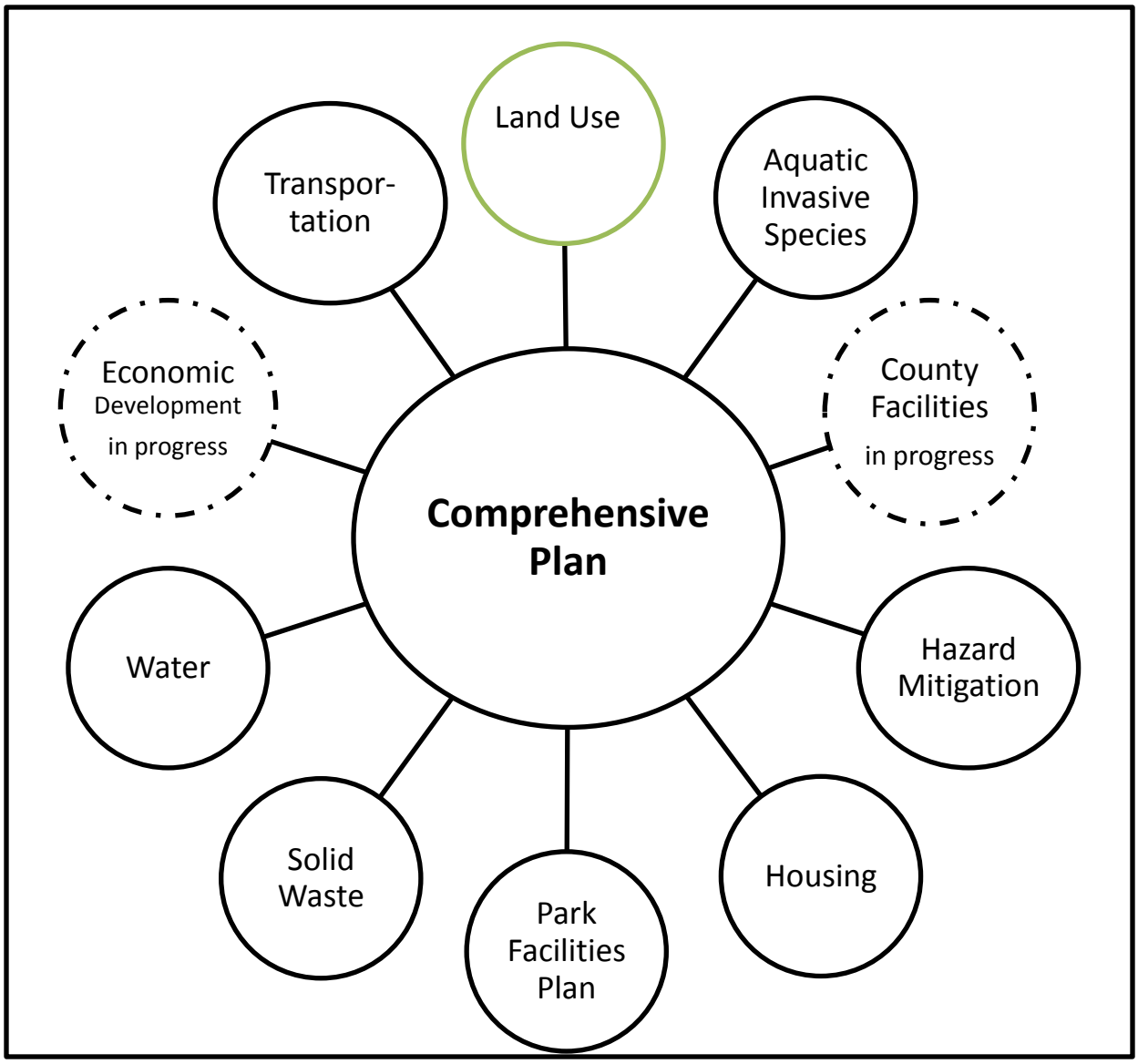


Table of Contents

EXECUTIVE SUMMARY

In 2007, Murray County celebrated its sesquicentennial, the 150th anniversary of the formation of the County. There had been many changes since the prairie days of 1857. The railroads have come and gone. Horse-drawn plows broke the prairie grass into fields now worked by large farm machinery of a scale not dreamed of a century and a half past. Murray County's residents past and present built homes and businesses, churches and schools, hopes and dreams into vibrant communities with a quality of life equal to any in Minnesota. Over the past ten years, more change has occurred which has shaped the County

There are always challenges in any community. Murray County has lost population since the middle of the last century and the median age of its citizens is increasing. Meanwhile, County buildings are getting older, the number of people within most of the communities and townships is getting smaller and lakeshore development has reached a critical stage in terms of protecting the environment and water quality. Murray County, like many rural counties, is in a state of continuous change and it is this change that makes comprehensive planning so critical.

From the beginning stages of this plan's update, Murray County leaders recognized the importance of citizen involvement and the need to have broad citizen input and representation for the development of the plan. In preparation for the comprehensive planning process, the County Commissioners selected individuals from various places and organizations throughout the County to serve on the Comprehensive Planning Advisory Committee, ensuring a broad representation.

The Murray County Comprehensive Plan is organized into key elements. Each chapter provides background information on the topic, then examines future development considerations and guidelines:

- Chapter Introduction
- Purpose for the Chapter
- Current Issues facing the County
- Current Situation
- Planning to Address Future Concerns

One of the main functions of the Murray County Comprehensive Plan is to provide a consistent set of goals and policies that can guide decisions regarding land use by both the private and public sector. Decisions regarding growth and development that were made in the past, as well as those that will be made in the future, will have an effect on the need for public expenditures and taxes, environmental quality, the consumption of energy and land, and will have effects on other resources.

Each chapter contains data that serves as the foundation on which the plan is built. This data includes reasonable projections, but since they are estimates it should be noted that they are subject to conditions of change. The Comprehensive Plan should be viewed as a dynamic document, and it should be examined and amended periodically.

The following is a list of the plan's chapters and the several key issues that were considered during the Committee meetings. Each of the following sections gives a brief overview of the issues facing the County in relation to that element.

Demographics and Housing

The demographics and housing section of this plan is intended to provide background on people living within Murray County. This information helps decision makers and citizens understand current conditions, evaluate proposals, and formulate policies to improve the community.

Housing is typically provided within the incorporated cities where municipal services are available. However, there remain substantial numbers of rural farm and non-farm home sites in Murray County's townships. The County has an on-going interest in promoting safe and affordable housing.

Key Issues

Decreasing population
Aging of population
Housing stock: age, condition, availability, safe and affordable

Economic Development

The economic base of Murray County provides jobs and income that fuel local prosperity. Economic development, then, is essential to growing the economic base of agriculture, manufacturing and exported services in a sustainable manner. It is vital for the County to ensure that its own ability to provide infrastructure and services is closely coordinated with current and future growth.

One of the main themes found within the Economic Development chapter is the retention and expansion of businesses already operating within the County, as well as continued pursuit of new businesses.

Key Issues

Murray County Economic Development Authority Work Program
Diversifying agricultural economy
Marketing and funding of the County's tourism features
Broadband infrastructure
Renewable energy

Historic and Cultural Facilities

Historic and cultural facilities occupy unique and special places in our landscape. People are beginning to understand that these structures or sites are non-renewable and once they are gone, they are not coming back. This Comprehensive Plan places an importance on designating, protecting, and preserving historic buildings and places. Each of Murray County's communities expresses a unique character, a distinguishing sense of place.

All communities and the historical significance they have should be important to Murray County and the County should work with all of its communities in order to protect this uniqueness. Through cooperation and promotion, historic properties will be further realized as the expression of a community's heritage, and many people will be able to continue to enjoy them.

Key Issues

Lack of understanding of the importance of historic and cultural facilities
Lack of funds for preservation and maintenance
Need for systematic facilities plans

Conservation, Parks, and Open Space

The Conservation, Parks, and Open Space chapter provides a framework for the use, protection, preservation, and enhancement of the County's natural resources, which include agricultural land, undeveloped natural areas, surface water and ground water, green space and open space, wildlife, and significant scenic and scientific areas. Environmental features have and will continue to play a key role in the development of Murray County. One of the primary issues here is converting marginal lands to agricultural production. This practice can lead to both loss of fertile topsoil and has the potential to cause degradation to water quality.

Key Issues

Natural resource base and environmentally sensitive land preservation
Surface and ground water quality protection
Enforcement of buffer law
Need for systematic facilities plans
Development and maintenance of the County's parks and trails
Loss, degradation and fragmentation of habitat/conservation areas

Infrastructure and Public Facilities

Murray County government is charged by statute to plan for certain public facilities and infrastructure. Transportation systems, for example, should be designed to meet the needs of citizens and commerce. They also have significant impact on the land and on the County's ability to function. Community facilities include both municipal and government facilities, parks and recreation areas, schools, churches, medical facilities, and cemeteries.

The need for on-going systematic planning for capital improvements and public facilities is essential for the assessment and maintenance of infrastructure and public facilities. There are technical reasons for this, such as if the County were to engage in Capital Improvement bonding. More common was the sense that the County must do the hard work of assessing public needs (now and into the future), inventorying all public facilities, and prioritizing projects before committing scarce taxpayer resources. Facilities Planning and Capital Improvement Planning are the commonly accepted ways across the nation for local government to do this.

Adequate service at a reasonable cost is an important balance for the County to achieve. Quality of life, a strong sense of community, recreational opportunities, and economic development depend on adequate infrastructure and facilities.

Key Issues

Maintenance of County infrastructure and facilities
Need for systematic facilities plans and capital improvements plans
Continued support for drinking water and waste water treatment systems
Access to technology, including broadband infrastructure
Development near existing transportation corridors, avoiding long dead-end roads and discouraging sprawl
Need for transportation access management
Access to emergency services
Transit and airports

Land Use

The Land Use element of the Comprehensive Plan ties the entire document together, and sets the stage for Implementation. This section describes public and private uses of land in the County as a guide to future decisions on Land Use.

The majority of land in Murray County is and will continue to be used for agricultural production. However, there is a need to balance land use—to balance lakeshore homesites and feedlots, to balance natural habitat and cropland, to balance the cost of extending public services and containing sprawl. Requiring new residential areas to follow conservation development patterns, and working with cities to encourage new residential and commercial development within existing municipalities, can help reduce the costs of sprawl, protect the natural environment, and assure the highest quality of life to all of Murray County.

Key Issues

Preservation of prime agricultural land
Balance natural resource protection with agriculture and urban development
Growth of renewable energy and standards for utilities
Balance costs and benefits of development outside incorporated areas
Decision-makers, residents and investors have clear, understandable and usable policies, rules and regulations for development

Implementation

The final chapter of this comprehensive plan consists of recommendations for the implementation of the plan, including goals, objectives, and policies. Specific immediate (next step), ongoing, short-term and long term implementation tasks are then set forward in a matrix relating each task to the related goals and policies.

It is important to remember that formal adoption of this plan is really the first step in setting the future direction of the County, not the last. It is absolutely imperative that the County continue to refer to the plan and update it when need warrants. The County should consider budgeting money to update the plan to ensure that the plan's objectives are being met and implementation strategies are being carried out.

CHAPTER 1.
INTRODUCTION AND OVERVIEW
OF THE PLANNING PROCESS

The Comprehensive Plan is intended to provide a basis for County decision making during the next 25 years. The plan sets forth research and information that was assembled throughout the duration of the project, and lists goals, policies, and recommendations to help decision makers address development-related issues in the County. Murray County's legal authority to plan for and regulate the use of land is delegated by the Minnesota Legislature in statute. Official controls such as zoning and subdivision ordinances must be consistent with this plan.

Individual Chapter Outline. Each chapter of the Murray County Comprehensive Plan includes a section listing current issues facing the County. This background includes research that was completed by the Murray County Comprehensive Planning Advisory Committee, Murray County staff, and the Southwest Regional Development Commission (SRDC) during the planning process. The Planning Advisory Committee identified all issues (strengths, weaknesses, opportunities, and threats) most critical and in need of addressing within the County. At the beginning of each chapter, these issues are identified and prioritized as considered by the Planning Advisory Committee.

The next portion of each chapter includes research findings related to that chapter. The plan includes information related to economic conditions within the County's communities and other issues related to economic development. Historic and Cultural Facilities information is included in its own section and an analysis of the environmental features within the County can be found within the Conservation, Parks, and Recreation Chapter. In addition, data collected on land use, transportation, and County facilities and plans are set out for each.

After the general background information in each chapter, the next section generally deals with future issues affecting that particular section. Where need warrants, forecasts and projections are made, possible future developments emphasized, and future land use considered. At the conclusion of the Plan, goals, objectives, policies, and implementation strategies are listed. These goals and objectives fulfill the mission of the Comprehensive Plan and they provide a sense of direction to County leaders.

Overview of the Planning Process. A major goal at the outset of plan development was to ensure that the residents had opportunities to voice their opinions regarding the Comprehensive Plan. The first step in plan development was to solicit members representing various areas within the County to serve on the Murray County Comprehensive Planning Advisory Committee. The Committee guides the planning process, and recommends the Comprehensive Plan to both the Planning Commission and the County Board for final approval. The County Board should then review the plan regularly to keep the Comprehensive Plan in use, to ensure that its goals and objectives are being carried out, and to establish new goals and objectives as the Committee deems necessary.

The Murray County Comprehensive Planning Advisory Committee has about two dozen members representing cities, townships, and organizations throughout Murray County.

From April 2016 to September 2016, the Planning Advisory Committee met to develop the first draft for an update of the Comprehensive Plan, which was originally adopted by the Murray

County Board of commissioner in 1972, subsequently updated in 2002 and 2007. The Planning Advisory Committee recommended this Comprehensive Plan update for approval to the County Planning and Zoning Commission on October 4, 2016. The County Planning Commission reviewed the document and recommended adoption of the update to the Murray County Board of Commissioners on _____.

In 2016, the Advisory Committee was identified and called to review and revise the Plan. Every Committee member had the opportunity to provide ideas and suggest changes at each one of these meetings. In addition, a Citizens survey was initiated to obtain input from Murray County Citizens on their ideas and visions for the future of the County. That input was reviewed by the Planning Advisory committee and helped shape the Comprehensive Plan update.

CHAPTER 2. DEMOGRAPHICS AND HOUSING

Demographic and housing data provides information on the background trends affecting the area. This information helps decision makers and citizens understand current conditions, evaluate proposals, and formulate policies to improve the community.

The topics discussed in this Chapter are arranged in the following order:

- Introduction
- Purpose
- Issues concerning demographics and housing within Murray County
- Current data on Murray County population and housing
- Future considerations for population and housing planning

INTRODUCTION

The extent of this chapter includes an analysis of growth trends and the demographic makeup of the citizens of Murray County. In addition, this chapter includes a breakdown of the household base and condition of the housing stock. A combination of these analyses will have an effect on both future and pending housing developments.

PURPOSE

The demographic data included in this plan is very important to the overall comprehensive planning process. By researching and discussing the County's demographic characteristics, many other facets of its development can be evaluated. This chapter will provide a framework to assist the County when making planning decisions which could include: future industrial and commercial growth, community facility needs, the general and specific needs of the County's labor force, environmental impacts, transportation, and the County's infrastructure needs.

Housing is also a vitally important element for those currently living in Murray County and those considering moving to Murray County. The housing section of this chapter is designed to inventory current housing conditions and needs within Murray County. Having enough housing that is both high quality and affordable is extremely important to the residents of Murray County. Finally, the housing section will inventory the number of available dwellings within the County and will inventory the age of the current housing stock.

ISSUES CONCERNING DEMOGRAPHICS AND HOUSING WITHIN MURRAY COUNTY

There are several demographic concerns facing Murray County

- Population loss
- Increased older population
- Increased median age in many townships
- Limited housing stock

The population has continually decreased in every U.S. Census since 1950. Adding to this concern is the fact that the loss in population is typically the younger citizens and younger families. This contributes to the problem of the County's population being made up of predominantly older citizens. Census 2010 figures show Murray County's population at 8,725 people, a loss of 440 from the 2000 Census.

Rural housing issues coincide with the aging population issue. We see the aging population remaining in their homes longer and fewer homes available for younger families. The ability of homeowners to maintain the quality of housing also tends to decrease as the homeowner ages. In addition, there is often times a lack of new or rehabilitated housing (owned / rental) in rural areas and the existing rental housing stock is typically of poor quality.

The future of Murray County is not all problems as the County does possess various strengths in terms of demographics and housing and there are features that the County could develop and enhance. However, there are circumstances that it should be concerned about such as those listed above.

CURRENT DATA ON MURRAY COUNTY POPULATION

General Population Trends

Murray County is a small rural county with a reported 2010 Census population of 8,725 people. The U.S. Census Bureau estimates Murray County's 2014 population declined to 8,475. If we take a larger look around the region, we see how difficult the past few decades have been on local population and housing. Murray County has experienced the largest decline in population since 1970 of any county in Region 8 (-30.2%)[1] and has the highest median age of 46.8 years.

For the last half of the twentieth century, the population of Murray County steadily declined. However, from 1990 to 2010, the numbers show a slower rate of decline (Table 2-1). Table 2-2 and Figure 2.1 illustrate the overall decline in population and they also show that the decline is largely due to rural population loss. Note that the County's municipalities did not show a large decrease from the 1950 population numbers until 1990.

[1] Minnesota Economic Development Region 8 includes all the counties adjacent to Murray County, including Cottonwood, Lincoln, Lyon, Jackson, Nobles, Pipestone, Redwood and Rock counties. It is the designated service area of the Southwest Regional Development Commission.

Table 2-1. Population of Counties in Region 8, 1970 – 2010

County	1970	1980	1970-1980	1990	1980-1990	2000	1990-2000	2010	2000-2010	1970-2010
Cottonwood	14,887	14,854	-0.2%	12,694	-14.5%	12,167	-4.15%	11,687	-3.9%	-21.5%
Jackson	14,352	13,690	-4.6%	11,677	-14.7%	11,268	-3.50%	10,266	-8.9%	-28.5%
Lincoln	8,143	8,207	0.8%	6,890	-16.0%	6,429	-6.69%	5,896	-8.3%	-27.6%
Lyon	24,273	25,207	3.8%	24,789	-1.7%	25,425	2.57%	25,857	1.7%	6.5%
Murray	12,508	11,507	-8.0%	9,660	-16.1%	9,165	-5.12%	8,725	-4.8%	-30.2%
Nobles	23,208	21,840	-5.9%	20,098	-8.0%	20,832	3.65%	21,378	2.6%	-7.9%
Pipestone	12,791	11,690	-8.6%	10,491	-10.3%	9,895	-5.68%	9,596	-3.0%	-25.0%
Redwood	20,024	19,341	-3.4%	17,254	-10.8%	16,815	-2.54%	16,059	-4.5%	-19.8%
Rock	11,346	10,703	-5.7%	9,806	-8.4%	9,721	-0.87%	9,687	-0.3%	-14.6%
Region	143,502	139,019	-3.1%	125,349	-9.8%	123,717	-1.30%	121,161	-2.1%	-15.6%
Minnesota	3,806,103	4,075,970	7.1%	4,375,099	7.3%	4,919,479	12.44%	5,303,925	7.8%	39.4%

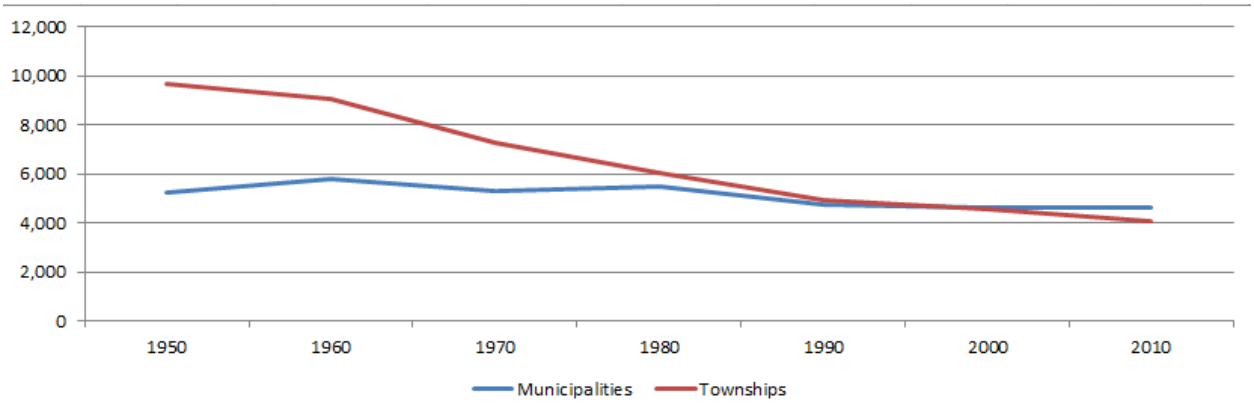
Source: US Census, Minnesota State Demographic Center

Table 2-2. Distribution of Population between Municipalities and Townships 1950 – 2010

Murray County	1950	1960	1970	1980	1990	2000	2010
Municipalities	5,266	5,768	5,328	5,484	4,759	4,593	4,627
Townships	9,674	9,087	7,284	6,023	4,901	4,572	4,098
Total	14,940	14,855	12,612	11,507	9,660	9,165	8,725

Source: US Census, Minnesota State Demographic Center

Figure 2-1. Distribution of Population between Municipalities and Townships 1950 – 2010



Source: U.S. Census, 1950 – 2010, Minnesota State Demographic Center

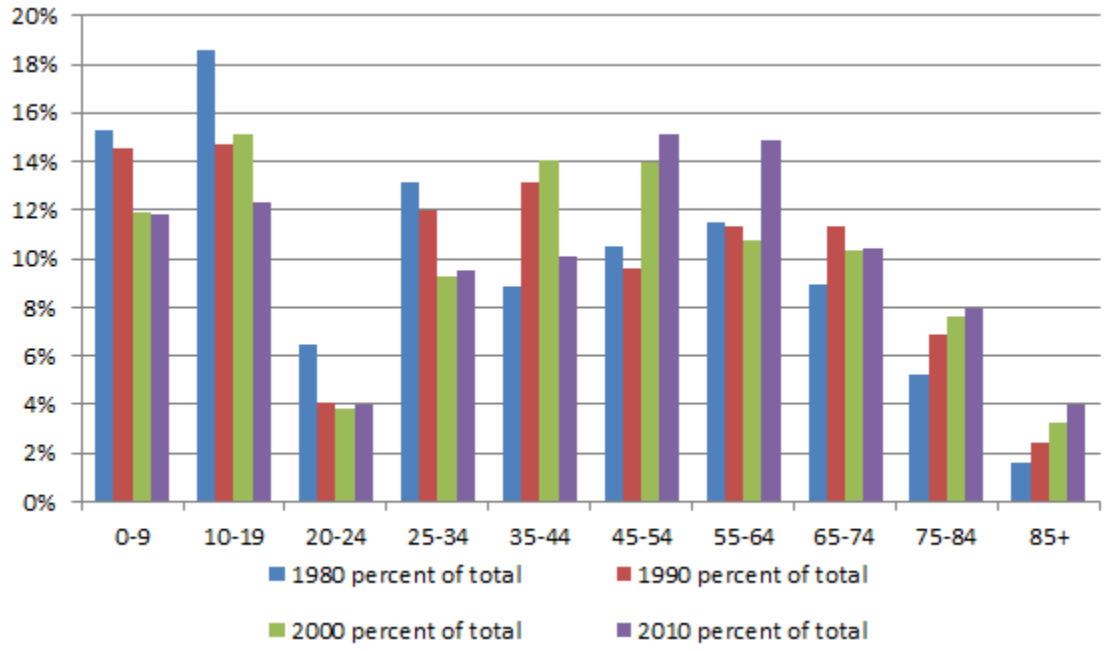
Population decline in rural areas can be attributed to several factors. For Murray County, these factors deal with the overall changes in the agricultural industry. The fluctuation in the real price farmers receive for the commodities they sell decreased, but the amount of labor that the agricultural industry used to support has largely declined during the last half of the twentieth century.

Despite these negative long-term trends, the first half of the 1990's did see some stabilization in total population numbers. During that time, the agriculture industry was experiencing better times and the County has been able to take advantage of development of permanent housing adjacent to the County's lakes, most notably in the Lake Shetek/Sarah area. These areas provide attractive amenities that help to both retain and attract residents to Murray County. However, these lake areas must be developed in a sustainable manner.

Population by Age

Use of age cohorts can identify trends and assist in identification of trends. Figure 2-2 and Table 2-3 displays how the age of the County has progressed over the last 40 years.

Figure 2-2. Percent of Population by Age 1980 – 2010



Source: U.S. Census 1980 – 2010

Age Trees

From 1980 through 2010, there was a 24.18% decrease in population. As displayed in Table 2-3, the age groups that decreased the most were the 0-34, with a 41.34% decrease to a 53.44% decrease. The largest percentage increase was in the 85+ age cohort with an 86% increase. However, the population which had been decreasing an average of 7% per decade from 1980 to 2000, decreased by only 4.8% between 2000 and 2010.

Table 2-3. Population by Age Cohort, 1980 – 2010

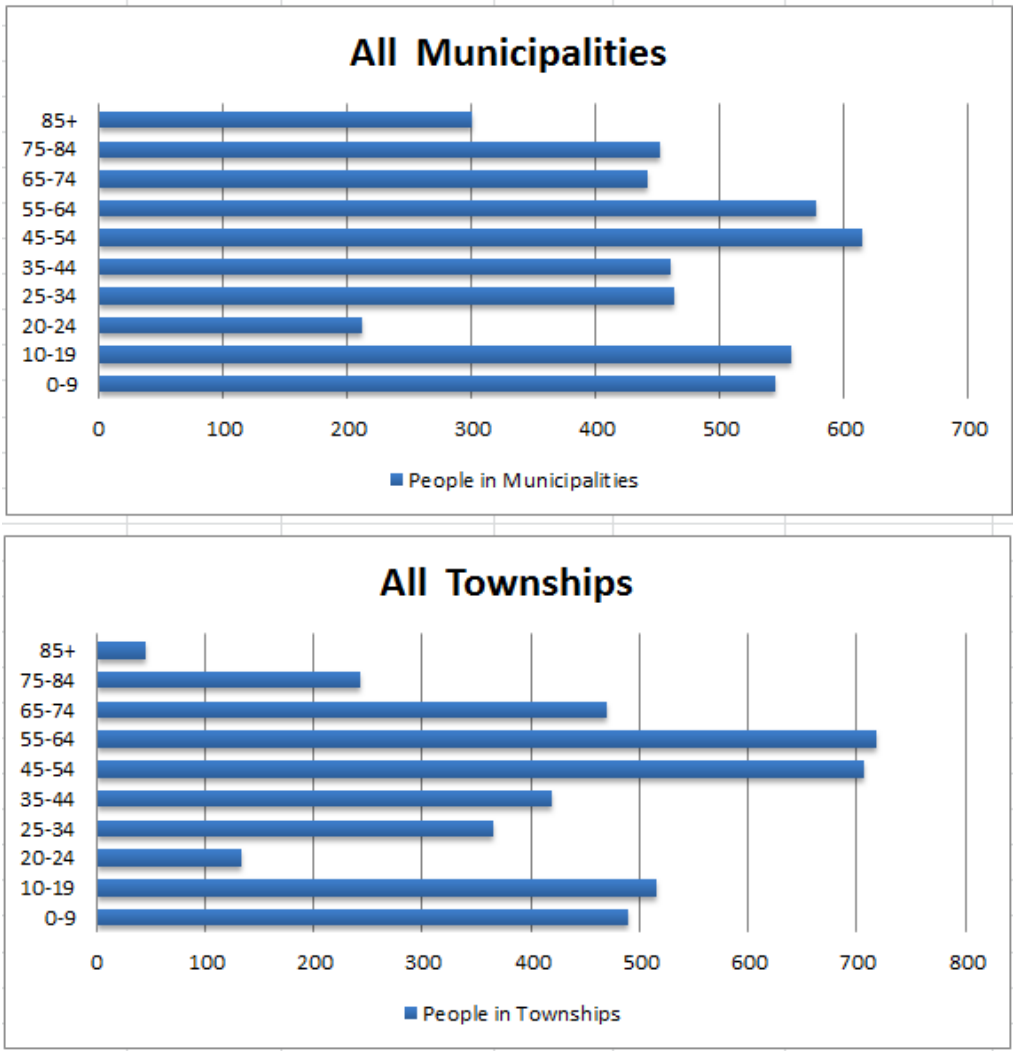
		1980		1990		2000		2010	1980 - 2010
Age Group	1980 Population	Percent of Total	1990 Population	Percent of Total	2000 Population	Percent of Total	2010 Population	Percent of Total	Percent Change
0-9	1,761	15.30%	1,401	14.50%	1,094	11.94%	1,033	11.84%	-41.34%
10-19	2,134	18.55%	1,422	14.72%	1,384	15.10%	1,073	12.30%	-49.72%
20-24	741	6.44%	390	4.04%	348	3.80%	345	3.95%	-53.44%
25-34	1,509	13.11%	1,161	12.02%	846	9.23%	829	9.50%	-45.06%
35-44	1,020	8.86%	1,272	13.17%	1,285	14.02%	879	10.07%	-13.82%
45-54	1,213	10.54%	929	9.62%	1,279	13.96%	1,321	15.14%	8.90%
55-64	1,318	11.45%	1,094	11.33%	982	10.71%	1,294	14.83%	-1.82%
65-74	1,024	8.90%	1,091	11.29%	948	10.34%	911	10.44%	-11.04%
75-84	601	5.22%	668	6.92%	700	7.64%	694	7.95%	15.47%
85+	186	1.62%	232	2.40%	299	3.26%	346	3.97%	86.02%
Total	**11,507**	100.00%	**9,660**	100.00%	**9,165**	100.00%	**8,725**	100.00%	**-24.18%**
Summary									
0-19	3,895	33.85%	2,823	29.22%	2,478	27.04%	2,106	24.14%	-45.93%
20-34	2,250	19.55%	1,551	16.06%	1,194	13.03%	1,174	13.46%	-47.82%
45-64	2,531	22.00%	2,023	20.94%	2,261	24.67%	2,615	29.97%	3.32%
65+	1,811	15.74%	1,991	20.61%	1,947	21.24%	1,951	22.36%	7.73%

Source: U.S. Census, 1980 - 2010

Comparing the 2000 and 2010 population cohorts provides some positive facets of the population. There was less than one-half percent change gain or loss in the 0-9, 20-24, 25-34, 65-74 and 75-84 age groups. While the 10-19 age cohorts shows a loss of 2.8%, a similar number from the previous decade 0-9 moved into the new age cohort. We again see the same dynamic occurring in the 35-44 age group and the previous decades 25-34 year olds. The largest increases are in the 45-54 and 55-64 age categories as the baby boomer generation ages and could be reflected by new residents in the County and people returning to retire.

The age trees illustrate the growing elderly population within Murray County and the overall age condition. The Figure 2-3 illustrates that the elderly population is higher in the County's municipalities, and it is generally lower in the townships.

Figure 2-3. Age Trees of Murray County by Age Cohort, 2010



Source: U.S. Census 2010

Median Age

According to the U.S. Census, the median age increased for all municipalities except Slayton from 1980 - 2000 (Table 2-4). That trend continued for Slayton and two other communities Chandler and Avoca from 2000 to 2010; Slayton and Chandler experienced a 3.1% and 4% decrease in median age, and Avoca remained about the same. The remaining communities' median age increased between 6.8 % (Fulda) to 18.6% (Iona).

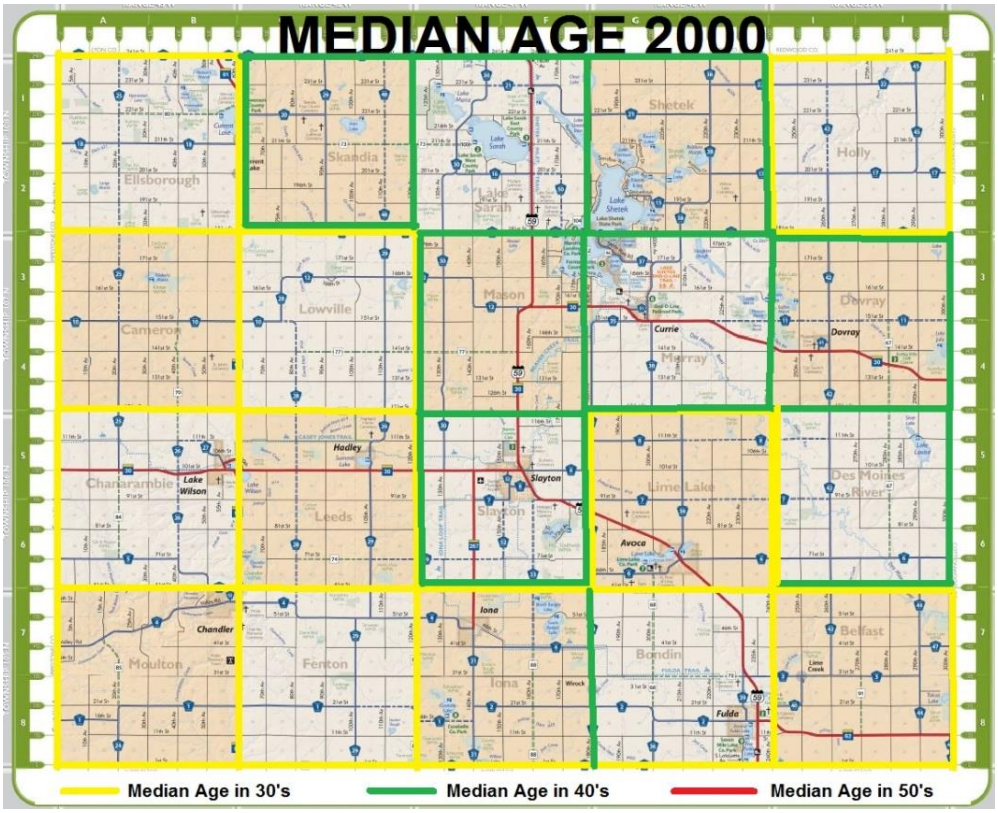
Table 2-4. Median Age for Political Subdivisions, 1980 – 2010

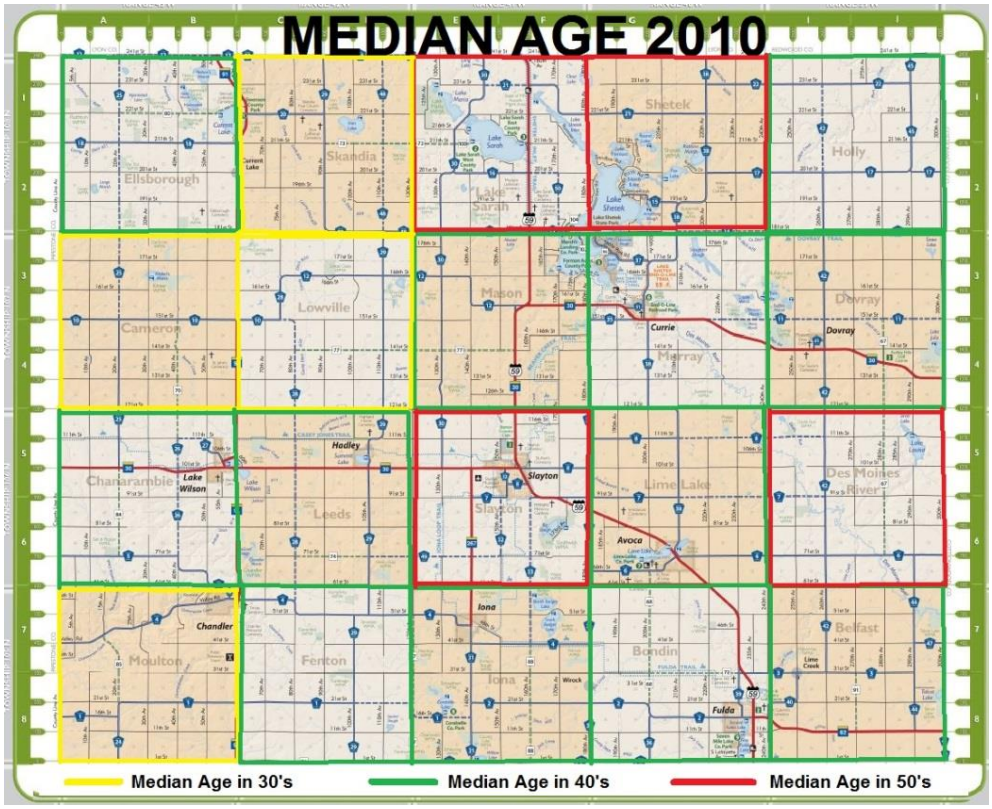
Political Subdivision	1980	1990	1980 - 1990 % Change	2000	1990 - 2000 % Change	2010	2000 - 2010 % Change	1980 - 2010 % Change
Avoca	33.8	40.4	19.50%	44	8.9%	44.1	0.2%	30.5%
Chandler	29.7	38.3	28.90%	42.7	11.5%	41	-4.0%	38.0%
Currie	32.3	37.3	15.50%	49.3	32.2%	53.3	8.1%	65.0%
Dovray	49.5	46	-7.00%	54.5	18.5%	59.5	9.2%	20.2%
Fulda	39.2	43.1	9.90%	43.8	1.6%	46.8	6.8%	19.4%
Hadley	27.9	37	32.60%	47.9	29.5%	56.2	17.3%	101.4%
Iona	36.3	37.1	2.20%	43.5	17.3%	51.6	18.6%	42.1%
Lake Wilson	30.9	41.5	34.30%	44.4	7.0%	51.2	15.3%	65.7%
Slayton	37.5	45.1	20.30%	44.9	-0.4%	43.5	-3.1%	16.0%
Political Subdivision	**1980**	**1990**	**1980 - 1990 % Change**	**2000**	**1990 - 2000 % Change**	**2010**	**2000 - 2010 % Change**	**1980 - 2010 % Change**
Belfast Township	25.9	30.7	18.50%	36.1	17.6%	45.4	25.8%	75.3%
Bondin Township	29	33.7	16.20%	38.7	14.8%	45.9	18.6%	58.3%
Cameron Township	27.3	31.7	16.10%	35.3	11.4%	38.4	8.8%	40.7%
Chanarambie Township	26.8	35.2	31.30%	35.8	1.7%	42.3	18.2%	57.8%
Des Moines River Towr	27.9	40.1	43.70%	44	9.7%	52.5	19.3%	88.2%
Dovray Township	33.3	42.4	27.30%	46.5	9.7%	45.3	-2.6%	36.0%
Ellsborough Township	30	33.3	11.00%	36.8	10.5%	46.4	26.1%	54.7%
Fenton Township	29.8	35.2	18.10%	39.6	12.5%	45.8	15.7%	53.7%
Holly Township	30	35	16.60%	38	8.6%	48.5	27.6%	61.7%
Iona Township	27.8	32.6	17.30%	34.1	4.6%	40.5	18.8%	45.7%
Lake Sarah Township	29.9	40.8	36.50%	47.7	16.9%	53.9	13.0%	80.3%
Leeds Township	27.9	34.8	24.70%	34.8	0.0%	44.2	27.0%	58.4%
Lime Lake Township	31.8	34.2	7.50%	38.2	11.7%	49.3	29.1%	55.0%
Lowville Township	28.3	32.9	16.30%	37.2	13.1%	39.3	5.6%	38.9%
Mason Township	31	37.6	21.30%	46	22.3%	49.3	7.2%	59.0%
MoultonTownship	27.3	28.4	4.00%	34	19.7%	35.5	4.4%	30.0%
Murray Township	24.8	35.3	42.30%	45.5	28.9%	47.3	4.0%	90.7%
Shetek Township	30	39.4	31.30%	46.1	17.0%	55.1	19.5%	83.7%
Skandia Township	30	32.2	7.30%	40.3	25.2%	36.5	-9.4%	21.7%
Slayton Township	27.7	33.4	20.60%	42.1	26.0%	51.1	21.4%	84.5%
Murray County	**32**	**38.3**	**19.70%**	**42.4**	10.7%	46.8	10.4%	46.3%
Region 8	**32.2**	**36.9**	**14.60%**	**39.9**	8.1%	40.5	1.5%	25.8%
Minnesota	**29.2**	**32.5**	**11.30%**	**35.4**	8.9%	37.4	5.6%	28.1%

Source: U.S. Census, 1980, 1990, 2000, 2010

All Murray County townships increased in median age between 1980 and 2000. In 1980, all townships with the exception of Dovray were under the County Median Age. In 1990, 16 of the townships were under the Murray County Median Age, and in the year 2000, 14 townships median age population was less than the County Median Age. The 2010 Census identified 5 townships where the median age in their townships was less than the County Median Age. However, in 2010, four of the townships passed the median age of 50 (Figure 2-4) and three others were approaching the median age of 50: Lime Lake, Mason and Holly (Table 2-4).

Figure 2-4. Median Age 2000 and 2010 in Townships





Overall, Murray County increased from a median age of 32 in 1980 to a median age of 46.8 in 2010. During this same time frame, the Region 8 median age was 32.2 in 1980 and 40.5 in 2010 and the State median age was 29.2 in 1980 and 37.4 in 2010. Murray County is following the State trend toward a more elderly population, only at a much higher rate.

Township Population

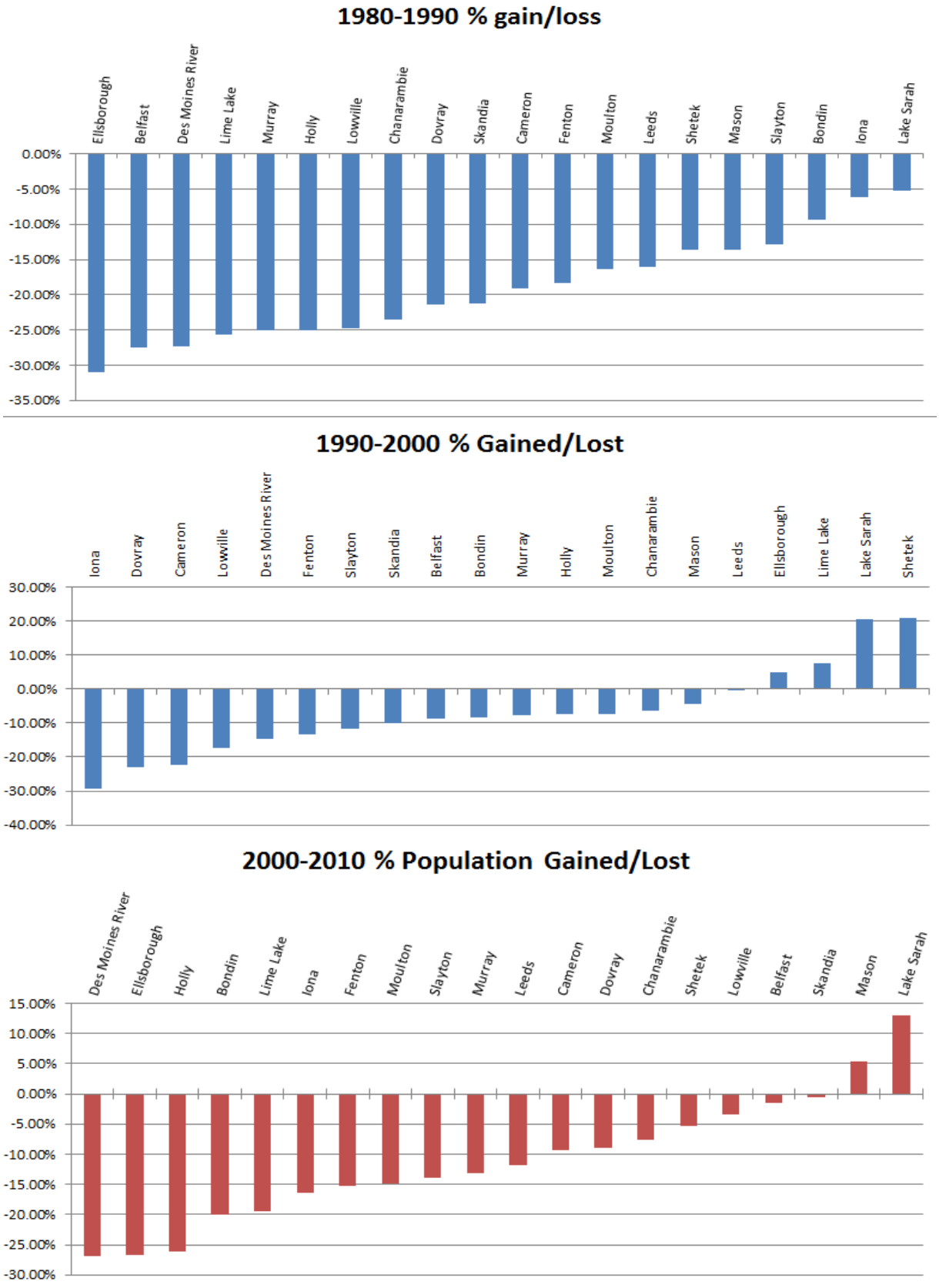
Historically, the majority of the townships experienced a significant population decline, (Table 2-5). The greatest loss for most was from 1980 to 1990, the total township population dropping from 6,023 to 4,901, a loss of 1,122. In 2000; four townships experienced either minor change to a growth in population (Leeds (-1), Ellsborough (9), Shetek (54), and Lake Sarah (59). From 2000 to 2010, there were five townships that experienced single digit loss to double digit gain (Lowville (-6), Belfast (-3), Skandia (-1), Mason (15), and Lake Sarah (45).

Table 2-5. Township Population 1980 - 2010

Township	1980	1990	1980 - 1990 Loss	2000	1990 - 2000 Gain or Loss	2010	2000 - 2010 Gain/Loss	1980-2010 Gain/Loss
Belfast	295	214	-81	195	-19	192	-3	-103
Bondin	404	366	-38	335	-31	268	-67	-136
Cameron	240	194	-46	151	-43	137	-14	-103
Chanarambie	311	238	-73	223	-15	206	-17	-105
Des Moines River	293	213	-80	182	-31	133	-49	-160
Dovray	276	217	-59	167	-50	152	-15	-124
Ellsborough	274	189	-85	198	9	145	-53	-129
Fenton	295	241	-54	209	-32	177	-32	-118
Holly	248	186	-62	172	-14	127	-45	-121
Iona	294	276	-18	195	-81	163	-32	-131
Lake Sarah	305	289	-16	348	59	393	45	88
Leeds	285	239	-46	238	-1	210	-28	-75
Lime Lake	281	209	-72	225	16	181	-44	-100
Lowville	282	212	-70	175	-37	169	-6	-113
Mason	344	297	-47	284	-13	299	15	-45
Moulton	312	261	-51	242	-19	206	-36	-106
Murray	295	221	-74	204	-17	177	-27	-118
Shetek	300	259	-41	313	54	296	-17	-4
Skandia	244	192	-52	173	-19	172	-1	-72
Slayton	445	388	-57	343	-45	295	-48	-150
All Townships	**6,023**	**4,901**	**-1,122**	**4,572**	**-329**	**4,098**	**-474**	**-1925**
Source: US Census 1980 - 2010								

Lake Sarah and Shetek Townships feature recreational lakes and have both permanent and seasonal lake homes. This would explain the more stable population and gain in population as well as the increase in median age above 50 for retirement homes. This is also where a large portion of the Murray County housing development has taken place during the last several years. The majority of all townships did not lose as much population from 1990 to 2000 and 2000 to 2010 as they did from 1980 – 1990. Des Moines River, Ellsborough and Holly Townships however lost large numbers during the time frames. Figure 2-5 illustrates this information.

Figure 2-5. Percent Population gain / loss by decade, 1980 to 2010



Municipality Population

All Murray County municipalities lost population from 1980 to 1990, as seen in Table 2-6. The City of Iona lost the highest percentage of it citizens (36.29%) while the City of Slayton lost the largest number of people (273). From 1990 to 2000, these municipality numbers decreased again but at a reduced rate. Average decreases for all municipalities went from a 9.71% loss from 1980 to 1990 to a 2.46% loss from 1990 to 2000. From 1990 to 2000, the cities of Dovray, Fulda, and Iona increased in population while the cities of Avoca, Hadley, Lake Wilson and Slayton all had reduced rates of loss. The cities of Chandler and Currie had increased rates of population loss during this time. From 2000 to 2010, there was an overall increase in municipality population of 34, with increases in Slayton, Fulda, Currie and Avoca.

Table 2-6. Municipality Population, 1980 – 2010

City	1980	1990	1980 - 1990 Gain or Loss	2000	1990 - 2000 Gain or Loss	2010	2000-2010 Gain/Loss	1980-2010 Gain/Loss
Avoca	201	150	-51	146	-4	147	1	-54
Chandler	344	316	-28	276	-40	270	-6	-74
Currie	359	303	-56	225	-78	233	8	-126
Dovray	87	60	-27	67	7	57	-10	-30
Fulda	1,308	1,212	-96	1,283	71	1,318	35	10
Hadley	137	94	-43	81	-13	61	-20	-76
Iona	248	158	-90	173	15	137	-36	-111
Lake Wilson	380	319	-61	270	-49	251	-19	-129
Slayton	2,420	2,147	-273	2,072	-75	2,153	81	-267
All Municipalities	**5,484**	**4,759**	**-725**	**4,593**	**-166**	**4,627**	**34**	**-857**

Source: U.S. Census, 1980, 1990, 2000, 2010

Murray County Migration

Americans tend to move from one place to another. The 2000 US Census indicated the greatest number of new residents had come from Nobles, Lyon or Cottonwood Counties and the greatest out migration were to Lyon, Nobles and Pipestone Counties; and the largest metropolitan destination was to Minnehaha County, South Dakota.

The US Census 2009-2013 American Community Survey indicates the largest net increase was from Jackson, Lyon and Hennepin Counties in Minnesota; the largest net out bound migration from Murray County was to Blue Earth Co, MN, Pennington Co, SD, and St Louis Co, MN. This data also indicated that there was a total net increase from migration of 19 residents.

Population by Household

Table 2-7 shows population in households, number of households, and persons per household in Murray County for the years spanning 1970 through 2010 (the US Census defines household as "including all of the people who occupy a housing unit as their usual place of residence"). There

was a slight increase in the number of households from 1970 to 1980. During this same time period, the County lost population in households. This is best explained by a national trend of smaller families, households without children, an increase in teen parenting, and an increase in the rate of divorce. From 1990 and 2000, Murray County lost both population within households and total households. This is most attributable to the overall population loss in all rural areas and was not unique to only Murray County. The trend in population loss continued into 2010, but the decrease in all categories was less.

Table 2-7. Population by Household for Murray County, 1970 - 2010

	1970	1980	1990	1970 - 90 Change	2000	1990 - 2000 Change	2010	2000-10 change
Pop in Households	12,340	11,345	9,506	-26.60%	9,004	-5.28%	8,562	,4.9%
Households	3,718	4,038	3,758	1.10%	3,722	-0.96%	3,717	-0.1%
Persons Per HH	3.32	2.81	2.53	-23.80%	2.42	-4.35%	2.3	-.5.0%

Source: U.S. Census, 1970 – 2010

Table 2-8. Municipalities and Townships, Persons Per Household, 1970 – 2010

	Municipalities					Townships				
Year	**1970**	**1980**	**1990**	**2000**	**2010**	**1970**	**1980**	**1990**	**2000**	**2010**
Population in HH	5086	4727	4605	4432	4464	7254	3936	4901	4572	4098
Households	1806	2114	2058	2008	2058	1912	1875	1617	1714	1659
Persons per HH	2.83	2.24	2.31	2.19	2.31	3.82	2.1	2.89	2.7	2.47

Source: U.S. Census: 1970, 1980, 1990, 2000, 2010

Municipalities in Murray County experienced an increase in households from the 1970's to the 1980's, similar to that of the County overall (Table 2-8). From 1980 through 2000, the municipalities show a small but continual loss in the number of households. This trend reversed in the 2010 Census where the population in households, household number and persons per household increased. The townships, however, steadily lost households from 1970 through 1990. According to the 2000 Census, the townships showed a small increase in households but lost a significant number of people in households. The Census 2000 numbers also show a loss in the number of people per household for the County's townships, going from 2.89 in 1990 to 2.7 in 2000. A large difference between the municipalities and the townships is the number of persons per household. According to the 2010 Census, the townships again began to lose population in households, the number of households as well as persons per households.

Average household size of cities was 2.19 in 2000, potentially a result of retiring farm-families (with no children living at home) moving into established communities; however it did increase in 2010 to 2.31. While the 2010 persons per household decreased in the County, it was higher in the townships than in the municipalities. The higher persons per household in the County's townships are potentially due to younger families, with children, moving into the homes vacated by retired farmers. These acreages, with their larger yards and quiet open spaces are often attractive to younger families raising their children.

Population Projections

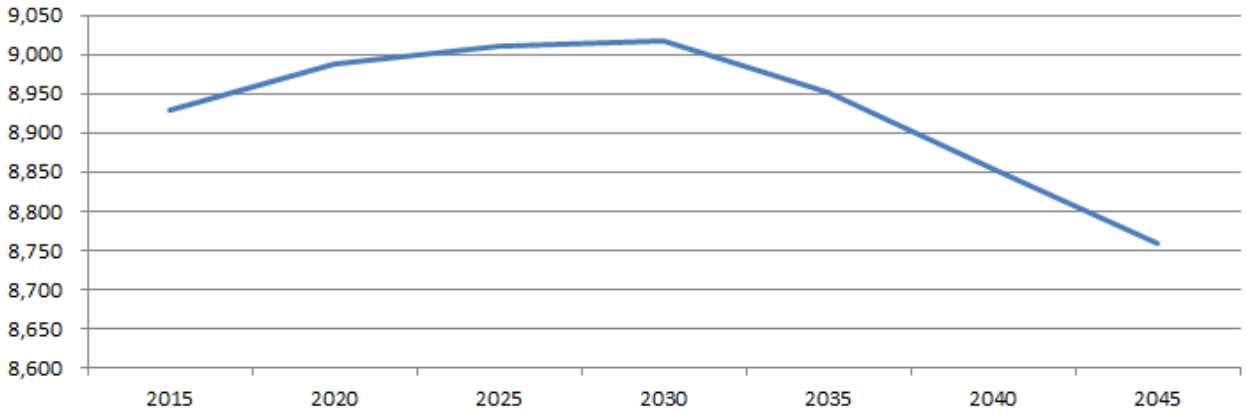
The Minnesota Demographic Center provides population projections for Counties based on various factors, such as birth and death rates, migration, and the American Community Survey. Table 2-9 and Figure 2-6 provide a view of the population projection for Murray County. These projects indicate an increase in population through the year 2030, but then begin to decline. The decline may be a result of loss of the baby boomer population.

Table 2-9. Population Projection, 2015 - 2045

	2015	2020	2025	2030	2035	2040	2045
Murray County	8,928	8,987	9,011	9,017	8,952	8,854	8,758
Southwest Region	120,758	122,957	125,454	127,622	129,237	130,471	131,432
Minnesota	5,497,933	5,677,582	5,841,619	5,982,601	6,093,729	6,175,801	6,234,930

Source: MN Demographic Center, March 2014

Figure 2-6. Minnesota State Demographers Population Projection, 2015 – 2045



Source Minnesota Demographic Center

Household Projections

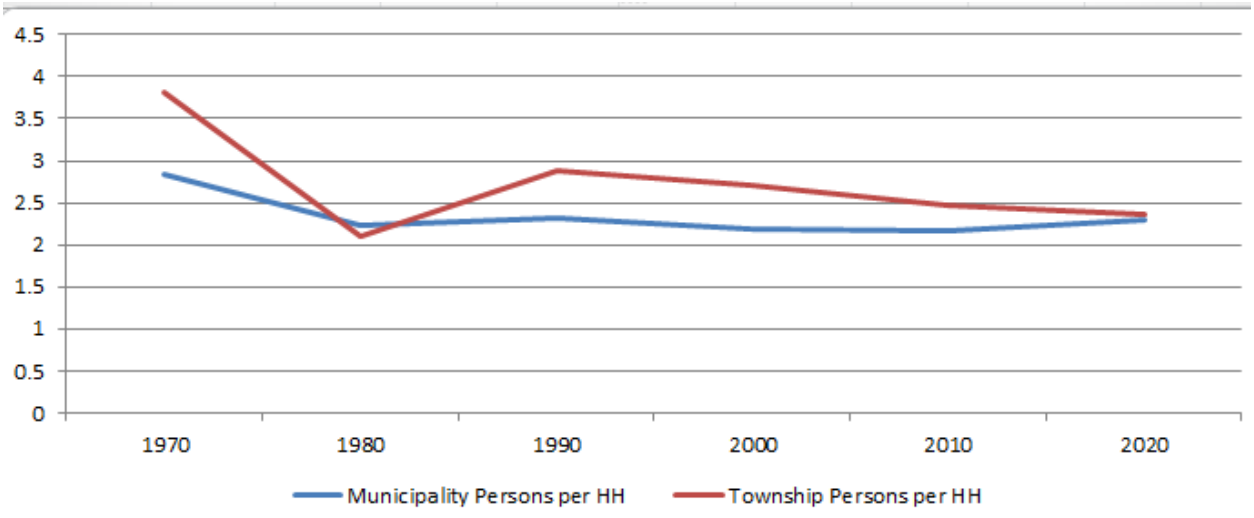
Households and household population are both directly related to overall population. Census 2010 numbers provide an accurate basis for the decennial projection. In 2014, the Minnesota State Demographic Center estimated future households for Murray County at 3,669, with 46% of the households in townships and 2.4 people per household. In municipalities, the 2014 estimate for persons per household was 2.22.

Table 2-10 represents the Census population in households, number of households and persons per household for both municipalities and townships. Figure 2-7 provides a comparison of persons per household for municipalities and townships projected to year 2020. The 2020 projection for municipal and township households and persons per household is a calculated projection, based on the State Demographers office on population in 2020, and applying the 2014 Demographers office projection to 2020.

Table 2-10. Household population by Township and Municipality 1970-2010, proj. to 2020.

	Municipalities					
Year	**1970**	**1980**	**1990**	**2000**	**2010**	**2020**
Population in Households	5086	4727	4605	4432	4464	4766
Households	1806	2114	2058	2008	2058	2077
Persons per Households	2.83	2.24	2.31	2.19	2.17	2.30
	Townships					
Population in Households	7254	3936	4901	4572	4098	4221
Households	1912	1875	1617	1714	1659	1781
Persons per Households	3.82	2.1	2.89	2.7	2.47	2.37

Figure 2-7. Persons per household, 1970 to 2010, projected to 2020



Source (for household information, Tables 2-10, Figure 2- 5): U.S. Census 1970 – 2010; State Demographers Office, SRDC

Race Trends

The 1970, 1980, and 1990 Censuses had different race categories for the respective respondent to select. For Censuses 2000 and 2010, these categories changed and allowed for more choices, including a selection for multiple races. This has made comparisons difficult. It should also be noted that "Hispanic" is a culture not a race; those identifying themselves as Hispanic or Latino can be of any race and have increased from 15 people in 1980 to 21 in 1990 to 135 in 2000 and decreased to 107 people in 2010 (Table 2-11).

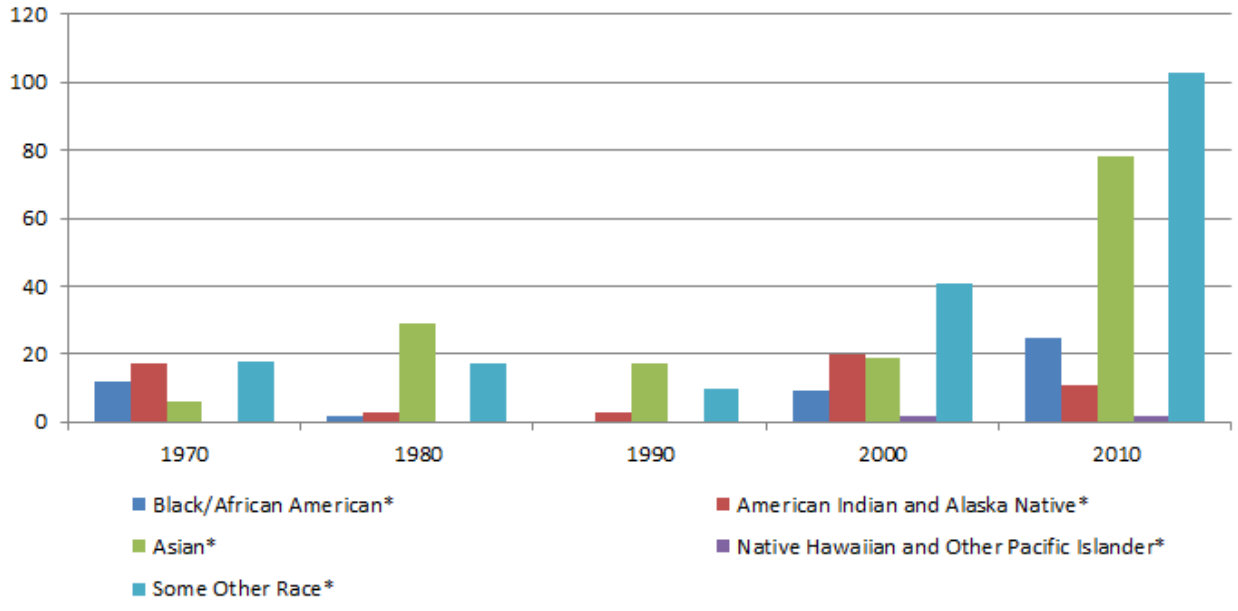
Table 2-11. Population Profile, 1970 – 2010

	1970	1980	1990	2000	2010
One Race	12,508	11,492	9,639	9,104	8,654
White*	12,455	11,441	9,609	9,013	8,435
Black/African American*	12	2	0	9	25
American Indian and Alaska Native*	17	3	3	20	11
Asian*	6	29	17	19	78
Native Hawaiian and Other Pacific Islander*	N/A	N/A	N/A	2	2
Some Other Race*	18	17	10	41	103
Total Non-White*	53	66	51	91	219
Two or More Races	N/A	N/A	N/A	61	71

Source: U.S. Census 1970 – 2010 , * One Race only

While Murray County does not possess as large of a minority population as some neighboring counties, it has seen an increase in total nonwhite one race only population in 2010 to a total of 219 people. Figure 2-8 provides a representation of Minority population from 1980-2010.

Figure 2-8. Minority Population 1970-2010



Some of these increases also may be attributed to increased employment opportunities both within Murray County and within neighboring counties such as Nobles County. Longer travel distances to work are continually becoming more common. With continued increases in this trend, demographic changes will most likely continue to occur.

Another indicator of diversity in the Murray County population can be obtained from school enrollment records. The Minnesota Department of Education maintains a database of the ethnic makeup of each school district within Minnesota. This database includes Pre-Kindergarten through 12th grade and Table 2-12 documents the sum of the public school districts with facilities in Murray County, for fall enrollment, indicating both ethnicity and total enrollment.

In the late 1980's and early 1990's, enrollment showed small declines, with a large decline in the 1991-92 school year. Table 2-12 shows that total enrollment numbers dropped by 227 students. This large decrease has been attributed to the tornado that passed through Murray County during this time. Some students were displaced and accurate counts were not possible.

By the next school year, 1993/94, Table 2-12 shows that enrollment levels were at their highest for the reporting period at 1,612. From 1994/95 through 2012/13 school years, the enrollment has for the most part declined about 33 to 34 students per year. From 2013/14 to 2015/16, there was an average increase of between 15 and 16 students per year.

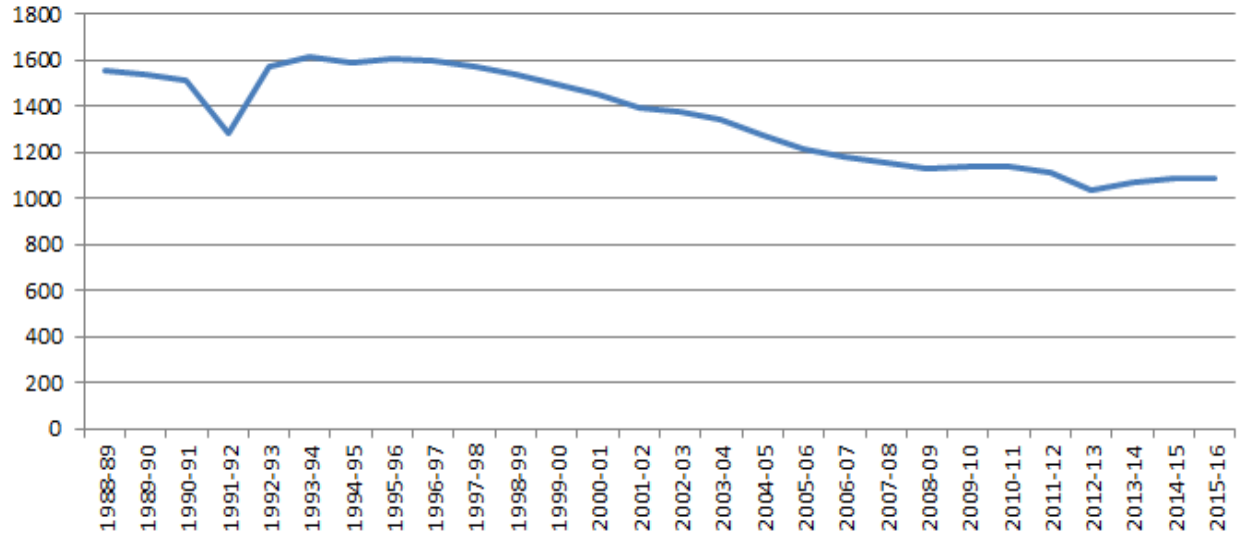
Table 2-12. Murray County Public School Enrollment, 1988 – 2016

School Year	American Indian	Asian/Pacific Islander	Hispanic	Black	White	Total Student
1988-1989	0	1	8	2	1547	1558
1989-1990	0	2	5	0	1530	1537
1990-1991	0	2	5	0	1505	1512
1991-1992	2	3	8	0	1272	1285
1992-1993	2	1	13	0	1557	1573
1993-1994	0	2	13	0	1597	1612
1994-1995	0	1	16	0	1574	1591
1995-1996	0	5	21	0	1580	1606
1996-1997	2	8	21	5	1559	1595
1997-1998	7	8	34	4	1520	1573
1998-1999	8	12	20	3	1493	1536
1999-2000	7	10	14	4	1459	1494
2000-2001	4	6	30	3	1410	1453
2001-2002	5	7	32	4	1342	1390
2002-2003	5	5	41	5	1317	1373
2003-2004	7	6	48	2	1279	1342
2004-2005	6	10	40	4	1212	1272
2005-2006	6	8	36	6	1156	1212
2006-2007	6	9	43	7	1118	1183
2007-2008	6	10	47	7	1086	1156
2008-2009	5	13	44	7	1063	1132
2009-2010	6	11	46	11	1066	1140
2010-2011	9	14	57	14	1047	1141
2011-2012	7	12	35	15	1041	1110
2012-2013	7	12	33	13	973	1038
2013-2014	7	16	44	11	992	1070
2014-2015	7	18	41	12	1007	1085
2015-2016	7	15	50	13	999	1084

Source: Minnesota Department of Education

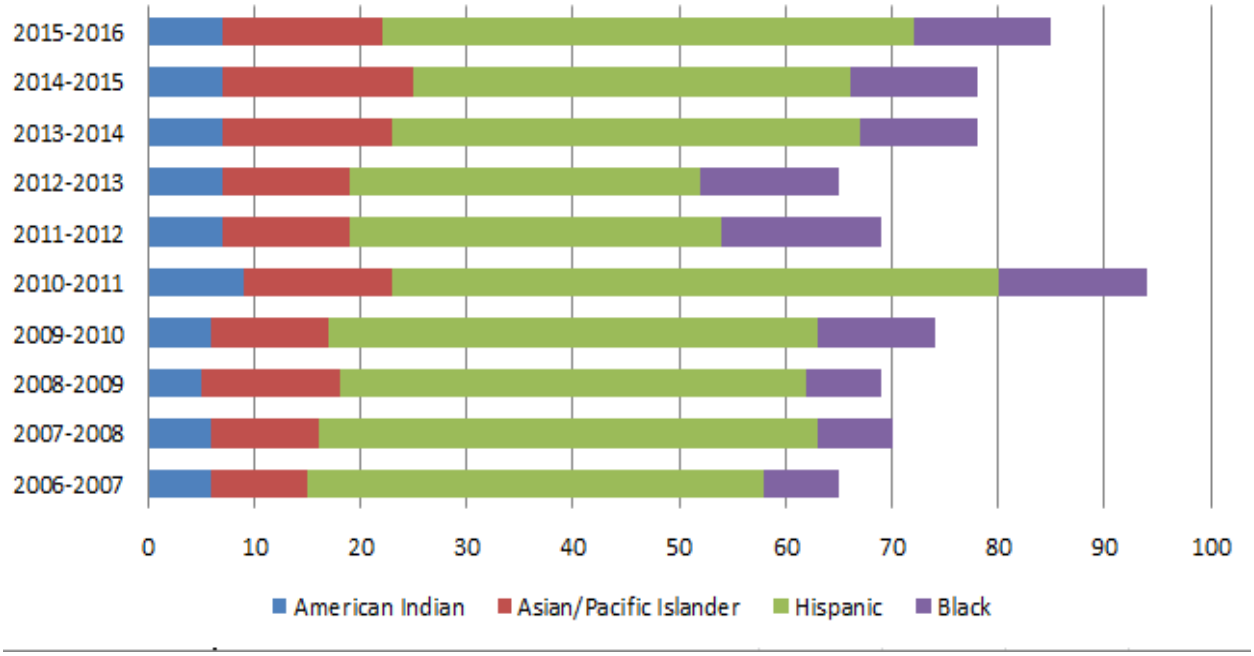
Figure 2-9 provides a visual representation of total public student fall enrollment trend for Murray County, Figure 2-10 represents the non-white ethnicity in fall enrollment within the Murray County public school districts.

Figure 2-9. Total Enrollment in Murray County Public Schools, 1988 – 2016



Source: Minnesota Department of Education

Figure 2-10. Grade Pre-K – 12 Ethnicity, 1988 – 2016



Source: Minnesota Department of Education

Housing

The material provided in this section inventories housing stock and evaluates past housing unit information and trends. Murray County should continue to focus on encouraging the development and preservation of affordable and life-cycle housing in its communities and rural areas. Housing is considered to be "affordable" if it costs no more than 30 % of a family's annual income. Life-cycle housing is defined as housing of a variety of types and costs meeting people's needs and preferences as incomes and circumstances change throughout their lives.

Murray County Housing Market Overview

According to the 2010 Census, there are 8,725 people in Murray County. This is a 4.8% decrease from its population of 9,165 at the time of the 2000 Census. Of these 8,725 people then living in Murray County, 4,627 live in the municipalities and 4,098 live in the unincorporated areas. According to the 2010 U.S. Census, there are 3,717 households in Murray County. The average household size in Murray County is 2.3 persons and the average family size is 2.8 persons.

The 2010 Census also reports that there are a total of 4,556 housing units in Murray County. Of those, 3,717 were occupied and 839 vacant. Of the 3,717 occupied housing units, 3,070 were owner occupied and 647 were renter occupied.

In 2007, Murray County completed a Comprehensive Housing Study, prepared by Community Partners Research. This study contains more information on housing market conditions in Murray County's cities and the County overall. The Southwest Minnesota Housing Partnership was consulted and indicated that little has changed in Murray County and the information in the Housing Study is still valid.

Age of Housing Stock

Table 2-13 shows the quantity and age of Murray County's housing stock in 2010. The number of housing units in Murray County was 212 greater in 2010 than in 2000. This 5% increase in the last decade has reversed the previous decade of 6% decline in housing stock.

About 50% of the total housing stock was built prior to 1960; construction for new housing since 1960 has averaged about 10% per decade. Age of housing stock may not indicate condition of housing stock. The 2007 Housing Study found in a windshield survey of 1,852 homes in cities and The Lakes area that about half were in sound condition, one-third in need of minor repair, 14% needing major repair and less than 2% considered dilapidated.

Table 2-13. Age of Housing Stock, Pre 1940 – March 2010 or later

Year Built	Total Units	Percent of Total
<1940	1,432	31.34%
1940 – 1959	974	21.32%
1960 – 1969	417	9.13%
1970 – 1979	532	11.64%
1980 – 1989	362	7.92%
1990 – 1999	413	9.04%
2000 – 2009	411	9.00%
>2010	28	0.61%
Total	**4,569**	

Source: U.S. Census 2010, 2014 ACS

Housing Unit Trends

Table 2-14 illustrates the housing trends from 1980 - 2010 for Murray County as well as the rest of the Counties in Region 8. There were a total of 52,831 housing units in Region 8 in 1980 and the number of housing units climbed to 53,716 by 2010. The total housing units decreased to 51,540 in 1990 and increased in 2000 & 2010. Region 8 experienced a 1.68% increase in housing units from 1990 to 2010.

For Murray County, the total number of housing units decreased from 1980-90 by 1.46%, following the Regional trend, it again decreased between 1990 and 2000 by 5.51% and increased in the following decade by 4.57%. Overall, the percent change from 1990 – 2010 was a decrease by 2.63%.

Table 2-14. Housing Unit Trends for Region 8 Counties, 1980 – 2010

	Total Units				Percent Change each decade			Percent Change
County	**1980**	**1990**	**2000**	**2010**	**1990**	**2000**	**2010**	**1990-2010**
Cottonwood	5,804	5,495	5,376	5,412	-5.32%	-2.17%	0.67%	-6.75%
Jackson	5,525	5,121	5,092	4,990	-7.31%	-0.57%	-2.00%	-9.68%
Lincoln	3,298	3,050	3,043	3,108	-7.52%	-0.23%	2.14%	-5.76%
Lyon	9,196	9,675	10,298	11,098	5.21%	6.44%	7.77%	20.68%
Murray	4,679	4,611	4,357	4,556	-1.45%	-5.51%	4.57%	-2.63%
Nobles	8,212	8,094	8,465	8,535	-1.44%	4.58%	0.83%	3.93%
Pipestone	4,636	4,387	4,434	4,483	-5.37%	1.07%	1.11%	-3.30%
Redwood	7,386	7,144	7,230	7,272	-3.28%	1.20%	0.58%	-1.54%
Rock	4,095	3,963	4,137	4,262	-3.22%	4.39%	3.02%	4.08%
Region 8	**52,831**	**51,540**	**52,432**	**53,716**	**-2.44%**	**1.73%**	**2.45%**	**1.68%**

Source: U.S. Census

Occupied Housing Units

As shown in Tables 2-15 and 2-16, there were a total of 48,302 occupied housing units in Region 8 in the year 2010. During this time, Murray County had a total of 3,717 occupied units (as mentioned earlier, there were 2.3 persons per household in Murray County in 2010). The number of owner occupied housing units in Murray County has varied in the past 40 years. In 1980 it was 85.46%, fell to 80.12% in 1990, 84.23% in 2000, and decreased to 82.59% in 2010. The number of renter occupied units in Murray County has steadily decreased from 1970, from a total of 897 units to 587 in 2000 and increased to 647 in 2010.

The 1980 U.S. Census reported that Murray County had a total of 445 vacant units. This number continually increased in 1990 to 853, decreased to 635 in the year 2000, and by 2010 increased to 839. In 1990, the Census Bureau began to separate owner and renter vacant housing units. So, the combined percentages of this new data are higher than the actual vacant units year round. This is because these numbers include unoccupied housing units for sale as well as housing for seasonal, recreational, or occasional use.

Table 2-15. Housing Unit Trends for Region 8 counties 1980 to 2010

	Total Units				Percent of Total			
County	**1980**	**1990**	**2000**	**2010**	**1980**	**1990**	**2000**	**2010**
Cottonwood	5,804	5,495	5,376	5,412	11.0%	10.7%	10.3%	10.1%
Jackson	5,525	5,121	5,092	4,990	10.5%	9.9%	9.7%	9.3%
Lincoln	3,298	3,050	3,043	3,108	6.2%	5.9%	5.8%	5.8%
Lyon	9,196	9,675	10,298	11,098	17.4%	18.8%	19.6%	20.7%
Murray	4,679	4,611	4,357	4,556	8.9%	8.9%	8.3%	8.5%
Nobles	8,212	8,094	8,465	8,535	15.5%	15.7%	16.1%	15.9%
Pipestone	4,636	4,387	4,434	4,483	8.8%	8.5%	8.5%	8.3%
Redwood	7,386	7,144	7,230	7,272	14.0%	13.9%	13.8%	13.5%
Rock	4,095	3,963	4,137	4,262	7.8%	7.7%	7.9%	7.9%
Region 8	52,831	51,540	52,432	53,716				

Source: US Census

Table 2-16. Occupancy Status, 1980 – 2010

	Owner Occupied				Renter Occupied				Total Occupied	Owner Occupied
County	**1980**	**1990**	**2000**	**2010**	**1980**	**1990**	**2000**	**2010**	**2010**	**2010(%)**
Cottonwood	4,243	3,925	3,955	3757	1,233	1,134	962	1100	4857	77.35%
Jackson	3,781	3,477	3,601	3466	1,207	1,083	955	963	4429	78.26%
Lincoln	2,323	2,161	2,130	2063	605	543	523	511	2574	80.15%
Lyon	6,203	6,207	6,643	6799	2,476	2,866	3,072	3428	10227	66.48%
Murray	3,181	2,982	3,135	3070	855	776	587	647	3717	82.59%
Nobles	5,928	5,791	5,955	5783	1,886	1,892	1,984	2163	7946	75.78%
Pipestone	3,358	3,129	3,173	3035	999	949	896	1019	4054	74.86%
Redwood	5,252	5,055	5,328	5135	1,600	1,499	1,346	1445	6580	78.04%
Rock	2,868	2,826	2,994	3031	987	928	849	887	3918	77.36%
Region 8	**37,137**	**35,553**	**36,914**	**36139**	**11,848**	**11,670**	**11,174**	**12163**	**48302**	**74.82%**

Source: U.S. Census

Table 2-17. Vacancy Status, 1980 – 2010

	Total Number Vacant				Percent Vacant			
County	**1980**	**1990**	**2000**	**2010**	**1980**	**1990**	**2000**	**2010**
Cottonwood	318	435	459	555	5.80%	8.59%	8.54%	10.25%
Jackson	379	561	536	561	7.59%	12.30%	10.53%	11.24%
Lincoln	324	346	390	534	11.06%	12.79%	12.82%	17.18%
Lyon	512	602	583	871	5.89%	6.63%	5.66%	7.85%
Murray	445	853	635	839	11.02%	22.69%	14.57%	18.42%
Nobles	383	411	526	589	4.90%	5.34%	6.21%	6.90%
Pipestone	278	309	365	429	6.38%	7.57%	8.23%	9.57%
Redwood	523	590	556	692	7.64%	9.00%	7.69%	9.52%
Rock	239	209	294	344	6.19%	5.56%	7.11%	8.07%
Region 8	**3,401**	**4,316**	**4,344**	**5414**	**6.94%**	**9.15%**	**8.29%**	**10.08%**

Source: U.S. Census

Housing Value

Table 2-18 shows the value of specified owner-occupied housing units and includes only one-family houses on less than 10 acres, without a business or medical office on the property. The value is the Census respondent's estimate of how much the property (house & lot, mobile home & lot, or condominium unit) would sell for if it were for sale. In 2000, Murray County's median home value of $50,900 was a fraction of Minnesota's figure of $122,500. There is no data available for 2010.

Table 2-18. Value of Specified Owner-Occupied Units, 1980 - 2000

	1980	1990	2000
<$50,000	1,409	1,398	1,063
$50,000 - $99,999	315	384	787
$100,000 - $149,999	15	22	202
$150,000 - $199,999	2	5	54
$200,000 +	1	1	60
Median Dollars	$30,600	$30,400	$50,900

Source: SRDC OEDP, 1993; US Census 2000 SF-3

Low housing prices may not encourage new construction, but they also provide a benefit to first-time homeowners and people on fixed incomes. The 2007 Housing Study stated, "the moderately priced homes in the Murray County Cities provide an excellent opportunity to promote home ownership…" The study estimated 2007 median home values for each city in the County, ranging from $20,600 in Avoca to $70,530 in Slayton and $196,313 in the Lakes Area. There is no data available for 2010.

Contract Rent

Contract rent is defined as the monthly rent agreed to or contracted. Specified renter-occupied housing units paying cash rent includes all renter-occupied housing units except one-family homes on 10 or more acres. There were another 80 households where no cash rent was reported (Table 2-19). Over one-third of rental units were reported at less than $250 rent in 2000, compared to only 14% in Minnesota overall. Over half of all units statewide reported rents in excess of $500 a month.

Table 2-19. Contract Rents, 1980 – 2000

	1980	1990	2000
<$250	383	389	174
$250 - $499	12	60	161
$500+	0	0	101
Median Dollars	$97	$156	$373

Source: SRDC OEDP, 1993; US Census 2000 SF-3

The 2007 Housing Study pointed out that there may be pent-up demand for rental units, particularly due to poor condition of some existing rental units. Murray County has addressed some of these issues with successful Small Cities Development Program (SCDP) projects for housing rehabilitation. The Study recommended a need for a modest new general occupancy rental housing project in the cities of Chandler, Fulda and Slayton, a subsidized project in Fulda, and Senior Citizen rental projects in Fulda and Slayton. There is no data available for 2010.

Special Housing Facilities

Table 2-20 identifies multiple family and group housing facilities in Murray County, with the number of units provided. The facility types that make up this housing infrastructure include: Assisted Living, Subsidized Rental, Congregate, and Market Rate Rental.

Murray County should support the provision of adequate facilities for the County's aging population, especially in accommodations that serve a medical need. These needs include nursing homes, elderly housing, boarding and lodging, and special boarding care facilities.

Table 2-20. Multiple Family and Group Housing Facilities, Within Murray County

Name	Type of Housing	Number of Units	Type of Subsidy	Available To
Basswood Apartments Slayton, MN	Subsidized Rental	8	Rural Development	General Occupancy
Centennial Apartments Fulda, MN	Subsidized Rental	16	Section 8/ Rural Dev.	62 years+ income eligibility
Halter Place Slayton, MN	Subsidized/ Market Rate	12	Rural Development	General Occupancy
Heritage Apartments Fulda, MN	Subsidized Rental	6	Rural Development	General Occupancy
Broadway Estates Lake Wilson, MN	Market Rate	4	SWMHP	General Occupancy
Lakeside Apartments Currie, MN	Market Rate	5	SWMHP	General Occupancy
Lindenwood Assisted Living Slayton, MN	Assisted living	16	Medicare	General Occupancy
Mapleview Estates Fulda, MN	Congregate	24	N/A	55 years and Over
Southgate Apartments Slayton, MN	Subsidized/ Market Rate	63	Section 8	General Occ. income eligibility
Sunrise Terrace Slayton, MN	Assisted living/ Congregate	20	N/A	55 and older Private Pay
Village Apartments of Slayton Slayton, MN	Market Rate Rental	12	N/A	General Occupancy
Village Townhouses Chandler, MN	Subsidized Rental	8	Section 8	General Occ. income eligibility
Westside Apartments Slayton, MN	Subsidized Rental	24	Section 8/ Rural Dev.	62+, disabled handicapped, income eligibility

Source: Southwest Minnesota Housing Partnership 2014; Minnesota River Area Agency on Aging – May 2007

The Minnesota Housing Partnership (MHP) has developed a profile for Murray County using County and State data on housing affordability as well as important housing trends that impact people of all ages. Key items learned from this 2012 profile[2] are "about 261 owner and 104 renter households pay at least half their income for housing, a level considered unaffordable." In Murray County renter income has fallen 15% since 1999 with the median renter income at $26,076. MHP has identified that in 2012, in order to afford rent and utilities for a safe, modest two-bedroom apartment at fair market monthly rent of $583, a worker in Murray County would need to make $11.21 / hour at 40 hours per week. A typical renter in the County earns $8 per hour; and at minimum wage, 1 and ½ full time jobs are needed. The profile identifies that there are constrained rental options because there is a growing demand for rentals with a limited supply of aging rental stock.

In 2011, the median home sales process was $77,775 and from 2005 to 2011 there were 83 foreclosures, of which 13 occurred in 2011. Home process dropped as a result of the foreclosure crisis which left 18% of Minnesota mortgage holders owing more than their homes were worth.

[2] Minnesota Housing Partnership 2012 Profile of Murray County
http://www.mhponline.org/images//stories/docs/research/countyprofiles/2012/Murray.pdf

CHAPTER 3. ECONOMIC DEVELOPMENT

The main objective for this section is to provide information that helps Murray County develop in an economically sustainable manner. It is also vital for the County to ensure that its growth is coordinated with its own ability to provide infrastructure and services. This plan advocates that growth within the County will pay for the necessary infrastructure improvements such as roads, storm water management systems, water supply, and wastewater treatment. Finally, this plan supports both the expansion and addition of Economic Development to occur within or adjacent to municipalities where infrastructure is existing or can be cost-effectively provided.

Issues addressed in the Economic Development Section are arranged in the following sections:

- Introduction
- Purpose
- Issues for Murray County
- Current Economic Development
- Future of Economic Development

INTRODUCTION

Economic Development has as many definitions as practitioners. It covers a broad field of public and private activity, from recruiting industrial plants to encouraging entrepreneurialism.

The responsibility of courting and retaining successful commercial or industrial enterprises is perhaps the most difficult or cutthroat type of task any community will have to face. These developments are so coveted because they not only bring jobs and people to the area, but they provide a much needed tax base both directly, and indirectly. As such, economic development can be defined as those actions and activities that bring additional monies into the area.

Continuing to develop and expand the County's commercial enterprises, while preserving the County's natural resources, will remain a fundamental concern. Because of this, meeting the requirements of the County today should not hamper the functions of the County in the future. Since 1989, Murray County has had a Department for Economic Development and acting on new authorization legislation in the year 2000, Murray County established the Murray County Economic Development Authority. Working together, the County EDA and Office of Economic Development have established a common vision:

To promote sustainable economic development and opportunity, foster effective communication and transportation systems, enhance and protect the environment, and balance resources through sound management of development.

The County has a responsibility to provide its citizens with a quality place to live in the present and 20 years from now. In order to achieve desired and sustainable business development, the County must continue to work with both the municipalities and rural areas in order to address the needs of all. In times of low unemployment and out-migration (both recently experienced by Murray County), the development of commercial enterprise can be challenging. Possessing an adequately developed workforce that is able to handle the more high tech positions is only one part of the equation. Not having enough qualified workers can also be a problem.

PURPOSE

It is the intention of the Economic Development chapter to summarize County objectives and to guide decision makers within the County. While this chapter will provide a legal basis for ordinances, it will also be used as a foundation for County decision-making regarding future developments. This plan will identify potential problem areas that presently reside within the County and list goals and strategies for solving these problems. The goals and policies will also serve as a guide for the various County and Community leaders when they make public decisions regarding various developments occurring within Murray County.

ECONOMIC ISSUES FOR MURRAY COUNTY

In recent years, local economic development has been heavily focused on agriculture. This focus has been based on the fact that Murray County had a large amount of prime farmland and a fairly large amount of farmers farming that land. Despite the remaining presence of prime agricultural land, the farming industry has continued to change.

Change in the agricultural industry is evident several ways: specialization, larger and more automated equipment and increased median age of farm operators. While it is often perceived that the amount of workforce to support the agricultural industry (directly and indirectly) has declined, it is difficult to measure because much of it is self-employment. The best estimate, provided by DEED is that nearly a quarter of Murray County employment is related to agriculture. To address the changing nature of agriculture, farmers continue to adapt to changing markets and conditions. Recent challenges to SW Minnesota farmers have been weed resistance to chemicals and avian bird flu; and potential changes of chemical use impact on ground water and beneficial insects. Many of the smaller to mid-scale farmers have taken on second jobs off the farm in order to supplement their farming income or have quit farming. Nitch operations, such as vineyards orchards or vegetable markets (locally grown foods) are increasing.

Agriculture, while still extremely vital to the Murray County economy, should not be viewed as the only asset the County retains. The County has begun to recognize the value of tourist destinations and can market these features to potential visitors. In addition, the County has a valuable workforce that can be trained into high tech positions and the use of telecommunications can be used to benefit the County several ways.

The entire Southwest Region is experiencing a very competitive labor market, and businesses have reported that they are reluctant to expand because there are no workers. Attributes that draw workers would be competitive wages as well as housing, quality of life, and communications infrastructure.

Strengths in Economic Development

While the development of business and industry remains competitive in both Murray County and the southwest region of Minnesota as a whole, the County does have features that can help make it attractive to these types of businesses.

- Recreation (Natural Resources)
- Overall Quality of Life
- Existing Health Care Facilities
- Educated and Available Workforce
- Room for Growth
- Abundance of Wind
- UPS
- Work ethic!
- Agriculture
- Longevity / maturity of businesses
- Lower cost of Living

Weaknesses in Economic Development

Potential weaknesses exist for Murray County and include the following:

- Distance from Interstate 90
- Lack of a Rail Line
- County's Location (Greater Minnesota)
- Potable Water Quality and Quantity
- Too Small of an Airport
- Lack of Lodging
- Lower Wages
- Aging active operators
- Dependence on ag – lack of diversity
- Lack of modern housing options
- Lack of single fam rental housing
- Water – quantity and quality
- Younger Generation does not save money
- No lots or building ready for business commercial

Opportunities for Economic Development

As the County advances into the future, there are several aspects of economic development that the County can look to build upon and include:

- Promotion of Business, Industry, and Tourism
- Increase Technological Positions (Telecommunications)
- Energy Development (Wind, Biomass, Solar, Renewable, etc.)
- Addition or construction of new tourism facilities
- Environment (Low Crime, Churches, Education, Attractive to Business)
- Partners
- Working with other communities
- Recreation – tourism
- Diverse agriculture, livestock

Threats to Economic Development

There are factors that can have the potential to limit the development of industry and business within Murray County. Some of these threats include:

- Lack of Funds
- Lack of Young Farmers
- Population Decline
- High Energy Costs
- Aging Population
- Interest rates – low – can't offer incentives
- Retired folks leave for cities or south
- Volatility of Ag Markets
- Not a lot of post-secondary education
- Transportation – Highway 59
- Agriculture
- Attitude change – accept change, need change to get ahead

ECONOMIC DEVELOPMENT IN MURRAY COUNTY

While the Murray County economy continues to remain heavily dependent upon agriculture, the nation has seen large changes in the agriculture industry as a whole. Increased specialization and a loss of small and medium scale farmers continue to occur throughout the Cornbelt. Production continues to increase as new farming techniques are employed, higher technology seed varieties are used, and farmers from other parts of the world have placed more land into production – agriculture is a global market. Production, weather, as well as speculation have increased the highly variable agricultural economy. Large increases in production often outpace demand for the goods produced. These changes create many challenges for many of the residents of Murray County since its citizens are so heavily tied to agriculture.

Economic Base Theory

Economic base theory has been developed based on research demonstrating that the local economy can be divided into two very general sectors: 1) a basic (or non-local) sector or 2) a non-basic (or local) sector.

Basic Sector: This sector is made up of local businesses which provide goods or services to a larger market, in return for income which is then circulated in the local economy. For example, Finley Engineering in Murray County is involved in the telecommunications industry. Finley Engineering is involved with: Telephone System Engineering, Electrical Power Engineering, CATV Engineering, Fiber Optics, Records, Computer Aided Drafting, and Right-Of-Way Services.

Finley Engineering builds and sells their products to companies and countries located throughout the world. Their business is dependent almost entirely upon exporting their services to non-local firms. Manufacturing and local resource-oriented firms are usually considered to be basic sector firms because their fortunes depend largely upon non-local factors and because they usually export their goods.

Non-basic Sector: The non-basic sector, in contrast, is composed of those firms that depend largely upon local business conditions. For example, a local grocery store sells its goods to local households, businesses, and individuals. Its clientele is locally based and, therefore, its products are consumed locally. Almost all local services (like drycleaners, restaurants, and drug stores) are identified as non-basic because they depend almost entirely on local factors.

The Economic Base Theory identifies all local economic activities as basic or non-basic; it is an important tool to develop and enhance the "engine" of the local economy.

The local economy is strongest when it develops economic sectors that bring new resources into the community. By developing firms that rely primarily on external markets, the local economy can better insulate itself from economic downturns because, it is hoped, these external markets will remain strong even if the local economy experiences problems. In contrast, a local economy wholly dependent upon local factors will have great trouble responding to economic slumps.

Employment Data

During the 1990's, Murray County did not see wide fluctuation ranges of total employment. Table 3-1 represents employment trends for Murray County since 1990. Overall, the County showed an increase of 574 jobs from 1990 to the 2015 estimates and the labor force also increased by 578. The increase number of Murray County employment could be attributed to both wind power production and related construction and maintenance jobs and the substantial development of animal confinement operations. The employment data was collected from the Minnesota Department of Employment and Economic Development (DEED).

Table 3-1. Employment Trends, 1990 – 2015

	Average Annual			Unemployment Rates		
Year	Employed	Labor Force	Unemployed	Murray	MN	US
1990	4,325	4,550	225	4.90%	4.80%	5.60%
2000	5,001	5,200	199	3.80%	3.20%	4.00%
2010	4,678	5,022	344	6.80%	7.40%	9.60%
2015	4,899	5,128	229	4.50%	3.70%	5.30%

Source: Minnesota Dept. of Employment and Economic Development

DEED estimates Murray County's labor force was 5,128 people in 2015. At this same time, total employment within Murray County was estimated at about 5,180 people for a monthly unemployment rate of 4.5%. Labor Force is considered place of residence data, consisting of people who live in the County and are working (or actively seeking employment), no matter where.

Table 3-2 illustrates the County and State labor force participation rate and unemployment rate by age. The County has a 64.1% labor force participation rate, compared to a 70.1% State participation rate. The largest differences between the County and State participation rates occur in the 16 to 19 and 20 to 24 age groups; in the County, the participation rates were higher and the unemployment rate lower in the same age categories. Of concern is the low unemployment rate, which means there are not enough people available to fill jobs, should they become available; this would then limit business creation and expansion.

Table 3-3 provides labor force projections for Murray County by age category from 2015 to 2025. Overall, the projection indicates the County will lose 4.8% or 219 people in the labor force. While there were increases in the age categories of 20 to 24, 25-44, 65 to 74 and 75 and over, there were significant loses in the 45 to 54 and 55 to 64 age groups. The County should consider what these projected losses will mean to the work force not only in terms of physical numbers, but also skill gaps and succession planning as the baby boomer generation retires.

Table 3-2. Labor Force Characteristics by age, 2014	**Murray County**			**Minnesota**	
	In Labor force	**Labor Force partic. rate**	**Unemp. Rate**	**Labor Force Partic. Rate**	**Unemp. Rate**
Total Labor Force	**4482**	64.1%	4.3%	70.1%	6.5%
16 to 19 years	281	62.7%	7.2%	51.1%	18.7%
20 to 24 years	311	92.3%	8.4%	81.8%	10.2%
25 to 44 years	1504	90.9%	4.7%	88.0%	5.8%
45 to 54 years	1023	85.5%	3.5%	87.3%	5.0%
55 to 64 years	1012	74.5%	2.7%	71.8%	4.9%
65 to 74 years	302	31.4%	4.0%	26.6%	4.1%
75 years & over	49	4.7%	0.0%	5.9%	3.5%

Source: 2010-2014 American Community survey, 5 year estimate, DEED

Table 3-3. Labor Force Projections, 2015-2025				
Murray Co.	**2015**	**2025**	***2015-2025 Change***	
	Labor Force Projection	**Labor Force Projection**	***Numeric***	***Percent***
16 to 19 years	330	286	*-44*	*-13.4%*
20 to 24 years	323	354	*30*	*9.4%*
25 to 44 years	1,533	1,662	*128*	*8.4%*
45 to 54 years	945	743	*-202*	*-21.4%*
55 to 64 years	1,065	814	*-250*	*-23.5%*
65 to 74 years	333	441	*107*	*32.2%*
75 years & over	56	68	*12*	*20.9%*
Total Labor Force	**4,585**	**4,367**	***-219***	***-4.8%***
Source: Minnesota State Demographic Center, 2010-2014 American Community Survey 5-Yr Estimates				

Table 3-4 represents the employment characteristics by race and Hispanic origin. The white alone category shows a 63.8% Labor force participation rate, with a 4 % unemployment rate. For the remaining categories, the labor force participation rate varies between 38.5% to 86.9% and unemployment rates 0% to 62.5%; the rates are based on very few people, (a total of 256) in the nonwhite categories.

Table 3.5 represents the labor characteristic based on educational attainment, veteran status, and disability. Within the age 25-64 population in the labor force, the County has a 84.1% participation rate and a very low unemployment rate of 3.8. The labor force participation rate is comparable to the State rate, and the unemployment rate is lower than the State rate. About 1/3 of the County labor force has a high school diploma or the equivalent, and nearly 2/3's of the County labor force has some college or higher education. Participation rate in the labor force of our veterans is 85.3% and 49.9% of the disabled population participate in the labor force.

Table 3-4. Employment characteristics by Race and Hispanic Origin, 2014	**Murray County**			**Minnesota**	
	In Labor force	**Labor Force partic. rate**	**Unemp. Rate**	**Labor Force Partic. Rate**	**Unemp. Rate**
White alone	4355	63.8%	4.0%	70.2%	5.6%
Black or African American	16	57.1%	62.5%	68.0%	16.4%
American Indian & Alaska Native	5	38.5%	40.0%	59.4%	17.4%
Asian or Other Pacific Islanders	66	86.9%	7.6%	70.6%	7.2%
Some other race	27	96.4%	0.0%	76.2%	11.0%
two or more races	33	62.3%	6.1%	69.5%	13.2%
Hispanic or Latino	109	68.1%	22.9%	75.0%	10.1%

Source: 2010-2014 American Community survey, 5 year estimate, DEED

Table 3-5. Employment Characteristics by Educational Attainment, Veteran Status and disability	**Murray County**			**Minnesota**	
	In Labor force	**Labor Force partic. rate**	**Unemp. Rate**	**Labor Force Partic. Rate**	**Unemp. Rate**
Population 25 to 64 years	3541	84.1%	3.8%	84.0%	5.4%
Less than HS Diploma	165	75.7%	13.9%	65.8%	13.1%
HS Diploma or Equivalent	1134	79.6%	4.2%	79.1%	7.3%
Some college or Assoc. Degree	1497	86.3%	3.7%	85.3%	5.6%
Bachelor's Degree or higher	741	89.1%	.8%	89.2%	3.1%
Veteran Status, 18 to 64	307	85.3%	5.2%	77.7%	6.9%
Employment by any disability	210	49.9%	8.6%	51.0%	14.0%

In a June 2015 DEED report called “One-to-One” and a March 2016 report titled “Help Wanted”, Southwest Minnesota has a high number of job openings with a low number of job vacancies. During the 4th quarter of 2014 there were more job vacancies than available workers, creating a very competitive labor market in the 23 county SW Minnesota DEED region. The report concluded that Southwest Minnesota has a one-to – one ratio of job seekers to job vacancies (Figure 3-1) and was reinforced by the 2016 report for a 1:1 ratio of job seekers and job vacancies (Figure 3-2).

Murray County is also experiencing a tight labor market with businesses expanding their search for workers, modifying their requirements and potentially increasing wages to attract workers. As the economy continues to expand and the labor market continues to contract, employers may find it hard to compete for available workers.

Figure 3-1. Southwest Minnesota Job Seekers per Vacancy, Q4 2001 to Q4 2014

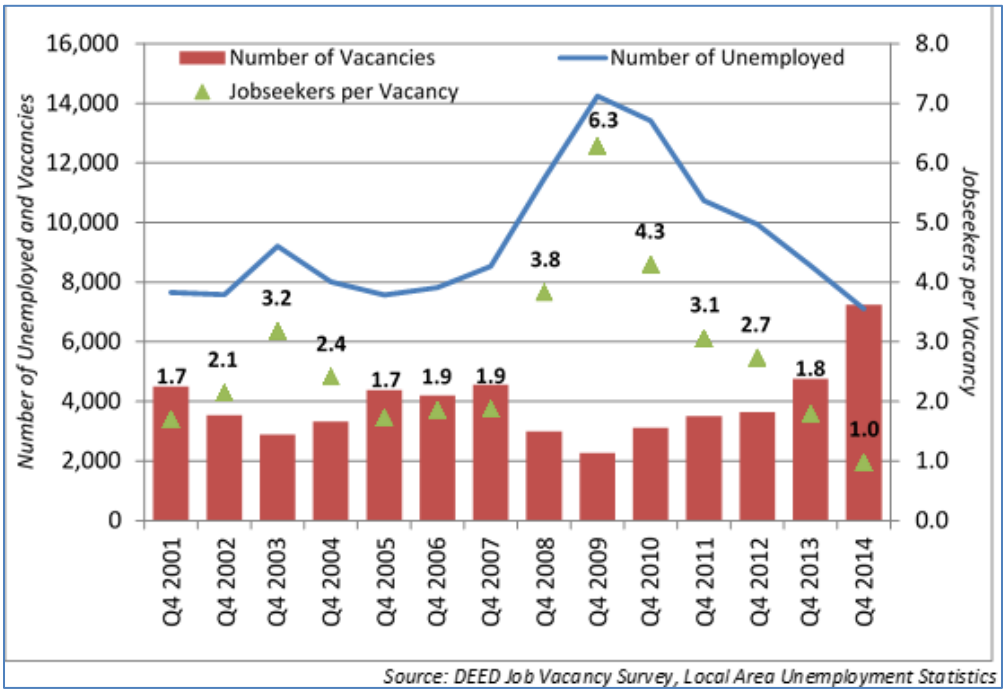


Figure 3-2. Southwest Minnesota Jobseekers per Vacancy

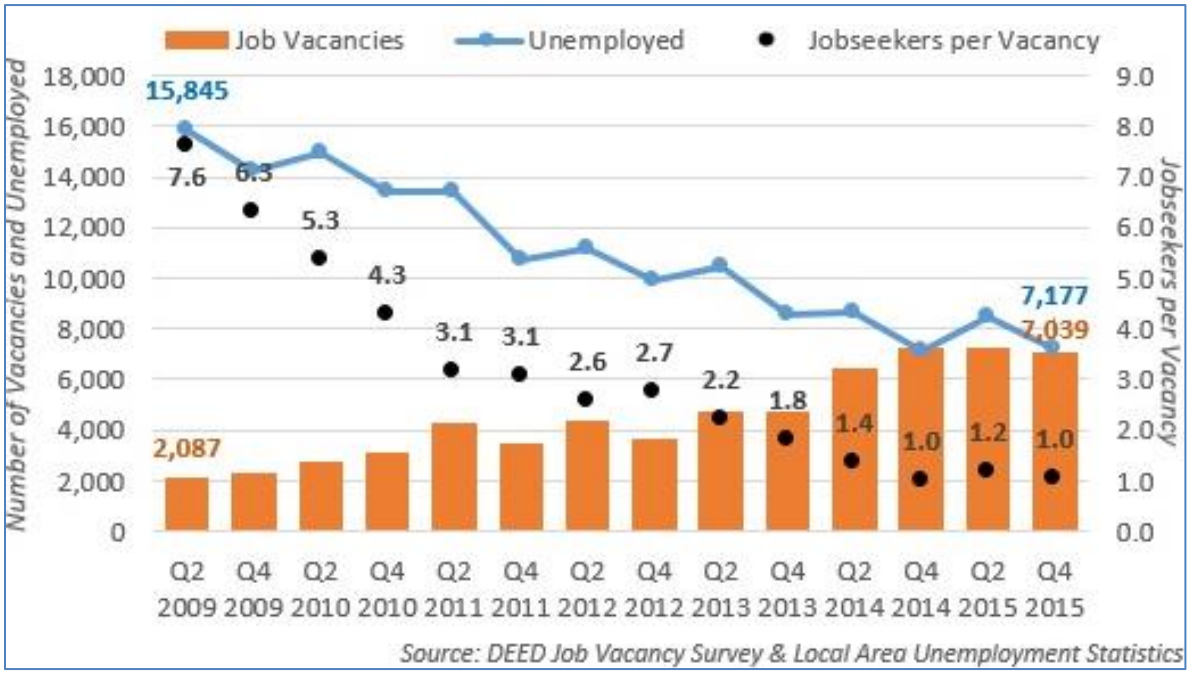


Table 3-6 represents the average annual employment by industry from 2000, 2010 and 2014; the information represents the number of jobs within Murray County regardless of where the employees live. This is regarded as place of work data. Covered employment in the Quarterly Census of Employment and Wages (QCEW) includes private sector employees as well as State, County and Municipal government employees. Some categories of employment are not covered, such as those self-employed and some farm workers. The data from each year represents an annual average.

Table 3-6. Murray County Employment by Industry

NAICS Code	2000	2010	2014	2000 - 2010 No.	2000 - 2010 Pct.	2010 - 2014 No.	2010 - 2014 Pct.	2000 - 2014 No.	2000 - 2014 Pct.
Natural Resources and Mining	105	81	104	-24	-22.86%	23	28.40%	-1	-0.95%
Construction	219	176	196	-43	-19.63%	20	11.36%	-23	-10.50%
Manufacturing	146	359	443	213	145.89%	84	23.40%	297	203.42%
Trade, Transportation and Utilities	580	770	731	190	32.76%	-39	-5.06%	151	26.03%
Information	36	NA	NA	NA	NA	NA	NA	NA	NA
Financial Activities	148	155	126	7	4.73%	-29	-18.71%	-22	-14.86%
Professional and Business Services	117	84	81	-33	-28.21%	-3	-3.57%	-36	-30.77%
Education and Health Services	682	774	795	92	13.49%	21	2.71%	113	16.57%
Leisure and Hospitality	185	179	191	-6	-3.24%	12	6.70%	6	3.24%
Other Services	71	79	92	8	11.27%	13	16.46%	21	29.58%
Public Administration	217	183	179	-34	-15.67%	-4	-2.19%	-38	-17.51%
Total All Industries	**2,508**	**2,868**	**2,960**	360	**14.35%**	**92**	**3.21%**	**452**	**18.02%**

Source: DEED QCEW

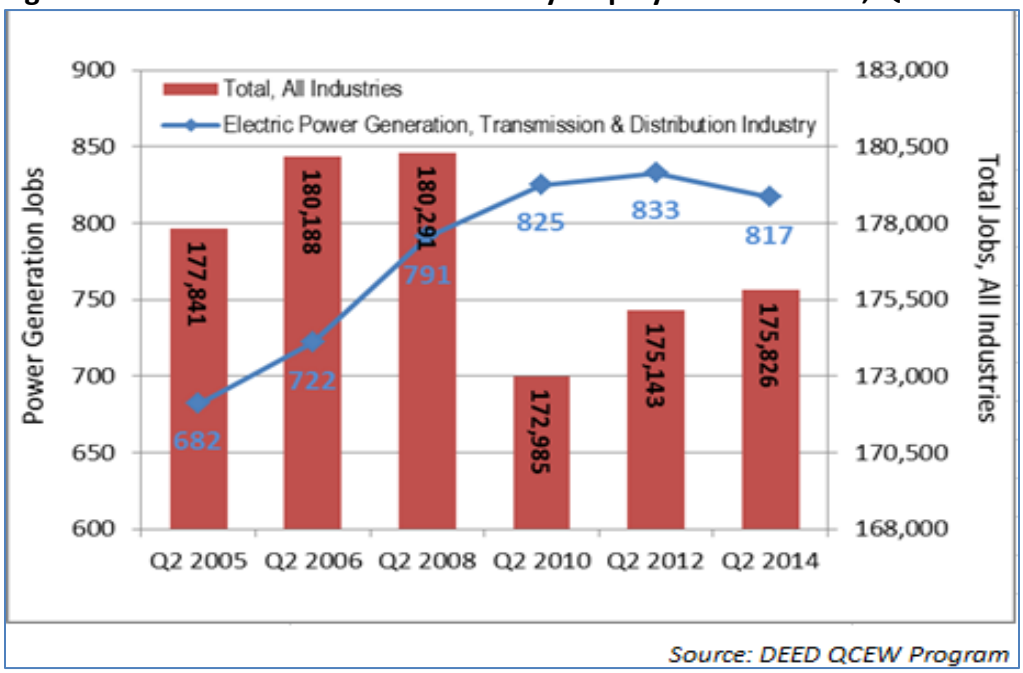
The trend for employment in Murray County from 2000 to 2014 shows an increase in the number of jobs. The largest number of jobs was in the Manufacturing; Trade, Transportation and Utilities; and the Education and Health Services categories. The increases from 2000 to 2014 are 203% 26% and 17% increases, respectively. The greatest loses from 2000 to 2014 were in the areas of Public Administration; Professional and Business Services; and Construction; although Construction has shown some recovery from 2010 to 2014.

As mentioned in other areas of the plan, Murray County industry has traditionally been strongly associated with the Ag Services sector, as have the surrounding counties. The majority of European settlers made their living off production of the land. During the early settlement periods through the mid-20th century, rural economies were based partly on the bartering of goods produced on the farm for goods sold at the local grocery store. As times progressed through the 20th century, Murray County, as well as many other rural areas, was forced to try to move away from this lopsided dependence on agriculture and natural resources. Now, as shown in Table 3-6, the economic base has been more diversified, with more employment in Manufacturing; Education and Health Services; and Trade, Transportation and Utilities sectors. These sectors play a very important role in the stability and growth of local rural economies.

Recent DEED reports focused on two jobs sectors with growth in southwest Minnesota: Trade, Transportation, and Utilities; and Education and Health Care. The following provides more detail in the Power sector and Health Care sectors.

The Trade, Transportation, and Utilities sector has shown significant growth since 2000. In a March 2015 report by DEED titled the "Southwest Region has the Power", it explains that the electric power generation, transmission, and distribution sector expanded more than 13% over the last decade. This report states: "There were 54 businesses providing 817 jobs in power generation in the 23-county Southwest Minnesota planning region through the second quarter of 2014" (Figure 3-3). It further states that this sector relies on an older workforce, which is nearing retirement age, which should lead to more growth and hiring in the next decade.

Figure 3-3. Southwest Minnesota Industry Employment Statistics, Q2 2005 – Q2 2014



Source: DEED QCEW Program

This sector has the opportunity for replacement openings and job growth with high wages and a range of career opportunities that will require technical skills. Data from DEED's Occupational Employment Statistics (OES) program, indicate that nine of the top 10 occupations in the industry earn median wages above $45,000 per year (Table 3-7). The data from DEED provides an indicator of projected jobs (growth and loss) as well as the education and training requirements.

Table 3-7. Top 10 Occupations for the Electrical Power Generation, Transmission, and Distribution Industry Sector.

Occupation	Percent of Total	Regional Jobs, 2014	Median Hourly	Median Annual	Projected Job	Common Education & Training Requirements
Electrical power-line installers & repairers	13%	350	$30.07	$62,546	1.10%	Long-term on-the-job training
Power plant operators	6%	70	$22.92	$47,674	0.00%	Long-term on-the-job training
Customer service representatives	5%	2,660	$14.69	$30,555	4.20%	Moderate on-the-job training
Electrical repairers, powerhouse, substation & relay	4%	20	$38.69	$80,475	0.00%	Long-term on-the-job training
First-line mgrs. of mechanics, installers, & repairers	3%	590	$27.31	$56,805	3.70%	Related work experience
Electrical engineers	3%	120	$33.00	$68,640	-6.70%	Bachelor's degree
Meter readers, utilities	3%	30	$24.01	$49,941	-33.30%	Short-term on-the-job training
Control & valve installers & repairers	2%	ND	$28.99	$60,299	ND	Moderate on-the-job training
Electricians	2%	630	$24.99	$51,979	4.50%	Long-term on-the-job training
First-line mgrs. of production & operation workers	2%	1,600	$23.26	$48,381	2.30%	Related work experience

Source: Bureau of Labor Statistics, DEED Occupational Employment Statistics (OES) program, DEED Employment Outlook Tool

DEED also provided a report focused on Long Term Care jobs. Murray County's aging population is growing; with the growing number, DEED has projected that health care and social assistance jobs will also grow. In the 23 County SW Region, over 4,000 new jobs from 2012 to 2022 will account for 70 % of job growth, and ½ of these jobs are expected to be added in long-term care support services.

Table 3-8 provides Health Care and Social Assistance Employment Projections from 2012 to 2022. The report has identified that family members provide the majority of long term care outside of nursing facilities, however when care needs become too great, professional or paraprofessional care providers are called in. With this shift, services for the elderly and disabled, home health care, and community care facilities are projected to be among the fastest growing sectors in the entire region (Table 3-8). While there will be a demand for these new jobs, traditionally, the industry struggles to attract new workers. The challenge will be that the occupations in demand have lower educational and training requirements and offer lower wages and benefits packages, resulting in a high turnover.

Table 3-8. Southwest Minnesota Industry Employment projections, 2012 - 2022

Table 1. Southwest Minnesota Industry Employment Projections, 2012 to 2022				
Industry Title	Estimated Employment 2012	Projected Employment 2022	Percent Change 2012-2022	Numeric Change 2012-2022
Total, All Industries	**207,849**	**213,534**	**2.70%**	**5,685**
Health Care & Social Assistance	25,529	29,605	16.00%	4,076
Home Health Care Services	1,376	1,963	42.70%	587
Nursing Care Facilities	5,309	5,352	0.80%	43
Community Care Facilities for the Elderly	904	1,159	28.20%	255
Individual & Family Services (for the Elderly and Persons with Disabilities)	2,067	3,119	50.90%	1,052
Source: DEED 2012-2022 Employment Outlook				

Table 3-9 represents public and private businesses throughout Murray County that employ 20 or more employees. The largest employer is Monogram Meats in Chandler with over 400 employees. Other employers over 100 employees are Murray County Medical Center, Maple Lawn Nursing Home and the Fulda School District. Major basic sector employers include Meat Products, Business Services, Printers, Schools, Ag Related businesses, Shipping, Education, and Health Care related services.

Table 3-9. Murray County Major Employers

Company Name	City	Employee Size Range	Primary SIC Description
Monogram Meat Snacks	Chandler	440	Meat Products (Mfrs)
Murray County Medical Center	Slayton	145	Health Care
Maple Lawn Nursing Home	Fulda	111	Residential Care Home
Fulda School District	Fulda	100	Schools
Murray County Central School	Slayton	85	Schools
Page 1 Printers	Slayton	75	Printers (Mfrs)
Murray County government	Slayton	66	Government
Chandler Coop	Chandler	60	Fertilizer mixing
Schmitz Grain	Slayton, Currie, Lake Wilson	45	Grain elevator / Fertilizer
Murray County Elementary	Slayton	40	School
UPS Customer Center	Slayton	36	Mailing & Shipping Services
Prairie View Inc	Slayton	32	Supportive Living Services
Finley Engineering	Slayton	30	Engineers
Fulda Area Credit Union	Fulda	30	Credit Unions
New Dawn Inc	Fulda	30	Homes-Cognitive Disability-Dev Disabled
Golden Living Center		27	Skilled Nursing Care
First National Bank	Fulda, Slayton	25	Banks
Hub Drive-In	Slayton	25	Restaurant
Schuur Concrete	Chandler	25	Concrete Products
Hadley Steel Inc	Hadley	23	Ag Implements & supplies
Pizza Ranch	Slayton	20	Pizza

Source: Murray County Economic Development

Table 3-10 identifies the number of employers by employee size range in 2013. The information from Table 3-9 appears to be consistent with the 2013 US Census Business Patterns data. What is more revealing is the County has a larger percentage (65.1%) compared to the State (54.2%) with businesses with 1-4 employees.

Table 3-10. Murray County Employers by Size Class, 2013

	Murray Co.		Minnesota
Number of Employees	**Number of Firms**	**Percent of Firms**	**Percent of Firms**
1-4	205	65.1%	54.2%
5-9	54	17.1%	17.7%
10-19	34	10.8%	13.4%
20-49	14	4.4%	8.9%
50-99	4	1.3%	3.2%
100-249	2	0.6%	1.9%
250-499	2	0.6%	0.5%
500 or more	0	0.0%	0.3%
Total Firms	**315**	**100.0%**	**100.0%**

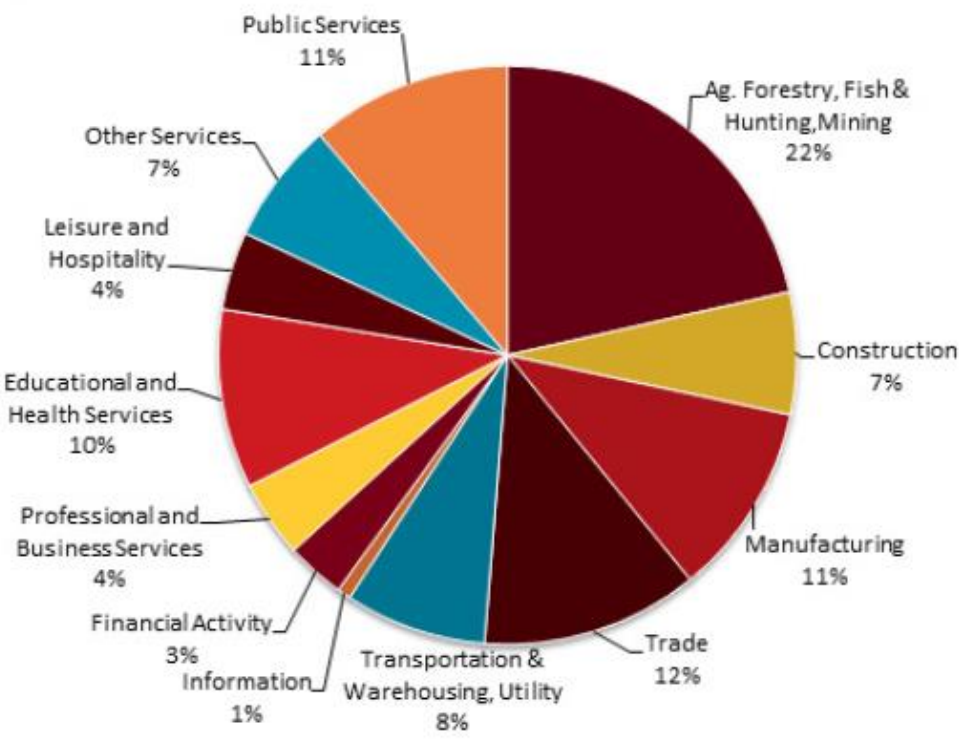
Source: U.S. Census, County Business Patterns

In 2015, the University of Minnesota Extension held an Economic Futures Workshop[3]. At this workshop, an analysis was provided of the recent economy of the County. The workshop and report reflected that while Minnesota was experiencing a significant recession in 2008 and 2009, the number of jobs in the County increased by 2%, and the Agriculture Sector employed nearly a quarter of the workers (Figure 3-4). The report also indicates that Murray County trails other Greater Minnesota counties in percentage of employment in industries such as education, health services, and leisure and hospitality.

In Table 3-6, the Natural Resources category, which also includes Agricultural jobs indicates there were 104 jobs in this sector in 2014, however it only counts "covered" employment. Self-employment is difficult to capture. However, the 2012 Census of Agriculture identifies that there are 529 individuals in Murray County who identified farming as their primary occupation, with another 266 that farm but have a different primary occupation. In the Figure 3-4, IMPLAN identified only farm operation covered under the unemployment insurance program and not all farmers are counted in that program. With that understanding, it is likely that the Agricultural Sector employment is higher, with no good way to measure it at this time.

[3] http://www.edacenter.org/publications_researchPublications.php?id=79

Figure 3-4 Employment by Industry, Murray County 2013



*Source: IMPLAN

Regional and Statewide Comparisons

The change of dependence to different industrial sectors has been difficult for rural areas due to the continual population declines that they face. The rural workforce as a whole is growing, but many counties lag State averages in terms of job growth. Table 3-11 shows the most recent numbers employed within the region and compares that to the metro area, and the State of Minnesota. Murray County and the region have a greater number of small businesses than their share of employment would suggest.

Table 3-11. Employment and Establishments, 2014

Area	Employment	% of State	Establishments	% of State
Murray Co.	2960	0.11%	336	0.2%
Region 8*	54,673	2.0%	3,945	2.41
Minnesota	2,7,297,374	100.0%	163,937	100.0%

* Region 8 includes Cottonwood, Jackson, Lincoln, Lyon, Murray, Pipestone, Redwood and Rock counties.

Source: DEED CQEW

The mix of employers within the rural areas is not entirely based on natural resources as commonly believed. However, the economy is usually not broad enough to protect workers against sudden economic changes.

Summary

DEED forecasts that total employment in Southwest Minnesota will grow to 213,500 by 2022, an increase of 2.7% (Table 3-12). DEED also expects that the greatest increase of new positions will be in the Health Care sector.

While Murray County continues to experience population declines and is still mainly dependent upon agriculture, there is potential to add some of these higher skilled positions. It is important to remember that the trends and projections by DEED are based on current and projected demography trends and do not reflect initiatives that can diversify or attract visitors, residents, and businesses to the area.

As the County investigates new or enhanced pathways to diversify the economy, such as tourism, other support businesses, such as lodging and visitor support, businesses could grow.

Table 3-12 Regional Industry Employment Projections, 2012-2022

Southwest Planning Region	2012 Est. Employment	2022 Projected Employment	*Percent Change 2012-2022*	*Numeric Change 2012-2022*
Total, All Industries	**207,849**	**213,534**	***2.7%***	***5,685***
Agriculture, Forestry, Fish & Hunt	5,389	5,519	*2.4%*	*130*
Mining	383	458	*19.6%*	*75*
Construction	7,299	7,809	*7.0%*	*510*
Manufacturing	31,654	31,719	*0.2%*	*65*
Utilities	772	704	*-8.8%*	*-68*
Wholesale Trade	8,262	8,526	*3.2%*	*264*
Retail Trade	20,071	20,404	*1.7%*	*333*
Transportation & Warehousing	5,123	5,317	*3.8%*	*194*
Information	2,914	2,608	*-10.5%*	*-306*
Finance & Insurance	5,874	5,903	*0.5%*	*29*
Real Estate & Rental & Leasing	1,270	1,396	*9.9%*	*126*
Professional & Technical Services	4,069	4,486	*10.2%*	*417*
Management of Companies	1,977	2,072	*4.8%*	*95*
Administrative & Waste Services	3,893	4,252	*9.2%*	*359*
Educational Services	1,971	2,037	*3.3%*	*66*
Health Care & Social Assistance	25,529	29,605	*16.0%*	*4,076*
Arts, Entertainment, & Recreation	2,507	2,551	*1.8%*	*44*
Accommodation & Food Services	11,915	12,153	*2.0%*	*238*
Other Services	8,312	8,265	*-0.6%*	*-47*

Source: DEED 2012-2022 Employment Outlook

Retail Trade

The retail trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. Their retailing process is the final step in the distribution of merchandise. Retailers are organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and non-store retailers. Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. Non-store retailers are organized to serve the general public, but their retailing methods differ through the use of web pages, direct response advertising, door-to-door solicitation, vending machines, etc.

Several decades ago, the "downtown" areas of communities in rural type areas were vibrant and full of economic activity. These city centers were at one time the heart of not only the community, but the surrounding area. However, many rural Minnesotans now travel to larger urban areas (sometimes leaving Minnesota altogether, i.e. Sioux Falls) in order to purchase essential goods and services. This practice has continued to increase and is continually easier to do. It is up to more than just the storeowners to find a niche to compete; it is also up to the citizens of the area to choose to buy their essential products locally. Although it is easier to say than to achieve, the production of specialty goods at the local level can result in increased economic opportunities.

The third largest source of employment in Murray County is retail trade. This sector includes many types of businesses that offer a wide variety of goods and services to consumers within the County. This is a sector that does not show pleasant trends, as declines in this area are often indicative of an increasingly mobile society and a declining (and aging) population.

To get an idea of retail trade in Murray County, the University of Minnesota completed a Retail Trade Analysis of the County using 2013 data[4]. According to the report, taxable sales increased by 25 % from 2006 to 2013, while the number of firms fell 2.9%. A statewide comparison in the same time frame showed taxable sales at an increase of 8.7 % and a 1.4 % increase in firms.

Income Levels

Income information is an indicator of a County's economic condition. The US Census provides income estimates based on the American Community Survey. Per capita income is the mean income computed for every person in a specified geographic area. Household income is based on the income of all members of a household over the age of 15, related or not. Family income includes only income of family members related to the primary householder.

[4] Source: The University of Minnesota Retail Trade Analysis Murray County.

Table 3-13. Comparative County Income Levels, 2014

County	Per Capita Income 2014	2014 Median Household Income	2014 Median Family Income
Cottonwood	$24,275	$47,350	$55,330
Jackson	$27,942	$50,907	$64,217
Lincoln	$25,764	$49,122	$63,719
Lyon	$27,787	$51,182	$70,910
Murray	$29,107	$53,426	$67,482
Nobles	$23,068	$50,340	$59,781
Pipestone	$25,102	$46.800	$57,618
Redwood	$26,119	$47,999	$61,854
Rock	$25,586	$48,403	$61,853

Source: US Census data quick facts

According to the 2014 data, Murray County has the highest Per Capita Income (2014 data) and the highest Median Household Income in the nine county region (Table 3-13). The 2014 Median Family Income is the second highest in the nine county region at $67,482. However, the Census information indicates that 9.6 % of the people in the County are in poverty.

Table 3-14 represents the family yearly cost, worker hourly wage and family monthly costs in 2015 for Murray County and Minnesota. This data indicates that the yearly cost of living for a family is less in Murray County than it is for other areas of the State. The hourly wage required to make ends meet is $13.38. The cost of food, health care and transportation are comparable in monthly costs; however, monthly costs for child care, housing, and taxes are significantly less than all of Minnesota. This does indicate that the cost of living in Murray County is less than in other areas of the State. Keep in mind that according to the 2012 Minnesota Housing Partnership Profile of Murray County indicated 261 owner and 104 renter households paid at least half their income for housing. While the income in Table 2-12 is favorable, we do have residents who earn less than what is considered needed to cover the cost of living.

Table 3-14. Family Yearly Cost, Worker Hourly Wage, and Family Monthly Costs, 2015

	Family Yearly Cost of Living	Hourly Wage Required	Monthly Costs						
			Child Care	Food	Health Care	Housing	Trans-portation	Other	Taxes
Murray Co.	$41,743	$13.38	$180	$785	$400	$660	$1,004	$202	$248
Minnesota	$50,988	$16.34	$443	$772	$405	$907	$1,039	$235	$448

Agriculture

Table 3-15. Census of Agriculture, 2012			*State Rank (of 87)*	*Change in Market Value, 2007-2012*
	Number of Farms	**Market Value of Products Sold**		
Murray Co.	895	$365,471,000	*24*	*54.1%*
State of Minnesota	74,542	$21,280,184,000		*61.5%*
				Source: 2012 Census of Agriculture

The economy of Murray County remains heavily dependent on agriculture. As mentioned in other parts of the plan, this dependence is a result of large amounts of prime farmland within the County. While this resource has benefited the County, compatible development is also encouraged to diversify the economy.

Agriculture no longer supports as many jobs as it once did. At the beginning of the 19th century, farmers were heavily dependent on horses and hired hands for producing a crop. As technology advanced, tractors replaced the horse and various other forms of equipment and technological advances replaced the need for hired farm hands. Table 3-15 identifies that Murray County ranked 24 out of 87 counties in agriculture, and the change in market value of products sold from 2007 to 2012 as 54.1 %.

Table 3-16 illustrates the number of farms by acre ranges. The size ranges appear to increase and contract over the years. Interestingly the average size of farms in 1997 was 459 acres and decreased in 2002 and 2007, but increase to 456 acres in the 2012 Census of Agriculture. In addition, the number of acres in farms has fluctuated between the 1997 and 2012 Census of Agriculture likely because of land going into and out of the various farm programs.

Table 3-16 Number of Farms and size 1997 to 2012

	1997	**2002**	**2007**	**2012**
Number of Farms between 1 - 9.9 Acres	43	20	50	57
Number of Farms between 10 - 49.9 Acres	87	172	209	128
Number of Farms between 50 - 179 Acres	151	176	223	262
Number of Farms between 180 - 499 Acres	267	246	248	170
Number of Farms between 500 - 999 Acres	218	184	166	146
Number of Farms between 1000 - 1999 Acres	70	100	106	97
Number of Farms over 2000 Acres	13	13	21	35
Number of Farms under 179 Acres	281	368	482	447
Number of Farms between 180 - 999 Acres	485	430	414	316
Number of Farms over 1000 Acres	83	113	127	132
Number of Farms	836	911	1,023	895
Land in Farms	383,725 a	407,488 a	428,869 a	407,919 a
Average size of Farm	459 a	447 a	419 a	456 a

Source: US Census of Agriculture

Crop production of the two primary grain crops in the County (corn and beans) have increased in bushel production, while the number of acres have decreased as shown in Table 3-17. Other crops such as oats, barley, and wheat have experienced a reduction in farm acres as well as bushels.

Table 3-17. Crop Production in Murray County, 1992-2012

	1992	2002	2012
Farms with Harvested Cropland	832	696	643
Harvested Cropland (acres)	308,321	353,805	352,407
Corn for grain or seed (farms)	754	610	548
Corn for grain or seed (acres)	146,668	167,617	173,711
Corn for grain or seed (bushels)	15,380,906	22,994,175	23,013,303
Wheat (farms)	68	22	6
Wheat (acres)	1,944	1,241	209
Wheat (bushels)	84,439	43,165	8,675
Barley (farms)	4	14	4
Barley (acres)	107	405	145
Barley (bushels)	6,924	23,906	5,000
Oats (farms)	224	104	58
Oats(acres)	5,234	3,875	1,740
Oats(bushels)	401,499	305,107	117,547
Soybeans (farms)	729	612	555
Soybeans (acres)	143,273	162,626	162,114
Soybeans (bushels)	4,709,278	7,133,549	7,096,596
Forage - Hay, etc. (farms)	385	267	200,
Forage - Hay, etc. (acres)	12,665	13,578	9,296
Forage - Hay, etc. (tons, dry)	38,648	45,478	34,258

Source: US Census of Agriculture

Table 3-18. Farms By Value of Sales, 1987 - 2012

Annual Sales	1987	1992	1997	2002	2007	2012
<$10,000	113	98	109	242	364	250
$10,000 to $49,999	291	274	174	149	126	82
$50,000 to $99,999	272	181	144	127	88	103
$100,000 or more	319	350	409	393	445	450

* There was a concerted effort with the Census of Agriculture in 2002 to capture the smallest qualified agricultural operations, resulting in a large increase in Farms enumerated with under $2,500 in sales.

Source: US Census of Agriculture

Often overlooked is how much the agricultural community impacts the local economy. Table 3-18 illustrates the trend of farms by annual sales from 1987 to 2012 as recorded by the Census of Agriculture. The market value of agricultural products sold from Murray County farms according to the 2012 Census of Agriculture was $365,471,000 (crop $232,560,000, livestock $132,910,000) and net cash income reported was $264,008,000. Products for farm expenses (seed, fertilizer, chemicals, fuels, feed, equipment repairs, etc.) are often to local businesses, thus investing in the local economy.

With advances in technology, employment within the agriculture sector has decreased over the last few decades. In 2002, 75% of the Murray County farmers considered Agriculture as their primary occupation; in the 2012 Census of Agriculture, that percentage was reduced to 59%. Farmers remain a unique group of entrepreneurs who produce a product at retail input prices but sell the product they produce at wholesale prices. To reduce the effects of this problem, farmers are encouraged to produce more, further lowering the value of their commodity. In an attempt to spread costs, farmers continually strive for more and more land. In terms of economy of scale, this makes it virtually impossible for the medium sized farmer to compete. Small-scale "hobby farms" are able to stay in operation usually due to a significant amount of off farm income. Often times, these smaller farms have adapted to some sort of niche market such as organic farming, vegetables for the local farmers market, or Christmas trees, etc.

With each new Federal Farm Bill, a safety net has helped reduce the financial strain through government payments. Table 3-19 shows that government payments to farmers were highest in Murray County during the 1980s. However, the number of farms receiving payments and the amount that they received has increased since 1992.

Table 3-19. Government Payments in Murray County, 1987-2012

	1987	1992	2002	2012
Farms Receiving Payment	802	657	676	783
Total Received	$11,309,000	$4,711,000	$5,553,000	$9,673,000
Average Payment per Farm	14,101	$7,171	$8,215	$12,354

Source: US Census of Agriculture

New Ag Markets

Diversification does not have to be limited to crops. Diversification for farmers may be scaling back on the number of acres they produce of corn and soybeans, and add livestock to their program. This way, they will be able to utilize machinery that they use to produce those crops and put it to use raising livestock. Some of the corn grown on the farm can be used to feed the livestock being raised. Cattle can be allowed to graze previously combined cornfields and the manure produced from hogs can be used to fertilize the fields for the next year's crop. Diversification does not have to be limited to switching from raising corn and soybeans to raising organic or specialty crops. Some of the possibilities of diversification include:

Carbon Sequestration – is the long-term storage of carbon in the soil and in living and dead vegetation. Any agricultural practice that adds organic matter to the soil without plowing it under or involves the permanent placement of grasses or trees also sequesters carbon. Sequestering Carbon can be achieved through no-till practices, winter cover crops, and conservation buffers. Land enrolled in CRP or WRP also increases organic matter and holds carbon.

Carbon Trading – This is a very preliminary idea but would include larger polluting companies buying "carbon credits" from no-till farmers. This way, the polluting industry would be allowed to release as much carbon as is being sequestered by the no-till farmer.

Bioenergy – trees, crops, and ag and forestry wastes that make fuels, chemicals, and electricity can be used as a replacement to fossil fuels.

Methane to Electricity – Farmers are discovering the value from capturing the methane produced from animal manure and converting it to electricity. Some early reports claim that methane capture can save the farmer money relative to the amount of manure produced. Scale of economy is a serious factor for making this method profitable.

Power Production – Crops, woody plants, and cellulose residue can be co-fired in coal plants in order to produce electricity, thereby reducing the amount of coal burned and reducing overall pollutants from fossil fuels.

Value Added Production

Value-added production is gaining popularity in the United States and Minnesota has been a pioneer in this area. As of March 2016, Minnesota produced more ethanol than any other State except for Iowa, Nebraska and Illinois (Renewable Fuels Association). Nationwide, 14 % of corn grown is used for ethanol, still less than the amount of corn exports, according to USDA Economic Research Service (ERS). Bio-diesel (using soy bean oil as a component of diesel fuel) is also now being produced in Southwest Minnesota. Both of these types of value-added production plants, if built in Murray County, could give an increased demand to locally grown agricultural commodities, resulting in increased prices for farmers. Careful research and planning is required before the decision to build one of these plants is granted. There are many issues to be resolved. Top concerns remain:

- Industrial-scale water quantity and quality issues
- Competition for both the grain that the plant will require and for the markets that the final product will require

After pros and cons concerning value added processing facilities are weighed, it may be more strategic for Murray County to focus on creating value in the agricultural products that it produces through manufacturing and branding premium agricultural products rather than seeking volume processing of undifferentiated commodities.

Branding

Murray County farmers could be encouraged to stop raising a “commodity” and start raising a “brand”. Commodities generally mean low-cost producers raising what are often low-cost products. Commodities have no customer loyalty. Brands generally feature value-added (higher) pricing and a higher perceived value. The key with specialty crops is to find farmers that have a passion for the product they are promoting.

Marketing plans could include the idea of differentiating Murray County product and convincing the various industries (i.e. processing, baking, wineries, etc.) and consumers that the products being produced are a good high quality product. An example of this effort would be Columbian coffee growers who developed the Juan Valdez promotional effort to promote “100 percent Columbian coffee.”

Murray County farmers can use the same ideas but in addition to being excited about their product, they must educate themselves about the market and consumers. In addition, they must work together to promote themselves as a brand that commands respect and premiums, rather than as commodity producers. This process may work for soybean producers because of potential health benefits of "soy foods". Also, producers of specific types of corn or beans, hogs or cattle, alternative crops, or using specific value-added processes may be able to participate. However, they must stop growing and selling "commodities."

Livestock

During the last couple of decades, Murray County as well as the rest of the country, has seen a large transformation in how farmers raise their livestock. The traditional family sized farms producing a modest amount of livestock have been replaced with the industrial sized confinement operations producing large amounts of swine, poultry, and cattle. The total number of livestock and poultry operations in Murray County is steadily declining. However, producers have also become more specialized. There were 462 registered feedlots in the County in 2013, a decrease from the 496 registered in 2007. Murray County is a delegated county under the MPCA feedlot program; which means they receive a base grant to administer the feedlot program. With delegation brings responsibilities such as re-registering feedlots every four years, inspection of 7% of the feedlots annually, compliance, and processing permits with 300 or more animal units or more that are expanding or constructing. Benefits of being a delegated county includes local control of construction and permitting, coordination with zoning and technical assistance with NRCS/SWCD, better understanding of local issues, and ability to explore compliance options. In 2015, Minnesota Counties experienced the avian flu, a reminder that biosecurity is a necessity in the livestock sector.

The 2012 Census of Agriculture also records livestock statistics. The data indicates that Murray County ranks high compared to other counties in the State for Sheep and Goats and cattle and calves in terms of both quantity and value of sales. The County ranks 22 in the State for the quantity of hogs / pigs and 20 in value of sales.

Table 3-20 Quantity and Value of Sales of Livestock in Murray County, 2012

	Quantity	State rank of 87 counties	Values of sales ($1,000)	State Rank
Hogs and Pigs	140,599	22	$56,766	20
Cattle and calves	48,748	14	$61,110	5
Sheep and Lambs	4,962	5	$1,117*	4*
Goats (all)	1,252	6		
Layers	795	57	D	84

* Includes sheep and goats, D – data withheld to avoid data for individual operations.

Source: 2012 Census of Agriculture

Summary

The agricultural industry will continue to face challenges adapting to global economic trends. Agriculture will also continue to be the dominant use of land in Murray County, and Southwest Minnesota, for the foreseeable future.

Tourism

Within Murray County, there are many features that can be used to attract tourists from other parts of the State and Country. The County has an important history that dates back to the times of European settlement and the conflicts that arose with the Native Americans living in the area. Murray County can take advantage of these special areas by investing money in the promotion and marketing of them to potential visitors. In addition, Murray County possesses many attractive lakes and a rich history surrounding historically significant areas. Although the Murray County population continues to decline, it does have the potential to capitalize on its various attractive features.

The County has several possibilities in terms of promoting tourism:

- Constructing a multi-use trail from Pipestone, through Murray County, to Walnut Grove (Casey Jones Trail)
- Research possible birding site potential along the Minnesota River Valley Birding Trail
- Explore the potential for building partnerships to look at developing a Prairie Coteau or Des Moines River Birding Trail.
- Adequate lodging in specific locations for visitors

The County does possess a great deal of site-seeing areas such as areas and trails around Lake Shetek, various birding sites, and multiple trails. However, tourism in Murray County is not limited to sightseeing features; it can also be generated through the excellent recreation and hunting opportunities as well. Within Murray County, pheasant hunting, fishing, ice fishing, duck hunting, and deer hunting all have great potential.

Summary

Economic Development, in regards to tourism, should be focused on providing an attractive living environment in Murray County. County leadership should be focused on protecting and enhancing natural resources that make Murray County an attractive and aesthetically pleasing place to live. This enhancement of the "quality of life" within Murray County can help to attract potential commuters from both Worthington and Marshall.

Telecommunications / Broadband

As humanity moves further into the 21st Century, the requirements of the average worker are changing. Not long ago, very few positions in the labor market required the use of computers. Today, the majority of jobs available require the use of computers in some form or another. As this technology continues to increase, more and more businesses, even smaller ones, can take advantage. Smaller niche type businesses are able to advertise their product on the web so it has the potential to be seen by millions. To add to this, the use of fax machines, express mail, and small cameras attached to computers with high speed Internet access and smart phone credit card readers, allow the smallest business located within rural areas a chance to compete

on a national scale. While stereotypes associated with the elderly indicate that these populations have no interest in the Internet or telecommunications, there are possibilities to get this demographic involved in advanced technology. What grandmother living in Murray County would pass up the chance to watch her granddaughter (who lives in the Twin Cities) blow out the candles on her birthday cake? Especially when this event could be witnessed from the comfortable confines of her living room. Advanced telecommunications and high-speed Internet access makes these possibilities a reality. Few grandmothers would pass up this opportunity, but these types of advantages made possible through advanced communication technology must be properly marketed.

High technology and communications will play a significant role for economic development in the future of both cities and counties. Those areas that arm themselves with superior technological infrastructure (such as high speed internet access) will have the potential to flourish economically in the upcoming years, while those that choose to sit idly by and do nothing to prepare themselves will most likely decline. With the continued advancement of technologies such as telecommunications, Murray County can portray itself as a "good life" area where people who prefer to live in the rural areas far away from the big city life can do so, but yet they can continue to do their job in the Metro Areas from their home via computers. For this reason, the County should continue to pursue Broadband - both high speed and wireless high-speed Internet access and continue to provide attractive features like excellent schools, recreational facilities, and roads that are in good repair. As the advancement of the computer, Internet, and telecommunications continues, opportunities will become available for citizens to not only obtain information quickly and communicate with others rapidly at great distances, but it will also allow people to work from their home. This will enable Murray County to market itself to those wanting to retain their respective employment but live in a rural type setting.

Renewable Energy

Across the nation there is increasing demand for renewable energy sources. Debates as to how far the extent of damage from traditional energy emissions continues as the Federal Government continually tightens its restrictions. Murray County has an opportunity to take advantage of its wind resources by continuing its efforts in transforming the County from a fossil fuel burning, carbon dioxide producing member of the State of Minnesota, to a County that relies more heavily on clean, renewable energy. This way, energy sources such as wind power and solar can become an export industry for Murray County.

Renewable energy within the region has the continued potential to provide an abundant amount of economic opportunity. In addition, renewable energy generation through wind and solar power production is continuing to help diversify the economy of Murray County. The direct effects of wind and solar power generation are seen through the spending of wages received from the local energy-producing industry as well as the easement payments made to County landowners, and the production tax generated from the energy produced. The development of locally owned cooperatives to distribute the generated electricity could maximize the local benefit of the ensuing renewable energy development.

While there are positive aspects to power generation, some view aspects as negative. Some citizens do not view large wind turbines or solar farms as aesthetically pleasing and many do not want to live near them. Wind towers can also have negative impacts on a surrounding area's wildlife populations. While avian monitoring studies at the existing Buffalo Ridge wind farms have not found significant numbers of birds killed by turbines, they have found a number of migrating bats that have been killed by them. Impacts to wildlife and native plant communities can be reduced by careful attention to micro-siting issues such as not locating them: Near native prairie, between wetlands, and near bird flight lines.

Solar currently comes in three modes, solar photovoltaic, thermal – air heat, and thermal- hot water. As a power alternative, solar has also grown in attractiveness to reduce energy consumption as well as to export the power. Solar photovoltaic is the generation of electricity and can be used on site or placed on the distribution system. An example of a larger solar array is the 2 MW Slayton solar farm, where the power generated goes to the distribution system to be used locally. The large solar facilities will likely be located near access points to the transmission system (substations). Due to the potential of generating more runoff concentrated at the base of the panels, care should be taken with relationships to water erosion as well as in shoreland areas. Depending on the need, any of the three solar technologies can be used on site to reduce the need for traditional energy sources.

Other known renewable energy resources include geothermal (used onsite to reduce traditional heating and cooling energy use and costs) as well as biomass. As technologies develop, one can expect other renewable energy opportunities to be developed and the County should research these opportunities as they become viable.

Future of Economic Development

Technology and diversification are two words describing the future for economic development. Technology is required in persuading high tech industries to enter a given area. Murray County can strengthen its economic base by increasing its technology, growth and training its workforce for modern computer applications, and finding niche businesses. Diversification results in finding new products to produce using the resources Murray County already possesses. The County already has the potential to expand its renewable energy market through the production of wind, solar, biomass, ethanol, and other renewable energy production.

Economic expansion and contraction are cyclic, the key to minimize the impact of economic downturns. During the last recession, Murray County was not affected as much due to the strong agricultural base. However, the past has also shown us that when the agricultural economy experiences a down turn, so does the County. They key is diversification which can help sustain the economy if one sector experience harder times.

As mentioned throughout this plan, Murray County, because of its abundance of prime farmland, will most likely continue to be based on Agriculture. Broadband infrastructure will enable the agricultural sector to maintain its economic viability as well as the support of businesses in the County and will allow a technology / communications climate to enable remote access to work, in the County, Region, State, Country and World. Diversification is important, taking advantage of amenities such as tourism and recreation and branding should

be a consideration to pursue. Trails for biking, hiking, horseback riding, ATV's, and snowmobiles, could all be promoted by the County because they are used by a variety of local citizens and could be promoted to those visiting or passing through the County. Development of specific park recreation areas is identified in the County Parks Plan; other areas are addressed in the Open Space, Parks and Recreation Chapter.

Murray County, like many rural counties, lacks a great deal of service positions that pay upper level wages. While it would not be impossible for the County to bring in high-tech type industries, the County will have to plan on developing opportunities to increase the workforce, work force housing, as well as, broadband / telecommunications infrastructure, and marketing abilities. The economy of Murray County has been historically tied closely to agriculture and does retain an excellent amount of prime farmland as well as livestock production. As American farming techniques continue to advance, increased production is a result. Value added opportunities may become available, and as they do, placement with the proper access to infrastructure should be a prime consideration. While often this means suitable placement near communities, that may not always be the case. The County should work with the communities to ensure location of development within a two mile radius of the community is consistent with their future development plans, thus ensuring planned growth with the supporting infrastructure.

There are two different strategies the County can use to generate economic growth. Murray County can either attempt to bring in new business or industry, or it can focus on the businesses and industries already doing business in the County. The Murray County Planning Commission should work closely with the County EDA and Office of Economic Development to assure that the new growth occurs in an economically sustainable way.

Summary

Many view the attraction of new business or industry as the primary means to solving economic problems within a specific area. However, the offering of free land or tax breaks is not always the answer. In many instances, especially during times of overall economic expansion, jobs are available. Plus, with the further development of telecommunications, people will not need to live within driving distances of their work, and many will choose not to. This is why it is imperative that Murray County continues to preserve and maintain high quality schools, recreational areas, churches, and infrastructure. The vigorous promotion of these Murray County features will aid in the attraction of new citizens and business development.

CHAPTER 4. HISTORIC AND CULTURAL FACILITIES

It is the intent of the Historic and Cultural Facilities portion of the plan to reflect the particular characteristics and needs of local historic, archaeological, and traditional cultural properties. Ideally, historic preservation will be firmly rooted in broad based public support, which is essential for its protection, preservation, and long-term sustainability.

The issues addressed in the Historic and Cultural Facilities chapter are arranged in the following sections:

- Introduction
- Purpose
- Historical background
- Existing historic and cultural facilities and organizations
- Opportunity for historic and cultural facilities in need of preservation

INTRODUCTION

Preservation of historic and cultural facilities is gaining more attention, not only in the State of Minnesota, but in the United States as a whole. This country's citizens are beginning to understand and realize the importance of designating, protecting, and preserving historic buildings and places. Each community expresses a unique character and a distinguishing sense of place. This uniqueness, which helps to distinguish a specific area from all other areas, largely stems from its history. Historic properties are the expression of a community's ethnic and economic heritage and should be preserved.

The United States Department of the Interior's National Register Bulletin gives the simplest and best definition of cultural resources. A cultural resource is a "building, site, structure, object, or district evaluated as having significance in prehistory or history" (NRHP Bulletin 16A). This definition of cultural resources indicates that at least one factor essential for designating a site or structure as historic, is the word "significance". While a number of agencies and criteria have been established to aid in helping designate significant structures or sites, this plan uses the most general definition of historical significance. This way, we are able to include those institutions such as museums that house historical information.

As previously mentioned, historic and culturally significant resources have come to be seen as nonrenewable resources similar to fossil fuels or to the fertile topsoil on which Murray County farmers depend. Murray County residents, as well as its leaders, should have a sense of conservation and stewardship when approaching the County's cultural resources. A sense of pride can be felt because these resources are not only theirs as residents of Murray County, but they are often times unique only to Murray County. The County should look to employ a greater commitment to long term planning in this area and work to get rid of the "Tear it down if its old!" type mentality. Through education and promotion, more residents can see these types of facilities and structures for what they are and the history they represent.

Residents of Murray County are in danger of losing some of their cultural and historically significant resources due to the expansion or construction of new infrastructure. However, threats facing Murray County's resources also include decreasing County population and the lack of resources. County leadership should remember that just because the County (or interested individuals) go through the work of nominating and securing a site on the National Register of Historic Places, it does not mean that structure or site will remain preserved or in good repair. Many different factors can determine how long a culturally significant building or site retains its attractiveness and vibrancy. These factors include citizens with pride in their County and their Community, as well as a desire by those citizens to preserve special history. The largest threat facing these resources is the lack of funding and interest to properly maintain them.

PURPOSE

The purpose of this chapter is to propose the standards and criteria for protection of the County's historic, cultural, archaeological and artistic resources. It is also hoped that this chapter will encourage the designation of more historically significant sites, further preservation and protection of existing sites, and increased awareness of County leaders in regard to the County's unique history.

ISSUES FACING HISTORIC AND CULTURAL FACILITIES IN MURRAY COUNTY

Often times, the primary concern relating to historic and cultural facilities within a specified area is the lack of concern for the condition of these structures or the overall limited importance of this topic. This is not entirely true of Murray County. In fact, the Murray County Planning Committee identified the lack of coordinated efforts in marketing as the County's largest weakness in this area. Perhaps, one of the County's most notable strengths in this area is an excellent interest in cultural and historic facilities by the County's older population. In response to the needs, in 2012 Murray County went through a comprehensive Museum Assessment Program (MAPS). This assessment was completed by outside peers and included the Murray County Historical Museum, Dinehart Holt House, Wornson cabin, and Sierk Building. The End O Line Park and Museum went through a similar process with a different peer reviewer. There were ten buildings included in that assessment. One of the reviewer's recommendations was for the two sites to streamline their work and combine efforts, which the County has addressed.

In 2014 the Murray County Museum completed a Collections Assessment, performed by Elisa Redman from the Midwest Conservation Group. This assessment surveyed the conditions of all collections with in the four buildings of the museum.

There is no shortage of attractive features in Murray County. The County possesses a very high quality of life, attractive and well-kept communities, quality schools and churches, and attractive County and City parks. The most important two factors that drive this chapter are the maintaining and preserving of the County's current facilities and their effective marketing and promotion.

Strengths in the County's Historic and Cultural Facilities

- State Park (Trail, Dakota Conflict)
- Recreation (Lakes, County Parks, End-O-Line Park and Museum, Trails, etc.)
- Museum (Historical Societies)
- Well researched archaeological sites- Bear Lake, Buffalo Ridge, Shetek area, Big Slough
- Draft Horse Week-end
- Autumn Boutique
- Churches
- Schools, and some country schools buildings exist
- Community Festivals – Wood Duck, Currie 4th of July, Lake Wilson Town and Country Days
- County Fair

Weaknesses in the County's Historic and Cultural Facilities

- No Countywide coordinated effort in Marketing or funding of marketing
- No/Few incentives to retain and rehabilitate historic structures
- Lack of Education of why history is important
- No organized group or committee overseeing the preservation of historic structures or landscapes
- Economic Impact (no visible return on dollars spent)

Opportunities for the County's Historic and Cultural Facilities

- Use different forms of marketing on a regular basis (newspapers, website, Facebook, Twitter, Instagram, tourism magazines, periodicals, ads, new programs (Dinehart Lunchbox Lecture)
- Promotion of the County's Festivals and Events (produce a Calendar of Events)
- Collaborative Marketing between area historic places and museums and State associations to draw visitors to attractions in the area
- Promote Cooperation between Neighboring Counties (market the areas features together)
- Make Enhancements to the County's Website
- The more effective use of Website is being addressed through two new websites for the End O Line Park and the Museum. The Historical Society now funds and runs its own website which will allow it more freedom to advertise, sell items on-line, and get input from users.
- Develop a Countywide plan to address loss of historic properties.
- Casey Jones Corridor

Threats facing the County's Historic and Cultural Facilities

- Access to funding.
- Lack of Effort / Apathy in younger population
- Politics – everyone is only looking out for their own interests
- Out Migration of Younger People, increasing older population that leaves in winter. Fewer residents have bond to past.
- Lack of Focus on what the County Already Possesses
- High price for ag land reduces incentive for preservation of historic rural structures, early tree claims, silos, etc.
- Lack of understanding of processes to save, renovate or preserve historic structures that are privately held.

HISTORICAL BACKGROUND

This section of the chapter outlines Murray County history. While Murray County was officially established by the Minnesota Territorial Legislature on May 23, 1857, the area's known and recorded history dates back much further and is comprised of many culturally significant dates, structures, and people. The earliest known people to have inhabited southwestern and west central Minnesota was an Algonquin-speaking tribe called the Cheyenne. During this early period of settlement, it is generally accepted that these people were a hunting and food-gathering people. Archeological digs have been performed at the Bear Lake site, the Big Slough, and Shetek area. Items dating to the early prehistoric era have been found. This dates pre-historic settlement back to 8-9,000 B.P (before present).

In 1688, the first Anglo-Europeans explored the Des Moines River headwaters. During the 18th century, French traders made their way to what was to become Murray County and to the region of four lakes— Bear, Great Oasis, Rush and Crooked Lakes. During this time of early European exploration, the Great Oasis area was covered with large amounts of timber as well as a natural water supply. With an abundance of fur-bearing animals such as beaver, otter, raccoon, muskrat, and mink, traders viewed it as an ideal spot for trading goods with the nearby Indians. During the earliest part of the 1800's traders came through the area trading with local bands. In 1832, a physical post was built by the American Fur Co. and operated by Joe Laframboise. The American Fur Co. did not have the post long as in 1837 it was abandoned. Trade with the local bands continued until after the Dakota were settled on reservations along the Minnesota River.

During the peak of the trading post's success, the nearby Indians traded their fur in exchange for blankets, knives, guns, flour, pork, and many other supplies. Old records show that during this period, muskrats sold for $.16 cents, mink brought $.25 cents, and a good otter could bring as much as $5.00. This particular trading post was a $5,000 a year enterprise. However, a decline in the available furs as well as a sickness outbreak among the Indians led to an abandonment of the Post. Indians eventually burned the Post but bits and pieces of charred chucking can still be found in the area.

Two miles west of the Valhalla Corner along County Road 48, lies the only known "Stone Man" Indian marking within Murray County. This stone man guarded an Indian burial ground atop a high hill known as "Poverty Hill," some distance to the Southwest. This burial ground is now unmarked but it was known by the early French traders as "Buttes de Mortes" or Mounds of the Dead.

Other Indian burial grounds within Murray County might still be found on Buffalo Ridge along the western part of the County. They were especially noticeable in Chanarambie and Moulton townships where stone markings, outlines of buffalo, a bear, a crane, a turtle and a stone man were all found on the ridge. A carved footprint is in the museum, found along the Murray/Pipestone County line, along with dozens of stone mauls and celts found with in the County.

Anglo-American Settlement

Murray County was created on May 23, 1857 by the passage of a bill in the Territorial Legislature. This bill gave the County the same boundaries it has today. The population count taken through the Federal Census of 1860 showed that 29 people called Murray County home. These 29 inhabitants were grouped in the first settlement near Lake Shetek. At the time of its establishment, the land constituting the County was named after William Porter "Pitt" Murray; an early official from the City of Saint Paul.

County government was formally organized in 1872. Currie was the original County Seat of Murray County. In 1889, Slayton was determined to be the County Seat after a series of conflicting votes and lawsuits. A brick courthouse was then built in Slayton in 1891. The County constructed a new Courts Building in 1974 and a new Government Center Building in 1981, after the historic Courthouse was demolished.

US Dakota War - The Dakota Conflict took place during the later part of 1862 and spanned much of the State of Minnesota. The initial stages of the conflict began on August 17, 1862, when five settlers were killed at Acton, in Meeker County, Minnesota. On December 26, 1862, thirty-eight Dakota (also known as Sioux) were executed at Mankato. While the entire Dakota Conflict took place in an area much larger than Murray County, for the purposes of this Comprehensive Plan, we will only document the fact as it relates to Murray County and Lake Shetek.

On August 18, 1862, another incident at the Lower Sioux Agency and Fort Ridgley continued transgressions from the day before and began to develop into what would become known as the Dakota Conflict. Two days later on August 20, 1862, the Dakota Sioux Conflict reached Murray County and the Lake Shetek area. The Dakota Sioux had experienced many grievances with the settlers including problems with the white government, difficulties in dealing with various agents, and finally, unfair dealings with traders. They had lost their lands and were forced onto reservations. They had been pressured to become farmers, and they were cheated by traders who also refused to credit them. It is commonly accepted that these facts finally pushed many of the Dakota into a general war against the whites.

Chief Lean Grizzly Bear and Chief White Lodge, two chiefs that refused to change their lifeways and lived off the reservations, brought their Southwestern Sisseton Dakota forces against nine families living at Shetek on August 20, 1862. Throughout the day, the families had negotiated and fought with the Dakota and eventually ended up hiding in tall prairie grass, which later became known as "Slaughter Slough." Several settlers as well as some Dakota in Murray County were killed during the course of the conflict. A Monument at Lake Shetek stands as a reminder of this day. Another memorial to the conflagration stands at the site of Slaughter Slough, now a designated Federal Wildlife Area.

Railroads - Unlike areas settled earlier in the eastern United States, the locations of most of the Euro-American communities in southwestern Minnesota are directly related to railroad development. The arrival of the railroads set the stage for a complete transformation of the landscape in a relatively short period of time. During the mid 1800's, southwest Minnesota had seen very little settlement. This would all change as settlers entering the agriculture industry

were gaining access to new markets as the general growth and consolidation of the railroad companies began to increase.

Communities that developed based on railroad decisions were laid out in patterns that are still recognizable today. The relationships between railroad track, passenger depot, freight house, grain elevator, and commercial streets are readily identifiable within southwestern Minnesota towns and are usually familiar to most people who have traveled in Midwestern America. Although there are no railroads in Murray County today, 2 different rail lines ran all the way through the County while a third entered via the community of Westbrook and went through Dovray and ended in Currie. This track was laid by the Chicago St. Paul Minneapolis and Omaha Railroad Company in 1899. One "through" rail line passed through the communities of Fulda, Iona, and Chandler before leaving the County and was constructed in 1878 by the Southern Minnesota Railroad Company. The other "through" line was constructed in 1878 by the St. Paul & Sioux City Railroad company, starting in the community of Heron Lake and passing through the communities of Avoca, Slayton, Hadley, and Lake Wilson before leaving the County.

Catholic Church Colonization Efforts - In 1876, Bishop John Ireland established the Catholic Colonization Bureau in St. Paul. He became a land agent for several railroad companies and used the land secured to attract Catholic Settlers. The town of Avoca became the first colony in Murray County, followed by Iona and Fulda. In 1880, the last major land contract for Catholic settlements was signed by John Sweetman, an Irishman. He obtained 10,000 acres around Currie.

The Sweetman Catholic-Colonization Company would help settlers by providing a small house and advance the settler with the gear, equipment and supplies needed to adequately work the farm. The company would lend up to $250 to be repaid in installments with an 8% interest rate. Lastly, the Sweetman Catholic-Colonization Company would provide a free pass from Chicago to Tracy or from St. Paul to Avoca for the head of every family. While this colony was not a success for every emigrant who participated in it, many were able to utilize its benefits and prosper.

Schools and Churches - Schools and churches played a large part in the early history of Murray County. In fact, the church was often the cornerstone of newly established communities and at one time, the total number of schools topped 110 in Murray County alone. These included at least one school for every township.

Pioneer Cemetery –A pioneer cemetery exists just outside of the City of Currie and is the final resting place of some of the early pioneers of Murray County.

Vast Drainage Projects - The "Great Oasis" is one particularly significant former wetland, which has been drained for agricultural purposes in Murray County. This former wetland is located in the north central section of Murray County. Rush Lake, Crooked Lake and the Great Oasis Lakes formally occupied this area, however, it has since been drained and converted to present day farmland. Lake Beauty north of Slayton has been partially restored.

Before the 20th Century, this area provided natural habitat for a number of fur-bearing animals. Some former wetlands, such as Lake Elsie and others, have been restored to provide habitat and water quality improvements.

Identification of Historical Trends

Murray County, like many rural counties, is experiencing a general loss of population. The average population decline is 5% every ten years. This loss in population has negative impacts on the County's historic and culturally significant sites and structures, as well as its ability to maintain them. With this loss in population, the County loses tax base and general funding. The rural infrastructure and character begins to decline with the destruction of farm buildings (barns) and homes, country and in-town schools, township halls, and churches. Since 1927 over 50% of all farmsteads in the County have been deserted and most have been razed.

The next trend, which can be strongly associated with the loss of population trend, is the loss of existing businesses within the County. This loss in population places a harder burden on small-town businesses that are already losing customers to larger urban centers due to their ability to provide greater services and selection in products. This has led to the removal of older downtown commercial structures because once they become abandoned they are either seriously neglected or torn down.

EXISTING HISTORIC AND CULTURAL FACILITIES AND ORGANIZATIONS

This portion of the plan is intended to portray the current status of preservation efforts in Murray County.

Assessment of Existing Data

As is the case in many counties, the largest threat facing these culturally significant structures is the lack of resources and willingness to properly maintain them. Table 4-1 lists properties within Murray County that have been placed on the National Register of Historic Places.

Table 4-1. Murray Co Historic Properties Listed on the National Register of Historic Places

Resource Name	City	Address	NRHP Date
4-H Club (Octagonal) Building	Slayton	Murray County Fairgrounds	12/22/2005
Avoca Public School	Avoca	Cole Ave. and 2nd St.	10/16/1979
Chicago, Milwaukee, St. Paul, and Pacific Depot	Fulda	St. Paul and Front Streets	10/16/1979
Chicago, St. Paul, Minneapolis, and Omaha Turntable	Currie	Co. Hwy. 38, End-O-Line RR Park	12/12/1977
Dinehart-Holt House	Slayton	2812 Linden Ave.	12/07/1982
First National Bank	Fulda	115 N. St. Paul Ave.	12/07/1982
Lake Shetek State Park WPA/ Rustic Style Group Camp and	Currie	Off Co. Hwy. 37 on Lake Shetek	07/01/1992

Source: Minnesota Historical Society, National Park Service

4-H Club Building, Murray County Fairgrounds - This octagonal frame building has an extension for livestock, built in 1936 by WPA for 4-H exhibits. Known locally as the "Round Barn", the building was designated to the National Register of Historic Places in 2005.

Avoca Public School –The Avoca Public School was designated to the National Register on October 16, 1979. The school was built in 1894 and is a two-story brick structure. The school consolidation act of 1947, along with a regulation passed by the State Legislature in 1970, unfortunately brought about the end of the facility's use as a public school. Since 1970, the building had been used as both a newspaper office and a church group meeting place. The facility is currently privately owned, sits empty and in poor condition.

Chicago, Milwaukee, St. Paul, and Pacific Depot –It wasn't until September 1879 that the railroad arrived in the Fulda Community. Fulda was one of the communities that were established through the efforts of Archbishop John Ireland. Typically, most of the settlers in Fulda were German.

The Southern Minnesota Railroad Company (SMRRC) built the rail line through Fulda but this company would eventually disappear in the 1880's. Its main competitor during the 1870's was the St. Paul and Sioux City's line north of Fulda, but the railroad operation in Fulda was a substantial one. In fact, following the SMRRC's acquisition in 1880 by the Chicago Milwaukee and St. Paul (Milwaukee Road), the City could boast a round house, turntable, depot, stock yard, water tank, and coal bins and had eight regularly scheduled trains passing through Fulda every day. The City of Fulda owns the structure and the site it sits on and the Fulda Heritage Society leases it from the City on a 99 year lease. Over the years the Heritage Society has cared for the building. A conditions assessment grant has been submitted as of 2016 with hopes of preserving the building in a 1901 time period. The Society also has a new building in construction to house larger ag equipment and artifacts, that sits to the south and west of the depot.

Chicago, St. Paul, Minneapolis, and Omaha Turntable – It wasn't until 1899 that the Omaha Railroad reached the Murray County community of Currie. However, when it did, the residents of the County (as well as the surrounding area) were delighted for several reasons. First of which, the new line connected Currie to a main railroad line between Mankato and Sioux City, Iowa. This resulted in the area's residents having a more economical and cost effective means of shipping goods into and out of the County. It also provided an alternative form of more favorable travel. Because the community of Currie was at the end of this branch line, a manually operated turntable was installed near the depot to turn locomotives around.

The rail line to Currie was abandoned during the 1970's, however, the turntable remains at the End-O-Line Railroad Park and Museum. This park, which is located in Currie, possesses the only manually operated railroad turntable in Minnesota.

Dinehart-Holt House – This historic home located in Slayton is very stately and resembles a small mansion. The Dinehart-Holt House is on the National Register, was privately owned for 116 years, and is well maintained. Murray County acquired the House in 2007 for use by the Museum. An historic structure report grant has been submitted that will offer a prioritized view of the structural needs of the house.

First National Bank –The Lytle Company of Sioux City, Iowa constructed the First National Bank in Fulda in 1918. The structure is 45 ft. by 75 ft. and is gunmetal colored brick. During the early 1900's, the majority of the First National Bank's clientele was farmers and because of hard times in the agricultural sector during this time period, the bank ended up in receivership on October 7, 1926. The facility was used as a community center even after the bank had closed. This went on until 1929 when Citizens State Bank purchased the building.

Lake Shetek State Park WPA/Rustic Style Group Camp and Historic District - The Lake Shetek area remains a popular attraction to thousands of people each year. About 100 years ago, most of the Lake Shetek area was treeless prairie. This prairie land was home to bison, elk, antelope and prairie chickens, making it prime hunting ground for the plains Indians. However, over the course of the past 100 years, native vegetation has been removed from most of the prairie land and transformed into cropland.

The Shetek Monument, completed and dedicated in 1925, is the final resting site for 14 of the settlers that were killed during the Dakota Conflict, on August 20, 1862. Several pioneer cabin sites remain within the park. These cabin sites include the Duley, Wright, Smith and Eastlick cabins. The Koch cabin, which was built in 1857 or 1848, was moved into the park from Teepeeotah by the Murray County Historical Society in 1964. This cabin is thought to be the oldest building in Murray County.

The Lake Shetek State Park was established in 1937. Much of the early development and construction of park facilities was performed by Works Progress Administration (WPA) workers. These workers were part of a WPA Camp that was located on Keeley Island from 1934 to 1940. The camp employed 200 transient and homeless men. This camp was first operated by the State Emergency Relief Administration and was one of 32 that existed in Minnesota.

The area of Shetek Lutheran Bible Camp on Keeley Island was at one time part of the State Park. WPA workers constructed buildings in the park and at the Bible Camp location, and several causeways, including the causeway that leads to Loon Island.

Several buildings and facilities are on the National Register of Historic Places. They include:

- The Beach House, built in 1939-40, features finely executed stonework incorporated into a series of stairways, terraces, and retaining walls.
- The Picnic Area Shelter Building was built in 1940-41. Although another picnic shelter was built in 1986, this building is still in use.
- A small Sanitation Building was built in 1940 just north of the shelter and is no longer in use.
- The Park Manager's Residence, originally known as the Custodian's Cabin, was built in 1939-40, and added on to several years after that.
- The Park Shop was the Garage and Park Office when it was built in 1939. After a fire in 1953, it was remodeled and added on to.
- Near the Shop and Manager's Residence is the Ice and Wood Building, which was built in 1941. Although ice hasn't been stored in the building for years, it is still used to store bundled firewood and other items.

- The 1000 foot long causeway that leads from the boat landing to Loon Island is also included on the List of Historical Places by the NPS. It was built in 1938 with boulders, fieldstone, and gravel from the shoreline of Lake Shetek and nearby farm fields. Two bridges were built into the causeway; one in 1966, and the other in 1974. It was heavily damaged during the flooding of 1993, and repaired in the autumn of the same year.

Murray County Festivals and Events

Murray County communities have the ability to provide its residents and tourists with great links to the past through various attractions. These attractions are listed below.

- Lake Wilson is known for Great Fishing; Buffalo Ridge geographic phenomena and dynamic buffalo sculpture (plywood cutout shape); and the Lake Wilson Town and Country Days, which is the third week end in June.
- Slayton is home of the Murray County Fairgrounds, where you can walk through the 1872 Wornson Log Cabin; see vintage and antique agricultural machinery in the Sierk Building; experience the past through many displays and exhibits in the Murray County Historical Museum or do family history research in the museum's resource center; rent the Dinehart-Holt House for private parties and meetings; and view a number of other historical buildings in the downtown area as well as many well-preserved homes and churches.
- Fulda features a Civil War cannon, a Civil War Statue, the G.A.R. Memorial, St. Gabriel's Catholic Church, the Historic First National Bank building and Depot. In addition, there are antique stores and many different interesting shops.
- Currie is home to the End-O -ine Railroad Park and Museum, where you can find a manually operated turntable that turned heavy steam engines in the past, as well as exhibits of railroad equipment and history. Visitors can shop in the restored General Store and visit a period school and church, and a newly-constructed replica of the original County Courthouse. The 6-mile Shetek trail begins at the Park and Museum.
- Lake Shetek State Park also provides visitors with access to the six-mile bike trail, which originates at the End-O-Line Park. There are also many activities available such as camping, fishing, hiking, boating, the Shetek Monument, historic Koch Cabin, WPA Buildings and guided tours.
- The Chandler area plays host to a Ghost Dance, which is a Native American Ceremony on sacred Native American Ceremonial land.

Status of Local Historic Preservation

Within Murray County, the Murray County Historical Society and the Fulda Heritage Society work to preserve and promote historic and culturally significant places and buildings. . End O Line Park and Museum has a loosely organized public advisory board that helps direct programming, policy, and physical updates. In 2015 there was an ad hoc group working to save the Fulda 1910 Fire Hall and in 2014 a group organized under a 501©3 to save and restore the Willow Lake Lutheran Church.

Fulda Heritage Society – Like the Murray County Historical Society, the Fulda Heritage Society is an extremely important and beneficial resource within the County. The Society's continued support is also encouraged as it operates a small museum in the Fulda Depot.

Murray County Historical Society – The Murray County Historical Society's principal function is to educate present and future generations about their local history. The Historical Society is a non-profit organization dedicated to the collection, preservation, interpretation and dissemination of the County's history.

The County is fortunate to have both Societies, and the Committee recommends that future support of these Societies and their efforts, be continued.

The Historical Society was established in 1934 and operates the Murray County Historical Museum in cooperation with the Murray County Board of Commissioners. Some of the projects undertaken by the Society include:

- Various open house events and special exhibits at the museum
- Koch Cabin (located at and now owned by the Lake Shetek State Park) – moving and restoring
- Country School No. 1 (located at End-O-Line Park) – moving and restoring
- Marking grave of early pioneer Kolander east of Slayton
- Publication of a 150th Anniversary pictorial history book

Murray County Historical Museum – Located in Slayton, the Murray County Historical Museum started in 1952. It's collection of over 10,000 artifacts include local history artifacts organized into topical displays; military objects from the Civil War through the Korean War; microfilms of County newspapers, census and naturalization records; County plat books and history books; files of family history and numerous photographs that document the County's heritage. The museum is entrusted with providing a safe and secure environment for its collections and with educating the general public about the County's history. The museum staff offers group tours, research assistance and historical presentations. The museum hosts special exhibits and open house several times per year. There is a monthly Dinehart Lunchbox Lecture Series in the fall and winter and the Front Porch Music Series in the summer. The staff host several student groups per year including the MCC High School Civics class and the Edgerton 2nd grade.

Wornson Cabin – Wornson Cabin was built in 1872 by Ole Wornson in Slayton Township. Mr. Wornson's family occupied it until 1951. The building was moved to its present location on the Murray County Fairgrounds and restored in 1976 by the Murray County Historical Society.

Sierk Building – Built in 1998 by the Murray County Historical Society next to Murray County Historical Museum in Slayton, this building houses the Society's collection of vintage farm machinery and artifacts related to the County's agricultural heritage.

End-O-Line Park and Museum – Located in Currie, the End-O-Line Park had its beginning in 1972 when Colleen Illg and Roxanne Probst, junior leaders in the Poco-A-Poco 4-H Club in Currie, decided to clean around the turntable in the railroad yard. Their 4-H project, called "Community Pride," inspired them to preserve the manual operation turntable for the future. The 4-H Club cleaned the pit of the turntable and picked-up and mowed the area around it.

What had been an eyesore now attracted attention as a pleasant roadside stop. The site today holds ten original and replica buildings that tell the history of railroading in and around Currie and the Shetek area.

Currie Dam Site – Lake Shetek, which covers approximately 3,600 acres, is the largest lake in Southwestern Minnesota. The lake forms the headwaters basin for the Des Moines River, and is over five miles long. The Currie Dam, located on the south end of the lake, controls the water level of the lake. The main drainage basin of Lake Shetek is about 134 square miles. Lake Shetek, which has about 32 miles of shoreline, is considered shallow, with a deep spot of 11 or 12 feet. Although many dams are located in Murray County, the Currie dam is mentioned here because of its somewhat unique history and due to its relationship to the depression as a WPA project.

In 1921, the Department of Game and Fish made a survey of the lake, at which time it was found that the lake level was about five feet below its high level and about two feet below its natural level. Dr. Thaddeus Surber, Superintendent of Minnesota State Fish Propagation, recommended that a dam be built at the lake outlet to protect the lake's fish potential. The Department of Game and Fish built a temporary wooden dam in 1922 near the site of the present Currie Dam. Threatened litigation by the owners of alleged flowage rights on the lake delayed further improvement of the lake and dam until 1924. By the early 1930's, many area residents wanted the level of the lake raised, so in 1934, beams were added and spaced in such a way that stop logs could be inserted to provide additional height to the dam. The Department of Game and Fish furnished plans, materials and supervision, and labor was provided by local organizations. The water level was raised about 18 inches. In 1939, the dam had an opening cut through the crest to act as a fishway for fish to move upstream into the lake, this was done as part of a WPA project.

The dam has seen many changes since the early 1930's. It saw its latest modification in 1995 when basically everything was removed except for the "core" of the old dam. In addition, the project included rebuilding everything around it and over it. Improvements also included riprapping portions of the shoreline.

Issues affecting Local Historic Properties in the Future

In summary, the largest threats to the historic and cultural resources within Murray County are the overall lack of interest in preserving them, the process and costs associated with refurbishing or preserving them and an overall lack of awareness about the significant sites and structures that the County does possess. Unless an easier path to their preservation can be created, many potential sites will fail to make it on the register and many of them will begin to deteriorate and eventually be removed. One recommendation is for a Historic Preservation Committee to form to identify structures of cultural or historic significance and prioritize them along a continuum of significance. Such a committee can also help individuals and cities move through the process of finding preservation funding.

OPPORTUNITY FOR HISTORIC AND CULTURAL

FACILITIES OR SITES IN NEED OF PRESERVATION

This Plan recognizes that Murray County has the potential to be known for its beauty, uniqueness, and historic significance. Murray County is fortunate to possess many aesthetically pleasing and recreationally inviting natural areas, a rich history of Native American inhabitance, and an early history of European settlement. All of these qualities have the potential to increase resident, business, and tourist expansion within the County.

As a matter of public policy, the Murray County Comprehensive Planning Committee aims to preserve, enhance, and perpetuate those aspects of the County having historical, cultural, architectural, and archaeological merit. Such preservation promotes and protects the health, safety, prosperity, education, comfort, and general welfare of the people living within and visiting Murray County.

Areas/Sites Appropriate for Preservation

While the County already possesses buildings that are listed on the National Register of Historic Places, there are other sites that require the County's attention and recognition. In addition, some of the following sites/buildings may be eligible for listing on the National Register as well.

- Slayton Downtown (Historic Buildings, two Historic Churches)
- Valhalla Roller Drome building
- Shetek Lutheran Bible Camp buildings
- Simpson House on Linden Ave. (Slayton)
- Phelan Farmstead and tile factory site (Currie)
- Avoca Bank (Now the liquor store)
- Currie Mercantile Store
- Currie 1910 Fire Hall
- Pioneer Graves not in Cemeteries
- Century Farm Buildings and Sites
- ACO and older silos and timber frame barns
- Township Halls
- Country School Buildings
- Inactive or mature Cemeteries
- Churches (those in rural and town areas that are closing in the near future) Willow Lake Lutheran, Zion Lutheran
- Bank (Hadley)
- Bank (now Post office Lake Wilson)
- Creamery (Hadley)
- Historic landscapes-1870's tree claims, archeological sites, identified native prairie sites

There is great potential to create a historic downtown district in the community of Slayton. The area currently possesses a variety of aged structures that would fit well into such a district and this project would be a great place to start this type of preservation in Murray County.

The Role of Municipalities in Historic Preservation

All communities within Murray County are encouraged to provide a protection clause, as appropriate, for historic sites within any new or updated comprehensive plans and zoning codes.

Historic Preservation

Historic Districts -The County Planning and Zoning Commission may designate by zoning ordinance, certain areas within Murray County as historic districts as well as certain places, buildings, objects, sites, structures, or clusters as exceptional or significant historic landmarks. For labeling purposes, any of these types of districts could exhibit the word "historic" in their zoning designation. Any appropriate landmarks could display the words "historic, exceptional" (HE) or "historic, significant" (HS) in their respective zoning designations.

Historic Districts Nomination -Any person (the County, the Historic Preservation Officer, Murray County Citizen, etc.) may initiate a historic district designation by filing an application with the State Historic Preservation Officer. Requests for historic district designation must have the concurrence of the owners representing at least 51 % of the property or 51 % of the property owners located within the boundaries of the proposed historic district.

Historic Districts Documentation -Once a specific area has been designated as a historic district, the Auditor/Treasurer shall record this designation within the official public records of real property of Murray County, the tax records of Murray County, and on the Murray County official zoning maps. Any zoning and all zoning maps should reflect all historic districts by inclusion of the prefix "H" to its use designation and should be specified in accordance with the general zoning ordinance of Murray County.

Historic Landmarks -Requests for landmark designation should only be made by or with the concurrence of the property owner.

Historic Landmarks Nomination - Any person, the Historic Preservation Committee (if one is created/exists), or the County, may initiate a designation by filing an application with the Historic Preservation Officer at the State Office.

Historic Landmarks Documentation -Upon designation of a building, object, site, structure, or cluster as an exceptional or significant historic landmark, the Auditor/Treasurer shall record this designation within the official public records of real property of Murray County, the tax records of Murray County, and on the Murray County official zoning maps. All zoning and zoning maps should reflect all historic landmarks by inclusion of the prefix "HL" to its use designation and should be specified in accordance with the general zoning ordinance of Murray County.

Historically Significant Cemeteries -All applicants for permits (excluding burial permits) affecting cemeteries shall be referred to the State Historic Preservation Officer for the purpose of determining whether or not the cemetery in question is historically, culturally, architecturally, or archaeologically exceptional or significant. If the officer determines said cemetery to be significant, any proposed change (excluding burials), must be presented to the County Planning and Zoning Commission for approval of planned work. If a court of competent jurisdiction has granted permission for cancellation or destruction of such cemetery, the Planning and Zoning

Commission must approve any plans for new construction thereafter. The Planning and Zoning Commission shall be governed in its recommendations by rules and regulations set forth in Minnesota State law for cemeteries.

Criteria for designating Historically Significant Sites and Structures

Murray County should establish a unified process for the designation of historic districts and landmarks. This process shall be initiated by applying the criteria already set forth by Federal, State, and City regulations for evaluating historically and culturally significant properties. These criteria should be used to assure that resources are preserved through restoration and adaptive use and to provide that conservation and development interests can consider resources early in the planning process.

To qualify for an initial evaluation of an historic district or landmark, at least one of the following criteria should be met:

- The site has value as a visible reminder of the cultural heritage of the County (or national event).
- The location of said site has significance in local, County, State, or National history.
- The site has a connection between itself and a person or persons who significantly contributed to the development of the Community, County, State or Nation.
- The site is identifiable by the work of a master builder, designer or architect whose work has influence in the Community, County, State or Nation.

When one or more of these criteria are met, the State Historic Preservation Officer should be contacted in order to begin the nomination process.

Preservation Techniques and Incentives

Incentives offer encouragement for owners to preserve historic and cultural facilities and properties. As funding resources change frequently, it is a good idea for the County to contact the Minnesota State Historic Preservation Office or a historic preservation organization for up-to-date information on requirements and availability. The following list briefly describes several incentives that could be available to sites within Murray County.

Federal Income Tax Credit

Property owners who undertake rehabilitation of their historic building may take advantage of a tax credit on their income tax bill. Properties must be listed in, or eligible for listing in, the National Register of Historic Places, and rehabilitation work must conform to the *Secretary of the Interior's Standards of Rehabilitation*. This incentive is applicable to income producing properties only (i.e., retail, offices, apartments, inns, etc.). Also attractive to investors is the ability to take advantage of the historic preservation tax credits simultaneous with Federal housing tax credits.

Development Grants

Matching grant funds are only rarely appropriated by Congress or the State Legislature for rehabilitation of designated historic properties. Usually, these grants are made on a dollar-for-dollar matching basis and used to pay for preservation tasks, such as new roofing, paint, foundation repair, and others and are administered through each State Historic Preservation Office. However, there are State dollars available for the restoration of historic properties that are either owned by a nonprofit organization or a unit of government. The Minnesota Historical Society administers the two grant programs (one for nonprofits and the other for units of government).

Special Valuation

This local option State property tax program, subtracts qualified rehabilitation expenditures for the reassessed property value every year for a ten-year period on National Register properties. In certified local governments, locally designated properties also may be identified as eligible to apply for the special valuation. For property owners to qualify for special valuation, rehabilitation work must be in accord with the Secretary of the Interior's Standards for Rehabilitation, conducted within a 24-month period prior to application, and at a minimum dollar amount equal to 25 % of the adjusted base value of the property.

Historic Preservation Easement

The value of a donated easement to a qualified organization can be deducted from a property owner's income tax obligation, subject to Internal Revenue Service Approval.

Open Space Taxation Act

This State legislation allows counties to assess qualified rural properties at current use rather than potential use levels. In addition to preservation of agriculture and other resource lands, current taxation can also be applied to historic and cultural properties.

Foundation/Corporate Giving

Many private, corporate, and community foundations provide support for historic preservation and related projects.

Summary

Historic preservation incentives, regulations, and land use planning techniques can be used in any number of combinations to achieve local historic preservation goals. Fortunately, local governments can shape local land use planning techniques to fit preservation needs. Some of the more notable techniques that have been employed successfully include:

- Historic property overlay zoning
- Transfer of development rights (TDR)/density bonuses
- Cluster development
- Greenbelts or open space provisions
- Historic districts (urban and rural)
- Adaptive re-use of historic structures
- Special purpose districts or development authorities
- Mixed use or multi-purpose development

Other innovative preservation planning techniques have been tried in different communities across the nation. Communities within Murray County should be encouraged to be creative in identifying and developing other incentives, planning, and development techniques in order to encourage historic preservation as the County advances into the 21st century.

CHAPTER 5. CONSERVATION, PARKS, AND OPEN SPACE

The Conservation, Parks, and Open Spaces chapter provides a framework for the rational use, protection, preservation, and enhancement of the County's natural resources, which include agricultural land, undeveloped natural areas, surface water and ground water, green space and open space, wildlife, and significant scenic and scientific areas. If there is going to be a healthy ecosystem and aesthetically pleasing landscape within Murray County, both public and private land will have to be protected, preserved, and in some areas, restored. The County's vision for parks and open space in Murray County is a system of parks, park reserves, and trails that protect and preserve important natural, historic, and/or cultural areas and landscapes; provide opportunities for the recreational enjoyment and education of the public; and complement the opportunities offered by other outdoor education and recreation providers.

The information outlined in this chapter is arranged in the following sections:

- Introduction
- Purpose
- Issues Concerning Conservation, Parks, and Open Space for Murray County
- Current Uses of Conservation, Parks, and Open Space within Murray County
- Future Uses of Conservation, Parks, and Open Space within Murray County

INTRODUCTION

Over the next 20 years, the population in Murray County is expected to remain stable or decline, which places Murray County in a different position than that of some other counties. The counties which have populations that are increasing, are developing more of their land (and often times more marginal land is placed into agriculture) and this places more pressure on the environment and natural resources. As these counties continue to grow, many acres of farmland and natural areas are converted to residential, commercial, or industrial uses. In Murray County, however, the scenario is slightly different. Development pressure on current agricultural and natural resource land is not as intense. Since the County possesses unthreatened space, this plan will attempt to identify ways to retain, improve and expand on those areas. This way, the County will be able to further use these areas as effective means of marketing the area to not only tourists, but to would be residents of Murray County. However, this plan also aims to protect and preserve those natural resource areas that are under development pressure, such as lands adjacent to the County's lakes as well as lands with highly-sensitive groundwater.

Conservation

In addition to fish habitat, wildlife habitat, and general ecological systems, the conservation section of this chapter also largely deals with water, water quality, and water protection as well as other natural resources.

Presently, the County is fortunate that generally there is an adequate supply of ground water to meet current needs. There are, however, portions of the County's available and practical ground water resources that are generally unpalatable for human consumption. Groundwater in Murray County, as in most of southwest Minnesota, has a very high mineral content. Iron and manganese regularly exceed recommended standards in the deeper aquifers of the County, but this is not necessarily true of the shallower aquifers. In addition, bacteria and nitrate contaminations of ground water supplies have the potential to be a concern in the rural portions of the County. Since contaminated water cannot be used for human consumption without treatment, the availability of drinking water may be further decreased unless adequate measures to protect ground water quality are initiated. As such, a wellhead protection plan, required buffer strips, and shoreland development, will all be further discussed.

Murray County has a relative abundance of high-quality wildlife habitat for an otherwise agriculturally dominated area. There are many small wetlands that still remain and are scattered throughout the County. Plus, there is a relatively large base of public lands that will also be identified within this chapter.

Parks and Recreation

In today's society, an increasing variety of parks and recreational uses exist and are being demanded by the public. In fact, the State Comprehensive Outdoor Recreation Plan (SCORP) dated 2014-2018 is to connect everyone to the outdoors so they can create experiences that inspire a legacy of stewardship for the natural world and they provide fun, outdoor recreational opportunities that strengthen families, friendships, health and spirit, now and into the future. This is coupled with other initiatives: Greater Minnesota Parks and Trails Commission – created to foster the planning and development of a regional parks and trail system; the State Health Improvement Program (SHIP) which promotes healthier active communities; Safe Routes to School which encourages children to become more active by walking and riding their bikes to school. Benefits not only include a more active lifestyle, but outdoor recreation facilities also encourage tourism.

The County's function in this area is to enhance the condition of natural resource-based parks and recreational activities in the County and to identify ways to preserve these resources. The County parks and trails should be developed to complement the parks and open space opportunities supported by other providers, such as State Parks and municipal parks.

The demand for outdoor recreation and education opportunities and for the preservation of open space is bright. National trends for recreation activities illustrate the general public's interest and participation in outdoor activities. However, there is an increasing degree of specialization to these trends. It is important for Murray County to continue to support a wide variety of recreation opportunities such as camping, birding, hunting, fishing, and trail use activities that not only include running, hiking, and biking, but also involve trail uses for ATV's, snowmobiles, and horses.

Murray County should look to preserve and protect the resources (land and water) that support its present recreational activities. These activities can support additional recreational, parks and open space activities:

Acquisition of Land – Purchase or donation of property for parks and trails will be the basic and possibly essential first step for building on to the existing park system. The County should develop a plan for acquiring land within and around park boundaries, working with landowners to complete the acquisition of that property. Through capital improvements planning, a broader consensus about what types of recreation facilities and equipment is desired in Murray County can be obtained. This will lead to a better set of strategies outlined for acquisition of land and in which areas that land should be obtained.

Regulation and Development of that Land – Murray County should also focus toward park regulation and development. This involves both the design and construction of facilities within the park areas. The update of park master plans, the design and construction of new facilities, and the maintenance or replacement of existing structures are all involved in this portion of the activity. Development of parks should not be limited to amenities or parking lots but may also include the restoration of natural vegetative cover, restoring wetlands, native grasslands, or other appropriate vegetative cover that is part of new park land development.

Programming – This refers to activities, events and other services offered to park visitors. Murray County should look to increase the amount of programming within its parks. It may be in the County's best interest to develop an Outdoor Education/Recreation Plan to construct a framework for this task. This Outdoor Education Plan should look to define outdoor education as environmental, historical, and cultural education. It should also identify outdoor recreation services in a park setting and should encompass a broad range of programs and services that can be offered to park visitors.

PURPOSE

Each level of government has a different but important role in protecting and managing our natural environment. Cities and townships can protect natural resources with land use controls such as but not limited to zoning, platting, and growth management. However, their efforts to protect these lands are often constrained by lack of funding and development pressures. In addition, communities can only implement land use controls within their boundaries and generally they do not have the ability to implement programs on a regional, ecosystem, or watershed basis. Murray County's role is a bit larger since it has adopted a zoning ordinance.

Therefore, the principle strategies in this plan will:

- Use zoning regulations and other official controls to protect and enhance the environment and natural resources of Murray County.
- Identify elements and costs associated with expanding the public knowledge and understanding of the environment and natural resources within the County.
- Encourage individual initiative to protect both the environment and natural resources within the County.

- Provide guidance and support to the County's communities for the protection of remaining high value natural areas and green space, including those areas of limited scientific value but of local importance.
- Protect the supply and quality of ground water through a coordinated approach of public education and community involvement.
- Continue to monitor water quality. Increase the amount of testing done to the County's lakes while increasing coordination and cooperation between those performing the tests to avoid duplication of effort. Use information gathered to assess the performance of water quality preservation methods and to determine areas that are safe or unsafe for swimming, fishing, etc.
- Provide direction for long-term investment of local resources in public open space (i.e. parks).
- Provide guidance for other County Plans, such as the County Water Plan, Parks Plan, EDA work plan, and highway improvement plans.

CONSERVATION, PARKS, AND OPENS SPACE ISSUES FOR MURRAY COUNTY

In terms of Conservation, Parks, and Open Spaces, there have been aspects and developments that have occurred as a result of the comprehensive plan completed in 1972. However, there were initiatives started through that plan that for one reason or another, were not carried through. This chapter will identify more areas to utilize, and it will also take a look back at proposed developments that were not enacted in the old plan and make recommendations as to whether or not these actions should be reconsidered.

Murray County has a variety of strengths in parks and conservation. The County should look to its strengths first for advantage. Throughout development of this plan, the Murray County Comprehensive Planning Advisory Committee considered recommendations that will help to positively affect the County's resources in the future. These recommendations are outlined below and further discussed throughout the body of the chapter.

Strengths

- County Lakes
- County Parks
- Wildlife Areas
- Lake Shetek State Park
- The Buffalo Ridge
- Diversified areas throughout the County
- CRP/RIM Lands
- Private Campgrounds
- CREP Program
- Remnant Habitat (Privately Owned)
- Relatively inexpensive land
- Presence of a bike trail
- Snowmobile Trail
- Buffer

Weaknesses

- Gaps in centralized sewer around the lakes
- Lack of coordination of leadership
- Poor water quality in most lakes
- Tax Structure (Townships losing funds but not responsibility)
- Lack of shower and restroom facilities at certain parks
- Lack of income generated from conservation lands
- Lack of drinking water at County parks
- Habitat degradation and fragmentation

Opportunities

- Coordination between Township/County/Community leadership
- Opportunities for targeted conservation zones
- Income generation from CRP and RIM/CREP lands
- Income generation from County parks
- Develop/extend the Casey Jones Trail (supports core background of all trails)
- Coordinate with Park Board and EDA
- Legacy dollars
- CREP, RIM
- Trails
- Due to minimal investment in County Parks to date, there is opportunity to expand and update them
- Coordination to ensure habitat quality in order to increase game bird numbers
- Increase environment/buffers along County ditches
- Attract new opportunities for new sources of revenue from developing conservation at the margins

Threats

- Expanding drainage posing negative downstream effects
- No funding for access to conservation areas due to tax structure
- Continued loss, degradation and fragmentation of habitat/conservation areas
- Poorly designed drainage ditch crossings of County and township roads
- Aquatic Invasive Species
- Buffers (shift land out of production)
- Impaired waters
- The governing of park/recreation lands is becoming too much and is having a negative impact on tax revenues (some parks do not provide enough revenue to support respective infrastructure)
- Conflicts between landowners
- Limited enforcement of the one-rod buffer on ditches
- Changing climatic events

CURRENT CONDITION/INVENTORY OF CONSERVATION, PARKS, AND OPEN SPACE WITHIN MURRAY COUNTY

Conservation and Open Spaces

Murray County's natural environment was the principle factor determining how the land was developed and why it was developed that way. The topography of Murray County is generally level with some rolling hills and, of course, the presence of the Buffalo Ridge. Native prairie, wetlands, and lakes dominated the original landscape. Small mixtures of forest and shrub land were present in areas that were sheltered from prairie fires. Adequate rainfall, fertile soils rich in organic matter, and a good source of potable water contributed to the intense agricultural development of the County.

The natural characteristics of a site need to be considered prior to development. Slope, ability of a soil to provide drainage or sewage treatment, proximity to floodplains, wetlands and other surface water features, availability to a water supply, and presence of important natural areas or endangered plants and animals may place restrictions on the type, size, or design of development that can occur. Understanding these factors will allow for better decisions on where to site development and will provide the information needed to design improvements that are most appropriate for the site.

Climate

The climate in Murray County is predominantly the continental type characterized by cold winters and warm (occasionally quite hot) summers. Forms of precipitation that occur during the winter months are generally made up of snowstorms (sometimes severe) and then as showers (occasionally very heavy) during the summer months when warm moist air leaves the Gulf region and meets cooler air over the County. The total annual rainfall is generally appropriate for raising corn, soybeans, and small grains.

Weather patterns circulate counter-clockwise and generally enter the County from the west to southwest and sometimes the south. As an example, according to NOAA, using data from 1981-2010, the annual precipitation in Lake Wilson MN is 28.82 the average temperature is 44.4 degrees with the average daily minimum at 34.0 degrees and maximum at 54.8 degrees. The average snowfall is about 40 inches. Figures 5-1 and 5-2

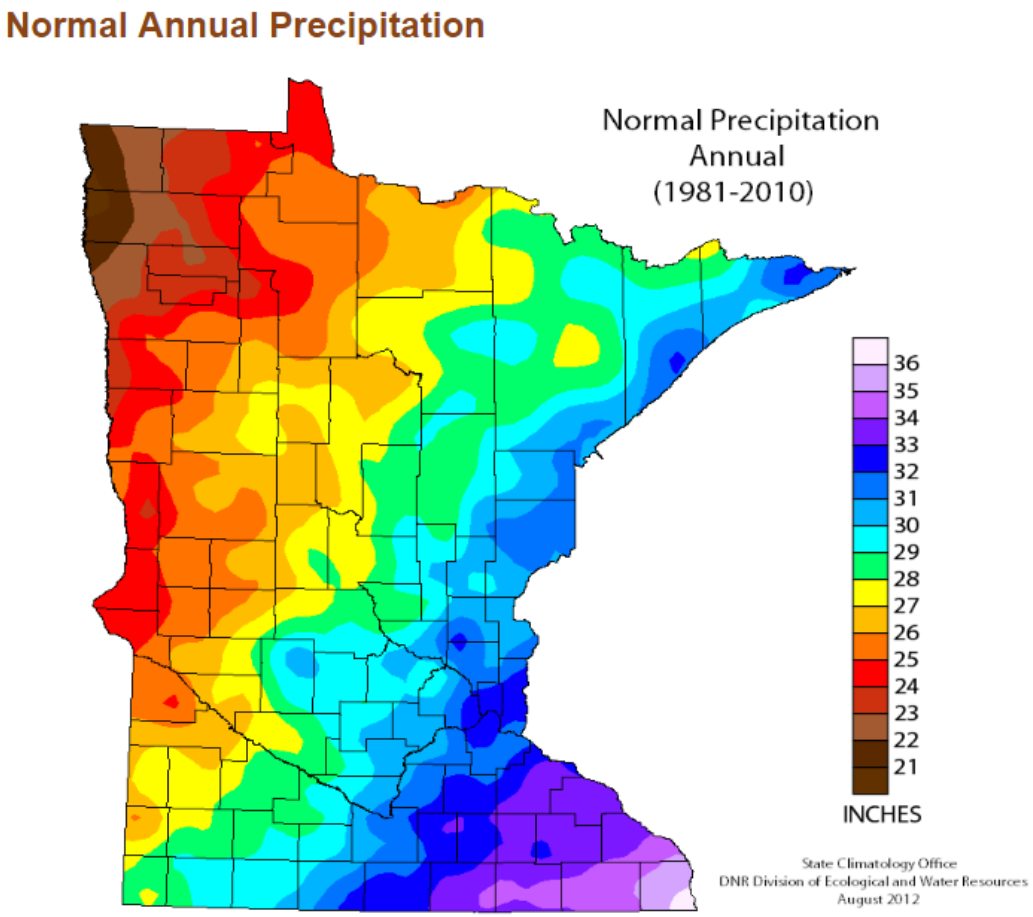
Table 5-1 NOAA Climate data for Lake Wilson, MN

LAKE WILSON, MN US

View Station Details | View Station Report

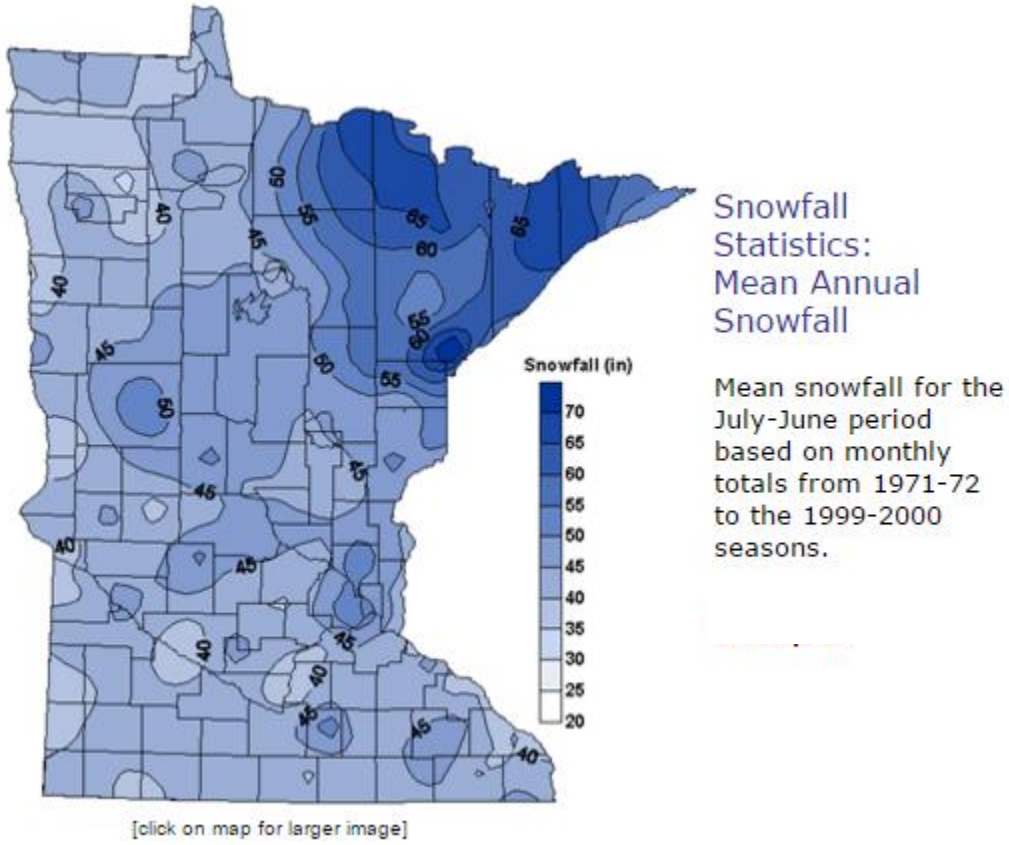
SEASON	PRECIP (IN)	MIN TMP (°F)	AVG TMP (°F)	MAX TMP (°F)
Annual	28.82	34.0	44.4	54.8
Winter	2.11	7.6	16.8	26.0
Summer	11.03	58.7	69.6	80.4
Spring	8.51	33.6	44.3	55.0
Autumn	7.17	35.7	46.5	57.3

Figure 5-1 Minnesota Normal Precipitation 1981-2010



Source: Minnesota Climatology Work Group, MN Education

Figure 5-2 Minnesota Snowfall 1971-1972 to 1999-2000 seasons



Source: 1981-2010 NOAA data

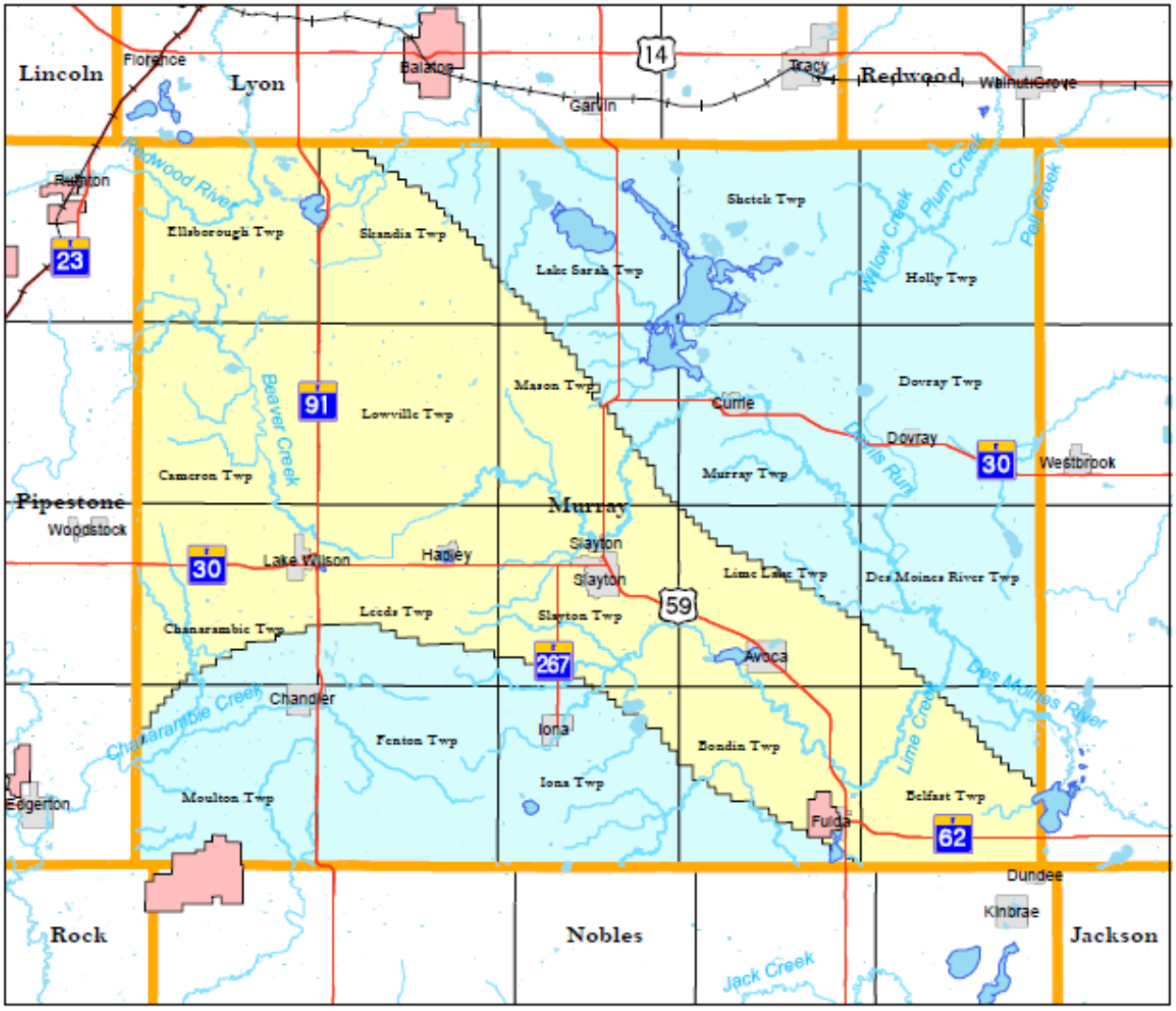
Surficial Deposits of Glacial Sand and Gravel

Aquifers in the surficial deposits of glacial sand and gravel are generally along glacial meltwater channels or on small outwash plains on the Altamont Moraine. Wells in this aquifer are shallow, generally between 30 and 55 feet deep. High yields of relatively good quality water, however, can still be expected from these aquifers if they are not near potential sources of pollution such as feedlots, leaking fuel storage tanks or failing septic systems. Aquifers in surficial sand and gravel are more likely to be contaminated than those in buried sand and gravel because of the direct exposure at the surface. Water coming from contaminated aquifers generally has higher concentrations of chloride and nitrate than water from uncontaminated wells.

Buried Deposits of Glacial Sand and Gravel

These aquifers are generally found in beds at various depths within the glacial drift. The aquifers are generally thin and discontinuous but provide adequate supplies for most uses. Most of the wells in buried sand and gravel aquifers range from 80 to 350 feet deep and average 180 feet deep. Figure 5-3 illustrates the two major aquifers in the County.

Figure 5-3 Aquifers in Murray County MN



0 1 2 4 6 8 Miles

Murray County Major Aquifers

- Trunk Highways
- DWSMA
- Lakes
- Named Streams and Rivers
- County
- City
- Township

General Aquifer Areas

- CRETACEOUS AQUIFER
- SIOUX QUARTZITE AQUIFER

Prepared by SRDC 4.08

Projection: NAD83 HARN Adj Murray Co
Source: ESRI, MnDOT, MPCA, DNR
Murray County Environmental Services

Cretaceous-Age Bedrock

Cretaceous aquifers are thin layers of sandstone concentrated near the base of Cretaceous deposits. These sediments range from 50 to 500 feet in thickness and are thickest in the northeastern part of Murray County. Few wells draw water from cretaceous aquifers in Murray County. Moderate yields of water high in content of dissolved solids and dominated by calcium, magnesium, and sulfate ions can be expected from these aquifers.

Sioux Quartzite Bedrock

Sioux Quartzite aquifers are in the upper 100 to 300 feet of quartzite bedrock that may have loose sand zones, fractures, and joints in which water is available. Few of the wells in Murray County draw water from these aquifers as they are used only where thin glacial drift directly overlies Sioux Quartzite. The best potential for these aquifers is in the southern parts of Bondin and Belfast Townships, where drift less than 200 feet thick overlies Sioux Quartzite.

Hydrologic Setting

The hydrological makeup of Murray County was developed as a result of glaciers advancing and receding over Murray County some 10,000 years ago. Murray County is bisected by the Mississippi and Missouri Major River divide. The watersheds of the Redwood and Cottonwood Rivers drain into the Minnesota River; the Rock River watershed drains into the Big Sioux and then into the Missouri River and the Des Moines River Watershed enters the State of Iowa and empties into the Mississippi River.

The largest watershed in Murray County is the West Fork of the Des Moines River, which contains approximately 525 square miles or 72% of the surface area of Murray County. The Cottonwood River drains 95 square miles of the northeastern corner of the County. The Rock River watershed is located in the southwestern corner of the County and contains approximately 86 square miles while the smallest watershed is the Redwood River, which contains approximately 15 square miles or 2% of the surface area within the County.

Over the last several decades, changes have occurred in which water is drained from the landscape. These changes include an increase in pattern tile, large amounts of altered or lost wetlands and permanent vegetation, and increases in the amount of impervious surfaces. These changes have all had negative impacts on stream structure. Tables 5-2 and 5-3 illustrate the Land Use by watershed and acreage in each watershed.

Table 5-2 Land Use by Watershed	**Percent Cultivated or in Pasture**	**Percent in Open Water/Wetlands**	**Percent Developed**
West Fork of the Des Moines River	93%	3%	3%
Cottonwood River	95%	2%	2%
Rock River	96%	0.50%	2%
Redwood River	96%	3%	1%

Source: Murray County Comprehensive Water Plan (1990)

Table 5-3 Murray County Watershed Area 1990

Watershed	Total Acreage
MINNESOTA RIVER	9674 acres*
Redwood River	15.12 sq. mi.
Total	15.5 sq. mi.
COTTONWOOD RIVER	63,853 acres*
Upper Cottonwood River	.9 sq. mi.
Plum Creek	58
Pell Creek	8.2
Dutch Charley	28.2
Total	95.3 sq. mi.
WEST FORK DES MOINES RIVER	331,063 acres*
Lake Shetek	78.2 sq. mi.
Lake Sarah	32.8
Beaver Creek	141.3
Upper West Fork Des Moines River	102.4
Lake Wilson	30
Lime Creek	100
Jack Creek	39.7
Total	524.4 sq. mi.
ROCK RIVER	56,210 acres*
Chanarambie Creek	53.8 sq. mi.
Upper Rock River	2.4
Rock River	5.4
Leota Creek	1
Champepedan Creek	23.2
Total	85.8 sq. mi.

Source: Murray County Comprehensive Water Plan (1990); *2016 Murray County Environmental Office

Lakes

The lakes within Murray County are broadly distributed throughout the County. Table 5-4 contains a list of the major water bodies, their location (township), and classification. Lakeshore development is further discussed in the Land Use chapter of this plan.

Murray County is fortunate to have a large number of lakes that are distributed fairly evenly across the County, with the greater concentrations occurring in the north-central portion of the County. Glaciers formed most of these lakes some 10,000 years ago. However, no matter when they were formed, the lakes can be greatly affected negatively by the actions of the human race. One of the largest problems experienced by lakes because of human activity is the increased level of nutrients. These excess nutrients spur the development of nuisance or problem algae, which, over time, can choke off beneficial vegetative life, reduce water quality, starve out desirable fish populations and increase the occurrence of winterkill and summerkill (summerkill

is when warm temps lead to accelerated decomposition of plants and algae in the water and the dissolved oxygen falls too low to support fish populations). Sources of increased nutrients in lakes include: municipal sewage discharge, leaching from septic tanks, feedlot runoff, applying excessive amounts of nitrogen and phosphorous to cropland, erosion of nutrient rich soil, improper manure disposal, and finally, the over fertilization of residential lawns. Pollutants have the potential to interchange between land, lake, and ground water, affecting drinking water or industrial water quality, as well as fishing, recreation, and human health.

Murray County has made progress and now has sewered communities around the vast majority of the lakes, and there should be little concern of municipal sewage or failing septic systems discharging into the lakes.

A second threat to the Murray County waters is Aquatic Invasive Species (AIS), which is addressed in the AIS Plan.

Table 5-4 Shoreland Classification

NATURAL ENVIRONMENT LAKES

Lake	Location (Twp.)	Lake	Location (Twp.)
Talcott Lake	Belfast	Long Lake	Lake Sarah
Klinkers Marsh	Cameron	Maria	Lake Sarah
Nelsons Marsh	Cameron	Manson Marsh	Murray
Louisa	Des Moines River	Smith	Murray
Silver	Des Moines River	Buffalo Lake	Murray/Dovray
Buffalo	Dovray	Armstrong	Shetek
Dovray Marsh	Dovray	Bloody	Shetek
Julia	Dovray	Fox	Shetek
Hjermstads Lake	Ellsborough	Freemont	Shetek
Lange Marsh	Ellsborough	Robbins Marsh	Shetek
Currant	Ellsborough/Skandia	Round	Shetek
Corrabelle	Iona	Webster Slough	Shetek
N. Badger	Iona	Park Lake	Shetek/Murray
S. Badger	Iona	Clear	Shetek/Sarah
Willow	Iona	Iron	Skandia

Source: Murray County Environmental Services

GENERAL DEVELOPMENT LAKES

Lake	Location (Twp.)
Fulda (1 & 2)	Bondin
Lime (both east and west of TH59)	Lime Lake
Sarah	Lake Sarah
Shetek	Shetek/Sarah/Mason/Murray
Wilson	Chanarambie

Source: DNR Waters Division

The filling of lakes by gradual sedimentation or soil erosion is also of concern. Eroded soils move into surface waters including wetlands, lakes, and rivers contributing to degraded water quality, which in turn, reduces the amount of sunlight that can reach aquatic plants. As a result, the aquatic plants are reduced and the nutrients that would have been used up by those plants are released and become available to support nuisance (unwanted) algae growth. In addition, soil particles carry nutrients such as phosphorus, which further contributes to nutrient loading in lakes and rivers. Other contaminants such as agricultural chemicals are also carried into surface waters through soil erosion. Finally, the basic public values of the impacted basins are jeopardized as they become silted in at accelerated rates. Lakes and wetlands can be literally filled in by erosion. The principle means of reclaiming these valued water bodies would be the extremely expensive and ecologically disruptive process of dredging. Further discussion on water quality can be found in the wellhead protection section of this chapter.

Public Water Access

There are 32 public water accesses in Murray County. The public water accesses in Murray County are either a trailer access or by carry-in. Murray County owns / operates nine of the accesses: Corabelle, Currant Lake, Fulda First Lake, Lime Lake, Lake Sarah (2), and Lake Shetek (2). The following lakes are inadequately served by public accesses: Lake Louisa, Summit Lake, Fremont Lake, and Long Lake

The Inlet

This Plan has identified the Inlet as a body of water that should be preserved from urban development but open to some form of development that utilizes the area's natural and aesthetic beauty. Using zoning to allow a use that will preserve a large portion of the natural areas around the Inlet such as a park, camp, or campground (i.e. conservation lands) will be in the County's best interest. This type of development will not only preserve the water quality within the Inlet, but it will also help maintain water quality in Lake Shetek, and the Des Moines River.

Water Quality Improvements

Surface waters within Murray County have been degraded by nutrients and sediment, however these surface waters will continue to be used primarily as recreational uses. Water-based recreation will likely decrease if degradation of the County's surface water continues, with a negative effect on tourism, economic development, property values, jobs, the quality of life, and population trends.

The Murray County Water Management Plan promotes surface water quality improvements and supports construction of water retention structures to slow runoff, to keep soil, fertilizer, and pesticides on the land.

The Federal Clean Water Act requires states to adopt water quality standards. A water body is considered "impaired" or polluted if it fails to meet these standards. The Act requires the State to conduct a Total Maximum Daily Load (TMDL) study to identify point and non-point sources of each

of these pollutants. MPCA and other agencies are working to reduce impairments in these waters. In 2016[5], the State listed the following water bodies in Murray County as impaired waters:

Table 5-5 2016 Impaired waters, Murray County

Lime Lake	Cottonwood River	Lime Creek
Fulda First Lake	Des Moines River	Beaver Creek
Lake Shetek	Redwood River	North branch of Jack Creek
Lake Sarah	County ditch # 48 – (The Creek that flows in to the Lake Shetek Inlet	Unnamed creek flowing to Lake Shetek
Currant Lake	Ditch #20 A – Plum Creek	Lower Lake Sarah Outlet
Bloody Lake	Dutch Charlie Creek	Pell Creek

Source: MPCA

Significantly reducing sedimentation and non-point pollutants can be accomplished by using conservation measures that help to slow or eliminate runoff entering the County's lakes and streams. By installing proper management practices, non-point pollution can be adequately addressed by combining management techniques with control activities on the land and through the construction of various structures. The following are some potentially available practices that are both visible and physical:

- *Streambank Stabilization* - Riprap or willow plantings or a combination of both.
- *Riparian Buffers* – Planting of appropriate permanent vegetation along the banks of streams and waterways.
- *Critical Area Seeding* – Planting of grasses in areas with erosion problems such as within agriculture fields in areas that are prone to gullying.
- *Wetland Protection, Preservation, and Restoration* – Wetlands are excellent in not only preventing erosion but supply functional habitat as well.
- *Suspended Ag Practices* – Taking poor or marginal farmland out of production and restoring native plant communities and wetlands.
- *Terraces* – Shaping the land to change the slope to slow runoff across the landscape.
- *Tillage System* – Use of no-till or minimum till to plant crops versus conventional plowing methods.
- *Managed Grazing* – Placing fencing to control the movement of livestock. A producer could fence off a steam bank or create small paddocks in a large pasture to control grazing and inhibit livestock from entering the lakes.

[5] The 2016 draft list of impaired waters was updated 7-28-2016
https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list

Management techniques consist of using one or more construction or planting technique, along with control measures *(such as timing)* and regulating activities. The list below constitutes various types of management techniques and should again be applied in all wellhead protection areas.

Pasture and Grazing Management – This system limits the time period of grazing based on the height of grasses in the pasture, or encourages cross fencing a large pasture in to smaller rotational pastures for more intense but shorter grazing time.

Hay Land Management – This system harvests or cuts hay at a selected time based on the type of hay or for wildlife habitat.

Crop Residue Management – This system uses no-till or minimum till farm equipment to leave more crop stems or stalks on the surface. A producer using these techniques will not use a conventional moldboard plow, thus leaving more vegetative material on the ground.

Buffer Zones – These are usually strips of land that are used to protect one land use or resource from another. These strips can be highly maintained, much like a park, or have very little maintenance. Depending on the condition of the land or resource and the desired results, intense construction and planting can occur. The overall goal of buffer zones is to absorb and reduce the intensity of the flow of materials, nutrients, noise, water, etc., from one area to another.

Stream Corridor Management System – This system would be similar to a buffer zone. A buffer zone may be a sub-element of a system that uses many different construction and planting methods and management techniques in a larger area connecting many different land uses. Objectives of a stream corridor management system may include the ability to carry flood flows and to transport normal sediment loads.

Setback – The County has in place a Shoreland Ordinance. This ordinance is a management tool that allows the County to protect water bodies, streams, and rivers in order to prevent pollution. Requiring setback of inappropriate uses or discharges from septic fields and tanks will help in preventing the eutrophication, or the depletion of oxygen, of surface water in the County.

This list is only a sample of the different types of management techniques and systems that exist. Bioengineering or ecosystem engineered techniques are attractive, since they are self-adapting and self-maintaining and are much cheaper over the long run. They are more aesthetically pleasing, but they can take more time to be fully effective.

The Murray County Water Plan has stated that discharge from feedlots and septic systems, soil erosion, and pesticide and nutrient runoff are all having an adverse effect on the water quality within open ditches and tile. Minnesota Statutes Chapter 103E states that a 16.5-foot (one rod) grass strip must extend from the ditch back on both sides. A number of the ditches within Murray County only have the required grass strip on one side or not at all. The County (acting as the ditch authority) and the DNR should take enforcement action in order to promote and enforce the required grass strip buffer on public ditches and altered natural waterways. The DNR can coordinate with and assist the County in the enforcement of the ditch law, but is not in a position to take over the complete authoritative responsibilities of managing ditches. Also, Best Management Practices (BMP's) in ditch systems should be considered. In addition, BWSR will work with the SWCD to implement the 2015 Buffer and Soil Loss Laws.

Wetlands

The term “wetlands” refers to low depressions in the landscape covered with shallow and sometimes intermittent water. Wetlands are also commonly referred to as marshes, swamps, potholes, sloughs, shallow lakes, and ponds.

Some wetlands in Murray County only have surface water in the springtime during thaws or after rainstorms, while others may form shallow lakes that rarely dry up. They are classified according to their depth of water, total area, and seasonal life span. Since there can be some inconsistency on how a wetland is defined, this plan incorporates the Department of Natural Resources definition, which is as follows: “land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.” For the purposes of this definition, wetlands must have the following three attributes:

- A predominance of hydric soils;
- Inundated or saturated by surface or ground water at a frequency and duration to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions;
- Under normal circumstance, able to support a prevalence of such vegetation.

In Murray County, wetlands not only serve as water transport systems, but they also provide immediate benefits to ecosystems that surround them. Benefits received from wetlands generally vary and are based on the type (or class) of the respective wetland, the season currently being experienced, and the type of year. In addition, wetlands collect and transport seasonal precipitation and water flows.

Originally, wetlands were located nearly throughout the entire County. With the advent of intensive agriculture practices and the application of land drainage techniques, many of the wetlands located on lands that were flat and suited to agricultural use have been drained. Because of this, there are now relatively few wetlands in the flat till plain areas of the County. The amount of wetlands drained throughout Murray County since the days of early European settlement is unknown. It is estimated that about 90 % of the County’s original wetlands have been drained and are now used for agricultural purposes. Most of the County’s remaining wetlands are identified in the National Wetlands Inventory. This Inventory classifies all wetlands into eight different wetland types. Wetlands are differentiated by depth of water and vegetation. Wetlands are some of the most productive ecosystems. Apart from filtering water before it enters aquifers, wetlands are the breeding sites of thousands of species of fish, shellfish, microorganisms, amphibians, reptiles, insects, invertebrates and birds.

Wetlands are regulated by Federal, State and local agencies.

Murray County SWCD is the responsible agency for administration of Wetland Conservation Act (WCA) throughout the entire County. The Murray County Water Management Plan supports active wetland restoration. The Minnesota Board of Water and Soil Resources (BWSR) oversees the implementation of WCA on a statewide basis. WCA protects any wetland, regardless of its status on the National Wetlands Inventory.

In 2015, the Minnesota Legislature passed the Buffer law, which was amended in 2016. The law establishes new perennial vegetation buffers of up to 50 feet along rivers, streams, and ditches that will help filter out phosphorus, nitrogen, and sediment. The new law provides flexibility and financial support for landowners to install and maintain buffers, and boost compliance with buffer laws across Minnesota. As of July 2016, the DNR has a buffer map that identified three categories of water corridors buffers: 50' buffers required, 16.5' buffers required, and corridors where the buffers distance needs a field review.

In addition to regulatory programs, technical and financial assistance is also available from many agencies and groups to aid landowners who wish to pursue wetland development. Examples include the DNR, US Fish and Wildlife, and Pheasants Forever.

It should be noted that generally an undisturbed wetland tends to have a much higher natural resource value (in terms of ecological and habitat values) than does those wetlands that have been degraded or even restored. There typically tends to be much more diverse plant communities if the original wetland is intact. This, in turn, provides a much more robust and higher quality habitat for other wildlife.

The Great Oasis

One particularly significant drained wetland located in the north central section of Murray County is the Great Oasis Lakes. The area was rich enough in wildlife to prompt the American Fur Company to establish a trading post there during the 1800's. Today, this area is used for extensive agricultural activities but it is still basically a wetland and can experience seasonal flooding. When considering all the positive benefits which wetlands provide, this plan recognizes the fact that the former Great Oasis area could have an enormous amount of beneficial impacts if it were to be considered as prime for potential wetland restoration.

Steps could be taken to return the Great Oasis area to its original natural condition with the possible ultimate creation of a water body impoundment in the former Great Oasis lakebeds. This rehabilitation of current farmland would be not only ecologically and aesthetically beneficial, but could potentially have positive impacts on economic conditions, as the area could become a significant hunting, fishing, and general recreation resource for the County. The area could once again become a major destination for waterfowl hunters, bird watchers, and many others interested in wildlife. In addition, the restoration of a basin this size would contribute substantially to improving water quality and stabilizing flows in the Des Moines River.

A restoration of this scale would obviously be very complex and has the potential to be very expensive as it involves many landowners. It would no doubt require a large amount of financial commitments by numerous partners. In this regard, perhaps a partial restoration is more feasible as the natural resource benefits would be virtually immeasurable from this restoration and it would create the potential for many economic returns as well.

Floodplains

Murray County has adopted Flood Plain Regulations that are designed to supply measures that ensure protection to the public health and safety and to property and improvements from hazards and damage resulting from floodwaters. There is potential for flooding to occur along the County's many lakes and streams. Flooding along Beaver Creek in particular, results in large amounts of sedimentation and backwash of floodwater into Lake Shetek. The County's water plan suggests that impoundment areas along the creek could be constructed to reduce damages and this action should be considered. Estimated average annual flood damages are not available for Murray County at this time.

Wellhead Protection

Wellhead protection is a management process that recognizes the link between the quality of groundwater supplies for drinking water and land-use activities taking place in areas that contribute to public wells. While wellhead protection planning is a State program and is the responsibility of the public water supplier, County support and cooperation is critical for success. Currently, Murray County does not have a wellhead protection program and the Murray County Water Plan indicates that dependence on the two rural water systems operating within the County will increase in the future. Many of the wells have been located outside of Murray County, however, Redwood Rock Rural Water is in the process of developing a well in Des Moines River Township. All public water supply wells in the County have ground water as the source.

Wellhead protection is a means of safeguarding public water supply wells by preventing contaminants from entering the area that contributes water to the well of a well field. This means that the principle objective of wellhead protection is to prevent contaminants that may have adverse effects on human health from entering public wells. All incorporated municipalities in Murray County that have a municipal water supply and rural water systems should be developing wellhead protection plans.

The communities of Fulda, Lake Wilson and Chandler have completed their wellhead protection plans. The Wellhead Protection Plan for the village of Leota also reaches into a portion of Murray County south of Chandler. There are 29 public water supplies in Murray County and are listed on the Department of Health website with the status of their wellhead protection. Table 5-6 outlines their status as of July 2016.

Table 5-6. Public Water Systems and Status of Wellhead Protection Plans

Public Water System	No formal wellhead protection plan as defined under Minnesota Rules Chapter 4720	A Source Water Protection Area has been designated for this well.	200' management zone	Purchased water
Avoca	x	No		
Breezy Point			yes	
Carlson's Corner			yes	
Chandler	x	Yes		
Currie	x	No		
Dovray				yes
East Lake Sarah Park			yes	
Edgewater Bay Campground			yes	
Fulda	x	yes		
Hadley	x	No		
Iona	x	No, SWPA Map – not vulnerable		
Key Largo on Lake Shetek, LLC			yes	
Lake Sarah Baptist Church			yes	
Lake Shetek Lodge & RCA			yes	
Lake Shetek State Park			yes	
Lake Wilson	x	yes		
Lost Timber Bible Camp			yes	
Marsha's Landing			yes	
Schreier's on Shetek			yes	
Shetek Baptist Camp			yes	
Shetek Lutheran Ministries			yes	
Sillerud Lutheran Church			yes	
Skandia Evangelical Free Church			yes	
Slayton	x	no		
Slayton Country Club			yes	
Sundquist Park at West Lake Sarah			yes	
Swenson Park			yes	
Trail's Edge General Store			yes	
Valhalla Island Campground			yes	

Source: Minnesota Department of Health

In terms of protecting wellhead areas, past land and water conservation efforts in Murray County should be continued, and, where appropriate, the development of recreational facilities in conjunction with conservation projects should be encouraged. Knowledge of the location of the public water sources should be considered when land use practices are permitted that could impact a wellhead recharge zone.

County Habitat for Fish and Wildlife

Murray County has lakes, wetlands, prairie remnants and other grasslands that provide habitat for various types of wildlife. The destruction and fragmentation of wildlife habitat has had detrimental effects on the quantity and quality of wildlife species since settlement. However, in recent years, changes in certain elements have placed greater strain on functional habitat. Some marginal lands such as old railway corridors have been converted to agriculture because of the railroads selling their excess or unused lands. Also, and of greater concern, is the fact that newer, larger and more powerful farm equipment is better able to work ground that had not been previously tilled. Finally, changing of farm practices, often times driven by detrimental incentives within current Federal farm legislation, encourages the cultivation of land that has traditionally been left idle or only used as pasture. Of the more than 20 million acres of tall grass prairie that existed in the US during the early 1800's, less than 1% (200,000 acres) still remains today.

Murray County is fortunate to have a number of diverse lakes, streams, rivers, and wetlands providing a range of aesthetic, recreational, and ecological values. Lake Sarah, Shetek, Currant, Lake Wilson, and First Fulda, all have aerators that are maintained by the County. Lake Maria was designated a game lake in 1991 meaning that the DNR can manage the lake water levels for the benefit of wildlife. Typically this means that the DNR can influence the water level within the lake without the typical permissions required of adjacent landowners. The water level is manipulated by the DNR so that overall levels are lowered in order to expose mudflats for the better part of a growing season. This is done to facilitate the germination of various aquatic plant seeds, which in turn, provide quality habitat for the County's deer, ducks and geese.

From the time of Euro-American settlement, Murray County experienced a severe decline in wildlife population for several reasons. The first is largely due to the increased drainage of the County's wetlands, a practice that has been reduced since the implementation of the State Protected Waters program during the late 1970's. This program protects type 4-5 wetlands larger than 10 acres. In addition, the Wetland Conservation Act (enacted in 1989) has helped to reduce losses in all classes of wetlands. This trend is systematically eliminating the practice of leaving fields idle and encourages the conversion of ditch buffers to agricultural production. Finally, to a much lesser extent, the destruction of windbreaks and old farmstead shelterbelts has contributed to the loss of habitat for some species (i.e. pheasants) more during the last couple of decades as more farm sites are abandoned and converted to agriculture. Due to these circumstances, the SWCD has placed a high priority on encouraging wildlife habitat improvements in farm plans. However, there is still a need within Murray County to establish a countywide program that will consider the distribution of lakes, marshes, pits, ponds, windbreaks, pasture, and conservation lands (public and private) from the standpoint of a biological community. Future wildlife habitat development in Murray County should be based on this consideration.

Biological Resources

Murray County should continue to further the development of natural resource protection, so ecological functions that support recreational activities such as fishing, hunting and wildlife observation, can be assured for future generations. Since Murray County is made up largely of prime agricultural land, steps must be taken to preserve what the County already has set aside and to further develop conservation land in marginal areas. For example, by using conservation overlay districts, Murray County can protect important wildlife areas that are threatened by development and other types of land use alteration. Areas for overlay districts include riparian corridors, such as those found within close proximity to the rivers and streams. Other potential areas would be the areas adjacent to Currant Lake, Lake Shetek, Lake Sarah, and Lime Lake.

Wildlife Management Areas. Care should be taken to not encroach upon wildlife refuges throughout Murray County. Refuges such as DNR's WMAs often attract housing developments due to their ability to provide wide-open scenic areas as well as the ability to provide distances between other developments and agricultural activities. Another development problem being faced by WMA's is the construction of feedlots and other livestock producing facilities that are in close proximity to the WMA. Public hunting opportunities are limited when these forms of encroachment occur near WMA's. This is because animals choose not to take cover in close proximity to man-made developments and because it is illegal to discharge firearms in close proximity to human dwellings.

Scientific and Natural Areas. DNR manages a state-wide system of Scientific and Natural areas (SNAs). The SNA program preserves natural features and rare resources of exceptional scientific and educational value. The Lundblad Prairie SNA has 80 acres east of the Badger lakes. Hunting and fishing are not permitted in SNAs.

Waterfowl Production Areas. Managed by the US Fish and Wildlife Service as part of the National Wildlife Refuge Systems, WPAs also offer protected habitats to fish and fowl. WPAs are typically open to hunting according to State regulations and restrictions.

Reasonable setbacks from protected wildlife refuges including SNAs, WMAs and WPAs should be considered. According to the DNR and USFWS websites, there are 60 WMA's, 1 SNA, and 7 WPA's, in Murray County. In December 2007, DNR requested approval to acquire two additional WMAs, in partnership with the National Turkey Federation, Pheasants Forever and others. These should be appropriately accounted for and accurately depicted on the County's zoning map.

Corridor Management and Development. Two different types of corridors, transportation and riparian, provide wildlife with a continuous string of habitat.

In regards to transportation corridors, rights-of-way surrounding the abandoned railways within Murray County provide the County with essential prairie remnants. This, in turn, provides a functional wildlife habitat. However, not only is there a very limited amount of these corridors remaining in Murray County, but these corridors may be threatened by herbicide drift from agricultural practices. The use of chemicals from farming operations may blow onto the corridor and potentially kill beneficial wildlife habitat.

Road corridors provide efficient, continuous habitat as well. Proper policies regarding allowable mowing and spraying dates, as well as proper vegetation management, will allow many different types of bird species time to nest. This will have positive effects on bird populations such as pheasants and mallard ducks living within these corridors. Murray County could also consider restoring native plant species such as prairie grasses and flowers within various road rights-of-way. The restoration of such native plant species will aid in the decreased need for weed control in these areas as well as provide considerable nesting cover for wildlife, such as pheasants.

Riparian Corridors. Riparian corridors make up the most substantial amount of natural vegetative covering in the County. Large portions of these corridors are located on private lands making cooperation from individual landowners critical for successful management. However, the corridors are also tied into aquifer protection and possibly source water protection and watershed management. This means the County should place a great deal of importance on these corridors.

Within Murray County, there are presently a significant amount of WMA's, wetlands, and shallow lakes. Within some areas, the concentration of habitat and cover appear quite noteworthy. A noticeable feature is the large portion of prairie that is associated with the Chanarambie Creek, southwest from Chandler. This area has a concentration of rare species and native prairie. Much of the recognized species are butterflies, though the federally endangered fish (Topeka Shiner) is also present. In addition, there is also a significant concentration of wetlands and WMA's within the vicinity of Currant Lake. Finally, there are numerous WMA's concentrated south of Slayton. Other Corridors that are significant within Murray County are found along Beaver Creek, the Des Moines River, and Plum Creek.

Conservation Core Areas

Minnesota DNR has identified conservation corridor areas within Murray County. While not every piece of natural resource base the County possesses can be preserved, this Plan recognizes by concentrating efforts in defined areas, the County can more efficiently protect and preserve its natural resource base.

Substantial wildlife habitat and/or opportunities for developing wildlife habitat exist within these specified corridors as well as within other corridors defined by stream and waterways within the County. In addition, there are two large areas and three smaller areas where the existing habitat is clustered providing the potential to create new and significant habitats within various wetland areas.

Chanarambie Creek Riparian Corridor: The Chanarambie Creek Valley located southwest of the City of Chandler stands out as a very significant area of natural resources. The area contains extensive areas of grassland cover and includes some fairly decent areas of prairie remnant. There are 10 contiguous sections of land that harbor at least one DNR Heritage Database Element. This corridor includes known prairie remnants, the Topeka Shiner (a federally endangered fish) habitat, several rare butterfly species, and a threatened turtle species. There is limited public land ownership in this area, as historically DNR land acquisition has focused on

wetlands. Given the size and documented ecological diversity in this area, it should be a high priority for serious conservation efforts. However, conservation should be sensitive to the nature of the resources. Some generalized wildlife project, tree plantings for example, may be inappropriate in this area.

Des Moines River Riparian Corridor: The Des Moines River stands out as one major opportunity for enhancing wildlife habitat. This corridor starts at Lake Shetek in the vicinity of Lake Shetek State Park. Along the river itself are numerous pastures, wetlands, and fallow lands. These lands collectively support a significant complex form of wildlife habitat. There are also several WMA's along the corridor between Currie and the Cottonwood County border. Most notable of the WMA's is Talcot Lake WMA just downstream of where the Des Moines crosses into Cottonwood County. Talcot is a major unit WMA. Including the surface of the lake, the area encompasses over 4,500 acres - including 500 acres in Murray County. Talcot is a major destination for goose hunters and provides one of the largest complexes of protected habitat in southwest Minnesota.

The Des Moines River corridor could also encompass a branch around Lime Creek. While the existing habitat is not as developed or high quality along Lime Creek, the stream does provide an opportunity to expand the size and complexity of habitat in the corridor.

Beaver Creek Riparian Corridor: Beaver Creek is one of the larger tributaries to the Des Moines River within Murray County. After a point between Lake Wilson and Hadley, this waterway does appear to have a relatively high degree of vegetated banks and buffers. In addition, there are a number of WMA's that the Creek flows through or near. Expansion of buffers along this river will improve the size and quality of the habitat in this area. Water quality within Beaver Creek has been a specific issue of concern in the overall Des Moines River system.

Plum Creek Riparian Corridor: Plum Creek is located in northeastern Murray County. While shorter than Beaver Creek or the Des Moines River, it has perhaps the greatest extent of permanent vegetative cover of any of the riparian corridors within Murray County outside of Chanarambie Creek. Also, there have been a relatively large number of CREP enrollments within this area. This means a potentially brighter outlook for the future as these enrollments contribute to the base of permanently protected habitat.

Currant Lake Wetland Cluster: Ellsborough Township and parts of the neighboring townships contain numerous wetlands and shallow lakes. Portions of this area have been preserved through the acquisition of approximately 10 wildlife management areas, and more recently of CREP easements as well (CREP easements are confined to the Minnesota Rivers Watershed). The concentration of WMA's, various other conservation easement lands, and privately owned wetlands all provide a reasonably good supply of winter cover for wildlife species such as pheasants and deer. These areas also provide public access and some core habitat areas.

Big Slough-Badger Lake Wetland Cluster: South and slightly east of the City of Slayton there is a second large cluster of WMA's, including about a dozen different units. This area is also host to two Federal WPA's and also a State Scientific and Natural Area. This core of public land holdings provides significant core habitat areas, winter cover, and public access opportunities.

North Shetek Wetland Cluster: There are a number of shallow lakes and a significant wetland complex on the border of Holly and Shetek Townships, as well as on the inlet adjacent to Lake Shetek. This area is much smaller than the previously mentioned areas but is home to several WMA's as well.

Buffalo Lake-Dovray Wetland Cluster: This area plays host to several large WMA's, large sloughs, and a number of small privately held wetlands. This area is also suitable for developing a concentrated area of high quality habitat. Portions of this area are included in the Minnesota River Basin, and there appears to be a number of CREP enrollments that have permanently restored habitat in the area.

Lake Julia-Lake Louisa Wetland Cluster: This area hosts two shallow lakes and a small connecting creek. While there is a limited public land base in the area, there remains a good opportunity to develop a core of high quality habitat. This area is also located within the Minnesota River Basin and could provide suitable locations for CREP enrollments.

Parks and Recreation

This section outlines the outdoor education and recreation sites within Murray County. A more complete inventory of the County Parks is in the County Parks and Recreation Plan which is reviewed and updated annually and addresses both short and long term improvements. The focus of this plan is on the County park system, and does not provide detail about the Municipal parks.

County Parks

The Murray County Park System contains three major components: County parks, County/regional trails, and special recreation sites/areas. The goal of the County park system should be to contain a diversity of natural resources and have a system (all parks) large enough to support a range of recreational activities. Regional trails also have an impact and can be defined as "linear parks" that provide for recreational opportunities and travel that follow natural or man-made features. Special recreation sites/areas include opportunities not otherwise found within specified park boundaries.

The Murray County park system is made up of 10 separate parks:

- Corabelle Park
- Forman Acres
- Lake Sarah East
- Sundquist at Lake Sarah West
- Lime Lake Park
- Marsh's Landing
- Seven Mile Lake Park
- Swensen Park
- End-O-Line Railroad Park & Museum
- Kuehl Park

Murray County also contains Grant-In-Aid registered snowmobile trails, 3 golf courses (Fulda, Slayton, Westbrook), and two Casey Jones Trail segments (Lake Shetek End-O-Line and west of Lake Wilson).

County Park Usage

It is important for the County to consider what the balance is between developing recreation type activities (fishing, trail usage, playground equipment, ball fields, etc.) and enhancing or preserving recreation activities that are focused on viewing and appreciating the natural resources within the County.

In this manner, the following Murray County parks could be considered as the Tourism generating parks: Lake Sarah East Park, Sundquist at Lake Sarah West Park, Seven Mile Lake Park, Swenson Park, and End-O-Line Park

The following parks are more centered on providing recreation type amenities: Corabelle Park, Forman Acres Park, Lime Lake Park, Marsh's Landing, and End-O-Line Park.

Parks that have been identified as nature observation and preservation type parks are: Forman Acres, Lime Lake Park (Increased potential for this park in this category with an improvement in water quality within Lime Lake), Sundquist at Lake Sarah West, Swenson Park, End-O-Line Park (Trail), Corabelle, and Kuehl Park on west side of Lake Shetek

Development Concepts for guidance in the maintenance of the Parks Capital Improvement program are in three categories, they should be developed and maintained accordingly.

1. The tourism draw parks should have a combination of or some of the following: Adequate camping facilities, Restrooms/wash areas, Public access to adjacent lakes, Countywide information that educates travelers to Murray County about events and activities.
2. Parks in the recreation category should have ample: Playground equipment, Recreation area (i.e. open area/ball fields/volley ball court), Picnic tables, Picnic Shelters, and Fishing docks.
3. Parks concentrated on the viewing and appreciating of natural resources within the County should: Pay close attention to the nearby resource base when designing new facilities; encourage the growth and preservation of nearby natural habitats; and where appropriate, develop observation facilities, viewing blinds, docks, etc.

Most of the County's parks are closely associated with a nearby or adjacent body of water. Utmost care should be taken when performing any new development within any of these parks in order to preserve and protect water quality. In general, the increases in water quality of all of these bodies of water will not only have positive benefits on the environment, but it will help increase park attendance and raise overall enjoyment in the parks. So, testing in order to ensure water quality by identifying trends should be conducted and the appropriate measures taken based upon data retrieved.

In general, all parks within the County should have appropriate lighting (while avoiding light pollution problems) and law enforcement should be encouraged to make one or more stops at all parks every night. Parks that are in good repair and well lit, generally receive fewer incidents of vandalism; however, parks that are already in bad shape and that are completely dark, are easier and more likely targets for vandals. Safety in parks is essential for adequate

attendance. Finally, all appropriate recreation type parks should have ample amounts of playground equipment that is in good repair as this type of infrastructure is essential for families with small children.

In terms of all County parks, any new hard surfaced parking lots and paved roads leading up to parks are generally considered desirable. However, they do have the potential to contribute to the degradation of the adjacent lake resource (if one exists). Any and all parking lot improvements should be done carefully and in a way that seeks to minimize direct runoff into the nearby lake. Best management practices (BMP's), storm water ponding areas, and possibly the use of semi-pervious materials should be considered where appropriate.

All the lake based County parks should coordinate with the Water Plan to address best management practices with water quality including invasive species.

County Parks and Recreation Areas as a System

On their own, each County Park achieves a small piece (some larger than others) of the goal for the entire system of parks, which is to contain a diversity of natural resources and have a system large enough to support a range of recreational activities. County leadership has developed ways to tie all of the County parks together, forming more of a system, which include:

- Signage within the most active parks as well as within the smaller parks that showcase not only that parks attractions, but other County parks' attractions and amenities. Plus, these signs alert visitors about nearby community parks, and community festivals and festivities.
- The Murray County General Highway Map can be found at the various park signage locations.
- Request Park visitors complete a questionnaire/survey to provide comments on their overall feeling of the park.
- Murray County's website has been enhanced to better advertise the County's parks and their specific attractions, including more pictures of each park, and links to other websites at the local and State level. Various tourism oriented websites are also used to help attract potential visitors.

Table 5-7 County Park Facilities

Park	Acres	Boat	Dock	Picnic	restroom	Swimming	camping	Playground
Corabelle	4	yes	yes	yes	yes		Potential future	
Forman Acres	1	yes	yes	yes	yes			
Lake Sarah East	1.6	yes	yes	yes	yes			yes
Sundquist at Lake Sarah West	12.97	yes	yes	Yes (3)	Yes (multiple)	Yes, and dressing		yes
Lime Lake*(west of Avoca)	4	yes	yes	yes	yes		3 sites	
Marsh's Landing*	1	yes	Yes, + Handicapped fishing pier	yes	Yes		Adjacent to Valhalla campground	
Seven Mile Lake*	10+	yes	Yes, and handicapped accessible pier	Yes (2)	Yes (multiple)	yes	14 + host, dump station, potential expansion	yes
Swenson* (east side of Currant Lake)	13.53	yes	yes	yes	Yes, bath shower facility	Potential future beach	18, host, dump station	Yes and disc golf
End-O-Line Railroad Park and Museum **	15				yes			yes

* Park and natural areas subject to permanent land use requirements through grant agreements. In addition to the Murray County Parks, the Avoca City Park, Chandler City Park, Slayton tennis courts and Lake Shetek State Park have received grant funds and have permanent land use requirements.

** Original manually operated turntable, authentically restored or reconstructed buildings, trailhead for the 6 mile segment of the Casey Jones trail, Veterans Memorial, gift shop and interpretative center, native American center. Future expansion limited due to floodplain. Consider connection to Currie Sewer and seek Regional designation from the Greater Minnesota Parks and Trails Council.

Municipal parks serve the same clientele and support similar uses as County Parks. As part of the same regional system, these parks should be viewed not as competitors, but as partners and potential collaborators in meeting the recreational and educational demands of the residents of Murray County. County leadership should support and encourage community leaders to come together and look at the opportunities offered in each system in order to understand how they can best complement each other, and then to develop a municipal parks plan accordingly.

County Parks Summary

Murray County is fortunate to have various water bodies and quality parks. Care should be taken to plan for all park needs and to address them as they arise. Concerns for the County's parks in their current form are in the amount of lighting they receive (appropriate amount that avoids light pollution and energy waste) and the amount of police coverage they receive, especially at night. The County should look for any effective means of promoting their parks, including the County website. Finally, signage is extremely important in regards to marketing the parks. Better signage should be designed along the corridors of Highways 59 and 30 and near each individual park.

Special Areas

The following is not an exhaustive list of the County's areas of special interest but it is included to give policy makers an idea on what types of sightseeing attractions that the County does possess. These areas/sites could not only be marketed separately, but also tied into the existing County Park and Trail system.

- Hill of the Dead (Lake Fremont Scaffolds – 1838)
- New Ulm to Sioux Falls mail route and the Des Moines River Crossing
- Headwaters of the Des Moines River (Lake Shetek)
- Buffalo Ridge
- Various WPA Projects
- Valhalla – Teepeeotah
- Native Prairie Grasses
- Wind Generators
- Murray County Museum
- End-O-Line Park and Museum
- Various Birding Areas
- Slaughter Slough
- Lake Shetek Monument
- The nine cabin sites of the conflict of 1862
- Various Archaeological Sites
- Indian Smoke Signal Pit
- Recreational Opportunities (Hunting, fishing, etc.)
- Casey Jones State Trail
- Dinehart-Holt House

State Parks

The State of Minnesota also operates a park within Murray County. This facility serves a similar purpose as the Murray County Park System, which is to preserve the natural areas of the County and to provide a natural resource based educational and recreational opportunity. This facility should be viewed as a potential partner for pursuing the County's mission and goals for its own park system.

Lake Shetek State Park

The Lake Shetek State Park was established in 1937 to preserve unique natural features and to provide opportunities for nature-oriented recreation, as well as the great potential to attract large numbers of visitors. Its location on the shore of the largest lake in Southwest Minnesota was a large contributor to this reasoning.

The park boundary includes approximately 1,109 acres. The park represents a historically significant area in the State, and includes several buildings and facilities on the list of the National Park Service's National Register of Historic Places. They include: the Beach House (1939-40), the Picnic Area Shelter Building (1940-41), the Park Managers Residence (1939-40), the Park Shop (1939), and the Ice and Wood Building (1941). Finally, the Park has a 1,000 ft. long Causeway that leads from the boat landing to Loon Island, which has also been identified by the National Park Service as historically significant.

Recreational Trends

Population trends continue to be an important component in determining what future demands may be for parks and recreation. National and local trends are also analyzed in an attempt to anticipate the level of demand for recreation opportunities and what types of activities are most desired. Combining this data will help Murray County to grasp not only what its future population will be like, but also what recreational opportunities in which they will be interested.

Recreation Trends for the Murray County Population

According to studies by national advocates such as the Nature Conservancy, the nature of outdoors recreation is changing along with long-term shifts in demographics and lifestyles. As reported in the Minneapolis Star-Tribune from February 11, 2008, "A smaller percentage of people in Minnesota, the United States and elsewhere are participating in outdoor recreation such as hunting, fishing, camping and visiting parks." However, as the population in the State and Nation grows, that smaller percentage continues to register as a large gross number of recreationalists.

We could look at a stabilizing population of Murray County as an indicator of less demand on park and recreational facilities. However, that does not mean that Murray County no longer needs to maintain its parkland. An increasingly mobile population demands a high quality of life, including access to natural amenities. Perhaps the rate of population decline could be reduced, or reversed, if Murray County supplies its residents with a better than adequate recreation infrastructure. In addition, through the increased marketing of Murray County's more tourism oriented parks and through the development of all Murray County parks as a system as opposed to individual parks, populations from outside of Murray County can help to fill the void.

Trail Use Trends

Typical trail recreation activities include walking, biking, running/jogging, horse-riding, in-line skating, and snowmobiling. While these are the more common recreational uses for trails, Murray County has the potential to both develop and benefit from the development of ATV and equestrian trails. The Minnesota Statewide Comprehensive Outdoor Recreation Plan (1990-1994) indicated that trail recreation is becoming increasingly important in Minnesota. This is in part because trail activities are healthy forms of exercise for people of all age groups; are suitable for people of all levels of physical conditioning; and can be done individually, in groups, and as families.

Participation in trail activities has increased nationally as indicated by the Sporting Goods Manufacturers Association's (SGMA) annual Sports Participation Trends Report. This report documents the public's participation in a wide variety of activities, including trail activities. While the trend shows that bicycling and running/jogging has been fairly stagnant, walking for fitness has seen a 40 % increase in participation from 1987 to 1996. Inline skating, for which data was not collected previous to 1990, shows nearly a 790 % increase from 1990 to 1996.

Summary

The analysis of recreational trends points to a high demand for recreational facilities both now, and in the future. Murray County's population forecasts does not indicate that there will be a greater demand for parks and recreational facilities, but the County's population will continue to become more age-diverse with more older residents and adequate numbers of young people and families to constitute new challenges for the County in meeting recreational needs. Finally, park and trail use is increasing faster than that of population growth, which means that people are becoming more active and that people from outside of Murray County could become more active users of the County's parks and trails. It is for this reason that Murray County should strive to retain sufficient amounts of park space and amenities as well as increased numbers of multi-use trails.

FUTURE PLANS FOR CONSERVATION, PARKS, AND OPEN SPACE WITHIN MURRAY COUNTY

Conservation and Open Space

Groundwater Protection

Groundwater goals, policies, and objectives should be implemented in accordance to the strategies contained in the Murray County Water Plan. Coordination of the implementation of the groundwater policies, goals, and objectives will be done by the County in conjunction with other governmental agencies, and through partnerships with the various townships and cities located throughout the County.

Surface Water Resource Management

Management of runoff into the County's surface water will continue to be the responsibility of the Murray County Environmental Services Office, Soil and Water Conservation District, the National Resource Conservation Service, and the watershed management organizations. The County should continue to support and work cooperatively with these organizations.

Biological Resources Protection and Management

Implementation of the biological resource protection and management policies, goals, and objectives should be coordinated and implemented through various County agencies and organizations, local communities, State and Federal agencies, and non-profit organizations. Murray County should support initiatives of conservancy organizations and land trusts to protect natural areas that are consistent with the overall County goals designed to protect natural resources.

Parks and Recreation

Development Plans for County Parks

As Murray County continues to develop its park units, it should rely on a willing seller approach, which means that the final date for completing acquisition is unknown. The development of an acquisition and Capital Improvements Plan will help set priorities among the remaining parcels and facilities for when and where acquisition and facility addition should take place.

Future development projects for existing park units are described in the inventory for each park. These projects should continue to be part of the Murray County Capital Improvements Plan (CIP).

Development Plans for County Trails

The Southwest Minnesota Regional Trails Plan (2000) identified recent studies that show the use of outdoor trail systems is on the rise. According to a 1990 Harris poll, it was estimated that 73 % of adults in the US walked outdoors, most notably for exercise. It is also believed that local economies receive stimulation when communities respond to the needs of trail users. Murray County should encourage the development of trails and trail heads within its borders, as well as trail connections with those of neighboring counties.

Potential Trailheads have been identified in the Regional Trails Plan, (* is an existing trail head) including:

- Chandler
- Corabelle County Park
- End-O Line Park (Currie)*
- Forman Acres County Park
- Fulda
- Lake Sarah East County Park
- Lake Sarah West County Park
- Lake Shetek State Park*
- Lake Wilson*
- Lime Lake County Park
- Marsh's Landing
- Seven Mile Lake County Park
- Slayton
- Swenson County Park
- Valhalla Island on Lake Shetek

Murray County has two segments of the Casey Jones Trail: Lake Shetek/End-O-Line (paved) and a segment by the community of Lake Wilson (unpaved).

Casey Jones Trail

The Casey Jones Trail was one of the first State trails authorized by the State of Minnesota when State Trail legislation was passed in the late 1960s. The longest segment is 13 miles of former railroad grade between the city of Pipestone and the Pipestone/ Murray County line. Five miles is paved, 8 miles is natural surfaced. A second shorter segment is natural surfaced 1.5 miles west of Lake Wilson. The third portion is a paved 6 mile loop between Lake Shetek State park and the City of Currie. This segment connects End-O-Line Park with the Lake Shetek State Park and goes by Smith Lake, Shetek Monument, Wildlife Area and the dam at the beginning of the Des Moines River. The Casey Jones Trail connects tall grass prairie, wooded ravines, and Lake Shetek.

The following are *potential* future trail developments for Murray County:

Casey Jones Trail

In 2005, DNR prepared a new State Trail Master Plan for completion of the Casey Jones Trail. This plan examined five multiple-use trail segments: Split Rock Creek State Park to Pipestone, Pipestone to Lake Wilson, Lake Wilson to Slayton, Slayton to Lake Shetek State Park (including the End-o-Line trail), and Lake Shetek State Park to Walnut Grove. In 2002, the State trail was legislatively extended on the south to Luverne and to the north to connect with the Minnesota

River State Trail in Redwood Falls. A DNR Master Plan exists for the original section of the Trail and acquisition and construction could occur in that corridor; a Master plan needs to be developed for the extensions. Work with the Greater Minnesota Parks and Trails Commission, the cities and Counties along the trail corridor, and DNR is a potential way to see further development of this resource.

Plum Creek Trail

This hard surface trail would connect Lake Shetek State Park and Walnut Grove. It is anticipated to be hard surfaced and target the bicyclists and hikers. DNR's 2005 Casey Jones State Trail Master Plan considered this route for inclusion in that trail corridor.

Shetek/End-O-Line Trail to Tracy

This 10 mile hard surface trail would connect Shetek State Park and Tracy. It would be targeted for bicyclists and hikers.

Potential Corridors for pedestrian and bicyclists or multiuse trails and routes, as identified in the 1999 planning process and January 2000 comment period of the Regional Trails Plan, include:

- "Casey Jones Trail" as originally envisioned by DNR.
- "Plum Creek Trail" (Lake Shetek State Park to Walnut Grove)
- Lake Shetek State Park/End-O-the-Line Park to Talcot Lake Area
- Currie (east side of Lake Shetek) to Valhalla Drive (west side of Lake Shetek)
- Lake Wilson to Chandler
- Chandler to Edgerton
- Fulda/Graham Lakes/Talcot Lake Area
- Water trail along the Des Moines River

<u>Consideration of New Park Units</u>

Currently, Murray County is not actively seeking to add new park units to its County-wide system outside of the regional trail projects outlined above. Murray County will use the willing seller policy for adding any potential sites to the County Park System. The County should work with local communities, the DNR, and other relevant groups in evaluating proposed sites. Murray County should also stay in contact with its communities and other recreation or open space providers to assess the potential for the loss of existing private or nonprofit outdoors recreational or educational facilities.

Consideration of potential sites for park units can be done in conjunction with investigation into natural areas preservation (as is suggested for the lands adjacent to the Inlet). Natural resource preservation and stewardship should be part of the mission of the Murray County Parks Department.

CHAPTER 6. INFRASTRUCTURE AND PUBLIC FACILITIES

In addition to parks and open space planning, Murray County handles planning for several other types of public facilities and infrastructure such as transportation and County-owned buildings. The County is also impacted by private and non-profit facilities such as electrical generation and transmission as well as pipelines such as natural gas. This chapter of the Comprehensive Plan was included to provide a basic inventory for facilities owned and operated by Murray County. These include medical facilities, transportation infrastructure, sewer and water infrastructure and educational facilities (even though these are not necessarily County owned). In addition, this chapter will provide goals and policies for addressing areas or concern regarding these assets. And identification of private and nonprofit infrastructure such as power generation, transmission and distribution lines and pipeline

The issues addressed in the Infrastructure and Public Facilities Chapter are arranged in the following sections:

- Introduction
- Purpose
- Public Buildings and Facilities
- Transmission (pipeline and power)
- Transportation

INTRODUCTION

The ability for Murray County to effectively plan for the required maintenance of its facilities should be extremely important to the mission and goals of County government. Long-range public facility planning is necessary to insure a consistent and coordinated approach to growth. However, plans must be sufficiently flexible to accommodate changing public priorities and revised projections of future needs.

This chapter of the plan focuses on the vision of the County for its facilities as well as the policies and guidelines used for public facilities in Murray County.

PURPOSE

It should be the intent of Murray County government to supply an array of public buildings and encourage the development of infrastructure that are:

- Readily accessible to the public and responsive to public needs
- Sufficient in size and flexibility of use to enable County staff and elected officials to carry out their functions efficiently and effectively
- Healthy to work in and to visit
- Safe for staff and customers
- Provide cost-conscious solutions for the provisions of public services
- Designed to fit the needs, character and values of Murray County

INFRASTRUCTURE AND PUBLIC FALILITIES ISSUES FOR MURRAY COUNTY

Infrastructure and public facilities include much of the core infrastructure that residents and businesses rely on. Infrastructure and public facilities cover many areas, from public owned buildings and facilities to other infrastructure needs for County residents, businesses and visitors. These facilities include energy (distribution and transmission power lines, pipelines, heating fuels, solar, wind, and as well as newer technology for vehicles such as electric charging stations); sewer and water (ISTS and private wells to centralized sewer systems and public water supplies); communications (broadband, cell phone, emergency communications); the transportation system (roads, bridges, aeronautics, and transit); as well as publicly owned buildings and facilities. The Murray County Comprehensive Planning Committee identified both current and future infrastructure that would be beneficial to the County to include in this Plan.

Strengths

- Capital Improvement Plan for parks
- Road network in place

Weaknesses

- Gaps in centralized sewer around the lakes
- Lack of coordination of leadership
- Poor water quality in most lakes
- Tax Structure (Townships losing funds but not responsibility)
- Communication between jurisdictions
- No rail or interstate
- Farming in ROW
- Township roads are 3-5 ton
- Township road agreements are all different
- Lack of shower and restroom facilities at some parks
- Lack of income generated from conservation lands
- Lack of drinking water at County parks
- Habitat degradation and fragmentation
- Funding for all roads
- Communication between jurisdictions

Opportunities

- Broadband and telecommunications
- Slayton future annexation to airport
- Power generation
- Expansion of rural water
- Road agreement for Townships and County
- Attract new opportunities for new sources of revenue from developing conservation at the margins
- Electric charging stations
- Light Manufacturing

Threats

- Expanding drainage posing negative downstream effects
- No funding for access to conservation areas due to tax structure
- Continued loss, degradation and fragmentation of habitat/conservation areas
- Poorly designed drainage ditch crossings of County and township roads
- Aquatic Invasive Species
- Buffers (shift land out of production)
- Impaired waters
- Rural Water expansion and gravel mining
- The governing of park/recreation lands is becoming too much and is having a negative impact on tax revenues (some parks do not provide enough revenue to support respective infrastructure)
- Conflicts between landowners
- Enforcement of the buffers on ditches
- Slayton Annexation to the airport (tax base loss)
- Roads deteriorate due to volume and weight of agricultural activity

PUBLIC BUILDINGS AND FACILITIES

County Buildings

There are many buildings owned by the County. Some of these are listed and described:

- Courts Building
- County Government Center
- County Hospital
- County Fairgrounds
- Murray County Highway Dept.
- Recycling Building
- Dinehart -Holt House
- Health & Human Services
- Professional (Old DAC) Building
- Sanitary Landfill Building
- County Park facilities
- Museum

Murray County Office Facilities - Over the last couple of decades, Murray County's population has continued to decrease but the number of people employed by Murray County government has remained fairly stable. Murray County government is carried out in the Government Center Building and the Courts Building, both located in Slayton. The Courts Building was built in 1974 and the Government Center Building was built in 1981. These two facilities represent the foundation of Murray County Government. The traditional County Government Offices are located in the Government Center building. The court administration activities as well as the law enforcement services occupy most of the Courts Building.

It is important for the Murray County government facilities to provide public offices that are accessible and responsive to the public's needs and that are sufficient in size and flexibility to enable staff to carry out their functions. In addition, it is important for Murray County to continue to work closely with local fire departments and rescue squads to ensure adequate safety for the public. Fire District and First Responder coverage area changes from time to time; the most recent maps of each are located on the Murray County website. The 2016 first responder coverage map shows no coverage in all or parts of 15 of the 20 townships; however the entire County is covered by ambulance service.

Murray County Maintenance Facilities - Through timely maintenance of the County's highways and parks, systems are preserved for their maximum use and the safety of users is enhanced. Both the Highway Department and the Parks Department operate central maintenance shops for major service and repairs (both are located in Slayton). In addition, the Highway Department also has one satellite shop located in Currie.

Murray County Historical Society and Museum - Since 1972, the Murray County Historical Society has been stationed at its present location 2480 – 29th Street, Slayton. In 2007, the County also acquired the historic Dinehart-Holt House east of the Government Center. The historical society's goal is to not only continually expand its museum of historical artifacts, but to educate the general public as to the important and exciting history of Murray County. The Historical Society sponsors a "free museum devoted to local and regional history". At the museum, you can see early radios and phonographs, genealogical records and a library, Indian artifacts, glassware, old style furniture, and much more.

Library Facilities - Murray County does not operate its own library, but several exist within the various municipalities. The Slayton Public Library and the Fulda Memorial Library are part of the Plum Creek Library System and benefits everyone through a variety of services and programs. In addition to being able to check out books and magazines, the facilities have access to the Internet, Slayton has computer work stations.

Medical Facilities

Hospitals and Nursing Homes - The Murray County Medical Center (MCMC) has brought together the publicly owned Memorial Hospital and Clinic in Slayton under management of Sioux Falls-based Sanford Health System. MCMC has been designated a Level IV Trauma Hospital by the State of Minnesota. The Medical Center Ambulance Service, currently based at the County's Professional Building on Broadway in Slayton, is also part of the MCMC Operations. The Medical Center has been looking at different options to locate Ambulance Service at the main campus on Trunk Highway 30. There are two medical clinics in Fulda.

Sunrise Terrace, a County-owned assisted living facility, is attached directly to the MCMC facility with twenty apartments.

Murray County has two nursing homes: Golden Living Center has a total of 60 beds and is located in Slayton; Maple Lawn Nursing Home, Inc has 62 beds and is located in Fulda. While not owned by the public, the nursing homes provide important services to the public.

Health and Human Services Building - Lincoln Lyon Murray Pipestone (LLMP) Public Health, Lincoln Lyon Murray Human Services, Western Mental Health, and RSVP are located in the new Health and Human Services Building constructed in 2008 on Maple Road in Slayton. The Murray County Public Health Nurses provide such services as: Immunization, Disease Investigation, Health Promotion Activities, and School Nursing.

Chiropractors, Dentists and Optometrists - Within Murray County, there are three chiropractors currently in private practice, two dentists and one optometrist.

Education Facilities

Although there are 9 different school districts that have jurisdiction within Murray County, only two districts, Fulda and Murray County Central, have public school facilities operating within the County.

Trends for Murray County school enrollment levels are presented in the Demographics and Housing Chapter.

Even though Murray County is not directly responsible for operating and governing educational facilities that are located within Murray County, the County is directly affected by the efficiency of the overall system. County authorities, as well as residents, should work cooperatively in order to provide a high quality education system. This system should place a priority on providing the opportunity for all children to obtain a high level of education. The opportunities should emphasize education at the elementary, secondary, and post high school levels.

Parks and Recreation

The Murray County Fairgrounds are located south of the Courthouse and Murray County Central high school in Slayton. A number of historic and modern buildings are located on the fairgrounds, as well as a dirt auto race track and horse arena. The wooden grandstands at the race track were demolished in 2007, and replaced by modern bleachers, restrooms and food service area.

The other parks, recreational facilities and trails within Murray County are addressed within the Conservation, Parks, and Open Spaces chapter.

Infrastructure

Water Supply and Management - Murray County does not have an overabundance in high quality water. Residential, agricultural, and industrial demand placed on the water supply in the County is substantial, relative to capacity of available aquifers. Some of the County's highest water yielding aquifers are shallow, which means that they are the most vulnerable to pollution. Any steps Murray County takes toward implementing wellhead protection should continue to restrict polluting land uses above these aquifers.

Generally, well depths throughout the County have the potential to become more of a concern. Some communities have wells that are located within areas of very high susceptibility to groundwater contamination. Ground water in Murray County, as in most of southwestern Minnesota, also has a very high mineral content. Iron and Manganese concentrations regularly exceed recommended standards. In addition, much of Murray County groundwater has high concentrations of sulfate and dissolved solids. This poses a problem for farmers who have livestock drinking large amounts of this water. It also forces municipalities within the County to treat water supplies in order to meet Minnesota Department of Health drinking water quality standards. Since water recharge in these shallow wells can occur in a matter of hours they are extremely vulnerable to pollutants that may result from inappropriate land use. However, this is where the water supplies are, so these wells cannot be abandoned. Action should be taken to aid in the protection of these wells from potential contamination.

The Lincoln-Pipestone Rural Water System currently provides water to the west side and southwestern corner of the County while the Red Rock Rural Water System provides water to the eastern side of the County plus service to parts of Lake Shetek and Lake Sarah. This leaves a large area within Murray County that is not serviced by a rural water system. Red Rock Rural water is also testing wells in Des Moines River Township to be able to extend access to rural water service to more residents. The availability of good quality and quantity potable water is important for Murray County and is often a key driver to economic growth and sustainability for rural industry as well as its residents.

Policies and strategies regarding economic development, with respect to water intensive industry, will have to be considered with the limited available water resources. In cases of severe drought, the Water Appropriations Law says that agricultural processing industries take priority over non-agricultural industries. Users of less than 10,000 gallons per day (gpd) are defined as small users and have a higher priority than industries using more than 10,000 gpd, regardless of use. This means local officials will need to take into account the needs of all existing industries and the ability of the current water reserves to support them before encouraging the development of more water intensive industries.

Wastewater Treatment Facilities - Within Murray County, ten communities currently have wastewater treatment facilities including: Chandler, Lake Wilson, Slayton - Hadley, Fulda, Currie – Lake Shetek, Avoca-Iona, and Lime Creek.

Avoca and Iona

The communities of Avoca and Iona worked together to upgrade their systems from on-site septic systems to a centralized sewer system. The communities worked together to apply to the United States Department of Agriculture's Rural Development Program and DEED's Small Cities Program for funding for the project. Each community constructed a collection system and then share a treatment facility between the two communities.

Lake Shetek

The Shetek Area Water and Sewer District was established as a public water and sewer system under Minnesota Statutes, with the intention to construct wastewater collection facilities in The Lakes area. The District covers 38.5 square miles and has constructed sewer lines around areas of Lake Shetek, Fox Lake, Bloody Lake, and Lake Sarah, with wastewater treated through an Interconnection Agreement with the City of Currie.

Hadley

After research into several non traditional solutions to community septic treatment solutions, the communities decided the best course of action was to connect to the City of Slayton wastewater treatment facility.

Lime Creek

In 2011, the village of Lime Creek, consisting of 9 homes and one elevator, with funding assistance through the Clean Water Fund, installed a cluster mound system to address their septic system needs.

Public Ditches

Although the soils in Murray County are very well suited to agriculture, the former existence of wetlands in the area has required the addition of a fairly extensive system of County ditches to drain the wet areas for cultivation. The Murray County Water Plan points out that many areas within the County have never had a proper outlet developed for the tile. The County should explore the possibility of doing the necessary improvements and maintenance to these areas.

Murray County has County ditches and judicial ditches, with the majority of these drainage systems underground. Murray County should continue to take a proactive role in appropriate maintenance of all public ditches and to adequately enforce the requirement of a one-rod (16.5 feet) vegetative strip on both sides of all open ditches.

Solid Waste - During 1991, Murray County became aware that the Minnesota Pollution Control Agency (MPCA) would require the County to close its municipal solid waste disposal facility.[6] The former Murray County Landfill is maintained through the MPCA Closed Landfill Program which requires the MPCA to develop and maintain a Land Use Plan to manage the risk to public health and the environment. That Land Use Plan is incorporated into this document by reference, and an overlay zoning district that complies with the MPCA Land Use Plan is part of the Murray County Zoning Ordinance.

MPCA issued a landfill closure to the County and County Officials and Staff worked with MPCA to identify a designated disposal location (s). Until the Cottonwood County Landfill could accept waste from Murray County, the waste was transported to the McLeod County Landfill. Over time, the flow of waste has changed and currently goes to landfills in Nobles County, Cottonwood County and Lyon County.

The County is required by the State to maintain a Solid Waste Management Plan. The most recent plan was accomplished as a 12 County Joint Powers Board planning effort. The ten year Regional Solid Waste Management Plan was approved in 2015, and is available through the County. Implementation of the Southwest Regional Solid Waste Management Plan is being conducted on a county and regional basis.

Murray County does continue to operate and monitor the demolition landfill in Section 26, Leeds Township, adjacent to the closed landfill, with access to the demo facility crossing a portion of the property in the Closed Landfill Program permit. Of recent concern are the lack of regulations and monitoring of "Permit by Rule" demolition facilities, while the permitted facilities regulations have increased. The County should continue to monitor regulations and implement measures to ensure the least amount of contamination from Permit by Rule demolition facilities. The County Recycling Building is located in the Slayton Industrial Park, and also includes 90-day storage for household hazardous waste. The County holds an annual

[6] The Closed Murray County Landfill is located in Leeds Township, Murray County (in Sections 26, T106N, R42W). The original permitted area was 25 acres with a fill area of 10 acres that contains approximately 230,000 cubic yards of waste. The site was issued a solid waste permit on February 9, 1973. The facility was permitted and operated from 1973 until 1991. The facility accepted primarily mixed municipal solid waste from the Murray County area. Murray County currently operates a demolition landfill on property adjacent to the closed SLF, with access to the demo facility crossing a portion of the property included in the SLF permit. Murray County SLF came into the Closed Landfill Program in 1996.

Household Hazardous waste collection and electronics collection event as well as an annual pesticide container collection event.

In 1997, through USDA RUS funding, thee Southwest Regional Development Commission researched the location of all the known city dumps in the 9 County Region. Murray County had a total of 14 dumps identified. Many of the former dump sites continue to utilize as tree and yard waste dump sites. Table 6-1 identifies the dumps, the location and use as of 1997. Development on these sites should be avoided.

Table 6-1. Old dump locations in Murray County

site	location	Land Use	Aquifer	Well
Avoca	S33, T106N, R40W	Trees and yard waste	N	Y
Chandler	S2, T105N, R43W	Trees and yard waste	Y	Y
Currie	S 16, T107, R40W	Tree and yard waste	Y	Y
Currant lake	S12, T108N, R43W	DNR Wildlife	N	N
Dovray	S20, T107N, R39W	Tree and yard waste	N	Y
Iona	S8, T105N, R39W	Tree and yard waste	N	N
Fulda	S24, T105N, R40W	Tree burn site	N	Y
Fulda	S25, T105N, R40W	Golf course	N	Y
Lake Wilson	S12, T108N, R43W	Grass / CRP	N	Y
Slayton #1	S10, T106N, R41W	Tree and Yard waste	n	N
Slayton #2	S10, T106N, R41W	Non-Tilable ag	N	N
Slayton #3	S15, T106N, R41W	Vacant land	N	N
Slayton #4	S15, T106N, R41W	Vacant land	N	N
Valhalla Resort	S1, T107N, R41W	Vacant land	N	Y

Source: Existing Dump sites: A study of their locations, longevity, composition, potential impact to the environment, and mitigation strategies; May 1997, SRDC.

Telecommunications / Broadband Infrastructure

Communities within Murray County provide a lot more than just a place to live for most citizens. Communities bring many families together and provide all who live there with a place to eat, work, shop, and attend worship services. Communities within Murray County, however, could and should be more than that. Murray County should explore all possible avenues in order to find funding for building community projects, including improved telecommunications infrastructure, which will provide some form of entertainment and job enhancement for its residents. The County should consider addressing this type of infrastructure development (i.e. communication towers, fiber optic facilities, etc.) within the zoning ordinance. This way, the County can address (aesthetic, height, and setback etc.) issues in regards to this type of development.

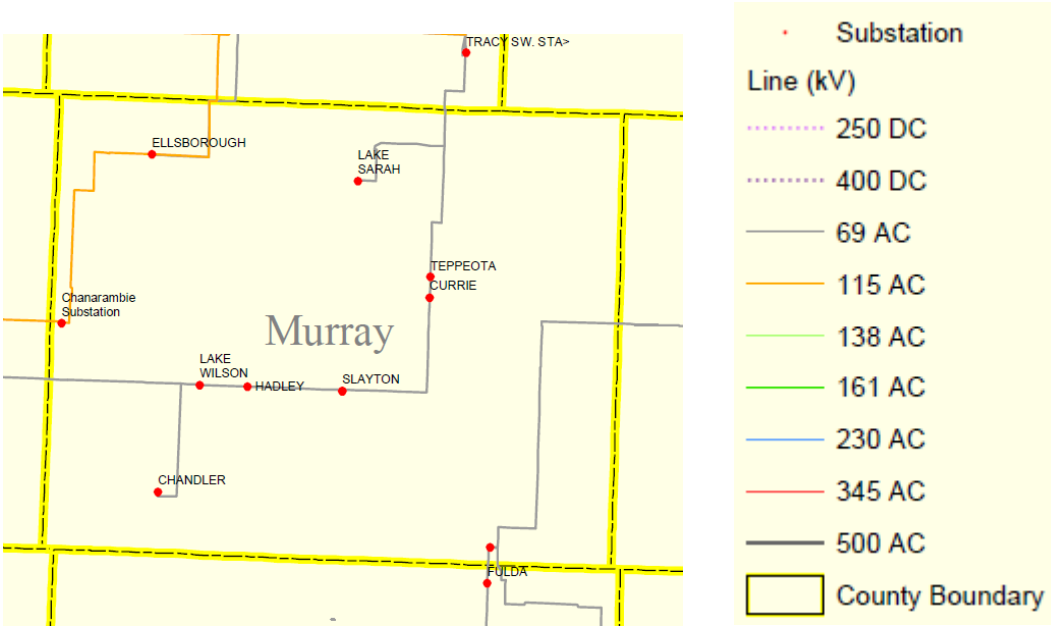
The continued development of the telecommunications industry is inevitable. Murray County cannot afford to ignore or put off the required exploration of this technology. As telecommunications becomes increasingly more important to the economy, businesses will use the Internet even more to sell their products as well as to communicate with suppliers and distributors, and to conduct research.

The possibilities are many in the realm of wireless high-speed Internet access. The benefits are offered not only to businesses but to common residents as well. Although initial start up fees will be expensive, the County cannot afford to not pursue this technology. By working with communities and local groups already beginning initiatives of supplying this service, Murray County can provide something to its residents that will give them one more reason to live within its borders.

Transmission (power and fuel)

Murray County has both transmission and distribution power lines. Murray County has 69 AC and 115 AC power lines and eleven substations (2008 data). Figure 6-1 represents the locations of these lines and substations. As commercial renewable energy is developed in the County, the most likely locations for it placement is near substations to access the transmission and distribution systems.

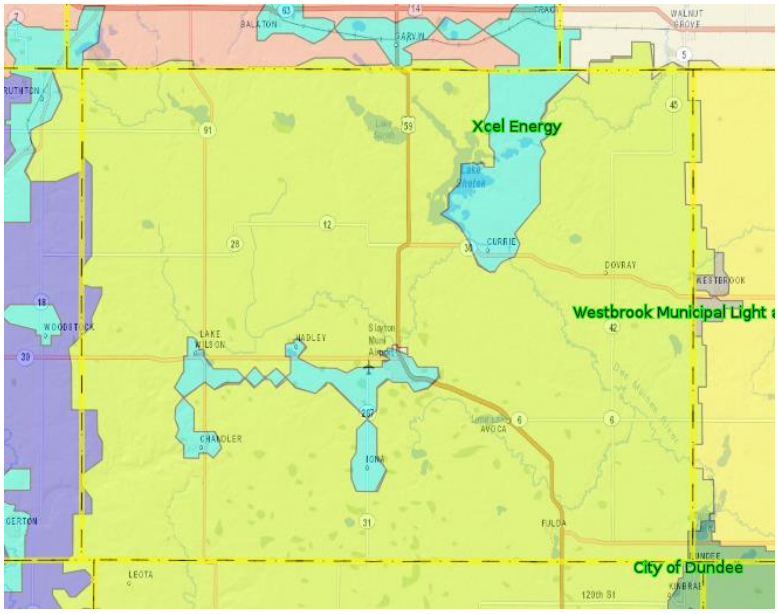
Figure 6-1. Electric Transmission lines and substations.



Source: Minnesota Environmental Quality Board by the Land Management Information Center 2008

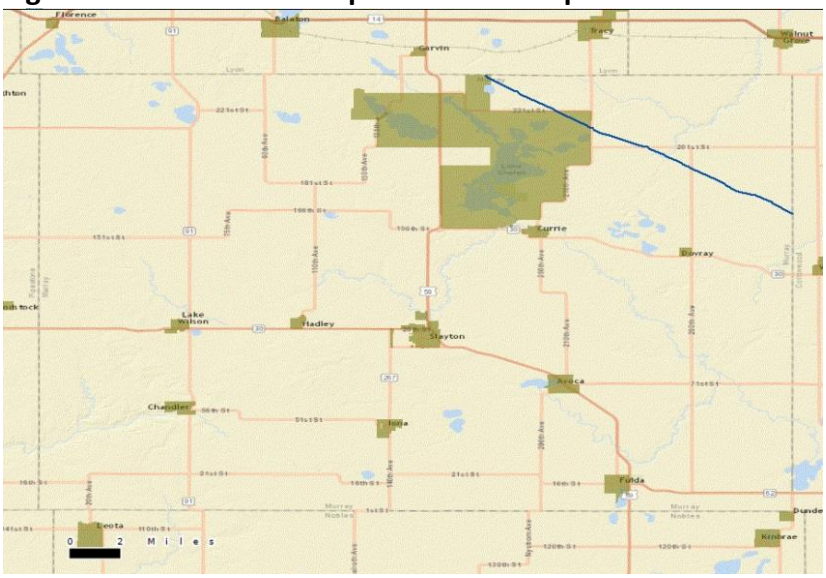
The primary electrical power providers in the County include Nobles Cooperative Electric (shown in yellow) and Xcel Energy (shown in blue), the far southeast corner of the County is served by Federated Electric (shown in green) and the western fringe is served by Sioux Valley Southwestern Electric (shown in purple) (Figure 6-2). One gas transmission pipeline is located in the northeast corner of the County (Figure 6-3). In 1994, Northwest Gas installed natural gas service to the communities of Avoca, Currie, Dovray, Fulda, and Slayton. Areas of the County without natural gas service rely on delivered fuel (propane / heating oil) or a bio fuel (wood, pellets, corn).

Figure 6-2 Electric Service providers and Pipelines



Source: http://www.mngeo.state.mn.us/eusa/index.html

Figure 6-3 Electric Service providers and Pipelines



Source: https://www.npms.phmsa.dot.gov/PublicViewer/composite.jsf

TRANSPORTATION

An effective and efficient transportation system is vital to the economic stability of an area. It provides a means by which agricultural, industrial, and commercial products can be transported or effectively marketed. Changes in the Transportation system can have both positive and negative impacts. Communities that cannot attract economic activities because of transportation deficiencies cannot afford to pay for facilities (streets, sewer, water, etc.) improvements; tax base would normally pay for these types of improvements. A healthy tax base is supported not only by a strong economic community but also by people that are attracted to a community because of job potentials. Communities that suffer from an insufficient tax base are generally economically depressed. However, the expansion or reconstruction of a transportation system could, in effect, improve the economic stability of a city and at the same time improve its chances to expand its economic viability and thus, the opportunity to provide jobs for people. A thorough transportation plan helps direct transportation partners in deriving sound planning decisions, helps to alleviate transportation problems, and addresses needs and issues.

Existing Highway System

The existing highway system within Murray County is a gridiron pattern, and generally follows the basic land survey section lines, with the exceptions of where physical characteristics such as lakes and terrain or other considerations provide obstacles and cause deviations in the pattern.

Road Jurisdiction

The jurisdiction of roads entails who is responsible for the construction and maintenance of roads. During the days of early statehood, the primary jurisdiction of roads was considered to be the responsibility of the township boards. Counties generally played a secondary interest while the State was responsible for very few, if any, roads. From early statehood to the 1930's, the State took the responsibility for the 70 constitutional routes, in order to provide a network of uniformly constructed and maintained roads. During the Depression years (1930's) the prevailing sentiment shifted to placing jurisdictional responsibility at higher levels of government, where it was thought they could be better maintained. Currently, almost all roads under State jurisdiction were established 50 to 60 years ago. The 1921 new road law passed by the Minnesota Legislature created five systems of roads:

Trunk Highway System. Statewide, 70 routes were established under a 1920 Constitutional amendment (6877 miles). In Murray County, these State and US highways include: 30, 59, 62, 91, and 267. These roads are constructed and maintained by the Minnesota Department of Transportation (Mn/DOT). These roads are managed as a 10 ton network.

County Roads (CR). These roads are established, constructed, and improved by the County Boards. They are under the sole authority of the County Board. The weight limits on these roadways often vary.

Township Road. A road established by and under the authority of the township board, or reverted to township jurisdiction by the County Board. These roads are constructed and maintained by township boards and are normally 3-5 ton roads.

City Street. These roads serve as direct access from residential properties and/or commercial establishments and are classified as any street under the jurisdiction of a municipality not otherwise designated as a Trunk Highway, County State Aid Street/Highway or County Highway.

In 1957, the State Aid Road System was established. **County State Aid Highways (CSAH)** are roads or streets that were established and designated under County jurisdiction in accordance with Minnesota Statutes Chapter 162. The State provides funding assistance to construct and maintain the CSAH system. These roadways are often the second highest volume roads and the County strives to build and maintain them at 9 to 10 ton.

Due to lack of funds necessary to maintain township roads and bridges, corrective measures to ensure passenger safety have been implemented. These measures include minimum maintenance roads and road closures.

Road Turnbacks

The State has "turn back" authority for several trunk highways in the region which were considered stub routes, not connecting to other trunk highways. For example, Mn/DOT turned back TH 266 which connected Wilmont to Worthington in Nobles County, and TH 268 which connected Edgerton to US75 in Pipestone County. Often, the State improves and resurfaces these routes before a turnback to the County, as happened with TH 268. TH 267 from Iona to TH 30 is a similar local stub route that may be a candidate for turnback in the future.

There are some County roads, and more specifically, some County-State Aid roads, that could potentially be better served by the respective community or township in which they reside. The County could work with the various local units of government (municipality, township) to find out which roads the County would more appropriately maintain and which ones the respective municipality or township would more appropriately maintain.

The type of coordination mentioned above is essential as the County would be able to use State Aid money on more appropriate roadways. This would be very beneficial as there is currently a lack of adequate funding for addressing the maintenance and reconstruction of the County and CSAH roads within Murray County. Murray County does not have enough money to bring its system up to a 10-ton design. The traffic within the County is such that most trucks and farm implements are now running 10-ton loads on the local system. This is causing premature failure of the various roadbeds.

Functional Classification

The Functional Classification System is designed by the Federal Highway Administration (FHWA) to classify roadways according to their role in moving traffic. The highways and streets are grouped in classes according to the character of service they are intended to provide. The following is a brief description of each of these categories:

Principal Arterial. Principal Arterials serve statewide and interstate corridor movements having trip lengths and travel density characteristics indicative of statewide or interstate travel. Also serve all urbanized areas and a large majority of the small-urban areas with over 25,000 populations.

Minor Arterial. Minor Arterials link cities, larger towns, and other traffic generators, such as major resort areas. Consistent with population density, and are spaced so that all developed areas of the State are within a reasonable distance of an arterial highway.

Major Collector. Major Collectors provide service to the larger towns not served by higher systems and other traffic generation of equivalent intra-county importance such as consolidated schools and county parks; link these places with nearby large towns or cities or with arterials; and serve important intra ounty travel corridors.

Minor Collector. At intervals consistent with population density, Minor Collectors collect traffic from local roads and bring all developed areas within a reasonable distance to a collector road and provide service to the remaining small communities.

Local. Local Streets serve as access roads to and from Minor Collectors. But also serve as access to Collectors and Arterials. Most often these roads are under township jurisdiction. These are roads not classified as arterial or collectors and include some county roads and most township roadways.

Weight Restrictions

During the spring of each year, the load carrying capacity of highways is reduced as a result of thawing and excess water in the sub grade. Spring axle load restrictions are determined by testing the road while simulated truckloads pass over the road sections. The spring load restrictions for axle load are set when 85% of the road section is able to handle the weight.

Mn/DOT has a policy to maintain the Trunk Highway network at a ten-ton capacity. When road segments fall below this capacity, the District Office makes a determination of whether to allow ten ton loads, placing the section at higher risk of deterioration or to post the road at a lower level. Spring Weight Restrictions are applied to routes less than 10 tons year round and cause the greatest difficulty to commerce and industry where there is limited access.

The increased weights of newer and larger trucks will continue to stress the current County Road network as well as the Township system. Roads are now being built to nine-ton standards on the County State Aid System. There are no rail lines in Murray County to provide an alternative freight transportation mode; the only way to move materials and goods in bulk is by truck. Murray County is agriculturally based, so a large amount of the goods movement is agriculturally based (grain, feed, fertilizer, livestock, etc.). There are other industries in the County that generate truck traffic, they include, but are not limited to: mining (sand and gravel), freight (USPS and UPS), meat packaging, and wind farm construction and maintenance equipment.

Current Highway Condition

Murray County annually updates the County Five Year Road and Bridge Plan. This is a Capital Improvement Plan, which is fiscally constrained. Each year the County Commissioners and the County Engineer conduct a road tour where they each have the opportunity to view and discuss road improvement issues important to the County. They also have the opportunity to review the Five Year Road and Bridge Program Plan to make necessary changes.

The Improvement Plan is fiscally constrained, yet dynamic in nature. Projects identified in the Plan may move forward or be delayed, dependent on funding or conditions of the road. It takes approximately five-years to plan and develop a road project. Once the Improvement Plan is revised, it is brought to the County Board for approval.

The Minnesota Department of Transportation (MnDOT) also maintains a fiscally constrained Capital Highway Investment Plan (CHIP) that covers ten years. The first four years are in the Statewide Transportation Improvement Program and are the near term projects that have been scoped and are considered commitments by MnDOT. The last six years of the CHIP have projects that have not been scoped, but have been identified as having a need for a project. The actual scoping of the projects includes consultation with local units of government to ensure the projects are phased in correctly and can take into consideration local issues. Projects in the last six years of the CHIP will change as the projects are scoped which refine the project requirements (cost and year changes). MnDOT is currently working in a maintenance and preservation mode due to limited funds.

Bridges

The Minnesota Department of Transportation maintains an inventory of bridges in the State and record of an inspection report that identifies the condition of the bridges. Bridge deficiency needs are identified by bridge sufficiency ratings. A sufficiency rating includes many factors, including actual structural condition of a bridge, detour length, traffic count, the approach, bridge length & width, and structural characteristics.

According to Minnesota Department of Transportation (Mn/DOT), a bridge is defined as a structure ten-foot or greater in length along the road centerline. Bridges can be either a conventional type or culvert(s), which have sufficient width to classify it as a bridge.

Local roads play an essential role in the overall State transportation network while local bridges are a critical component of the local road systems. Support from the State for the replacement or rehabilitation of local bridges continues to be crucial to maintaining the integrity of the local road systems. This support is also necessary for the County and the townships to proceed with the replacement or rehabilitation of the high priority deficient bridges. State Transportation Bond Funds are often the funding source to replace or rehabilitate bridges. Murray County has identified specific deficient bridges on the CSAH, County Road and Township systems that are a high priority and require replacement or rehabilitation within the next four (4) years. Murray County has committed to proceed with the design and contract documents for bridges identified in the County Four-Year Bridge Plan.

The County Highway Department goal is to maintain the County road network to serve residents and businesses in Murray County. This is accomplished through the following strategies and actions:

- Development of a fiscally constrained 5 year Road and Bridge program, updated annually. Primary factors considered for inclusion include, but are not limited to:
    - Age of Road. Generally a road needs an overlay every 20 years.
    - Road condition monitoring
    - Proximity to other roads.

- Monitor the roadway network condition and schedule improvements or issue load limits as merited.
    - Monitor roads on an on-going basis.
    - Maintenance is done as the need arises: Crack sealing, patching, overlays, etc.
    - Post load limits to roads and bridges.

- Develop and maintain a 10-ton basic network of paved roads as intercounty routes to serve the County's freight needs.
    - Plan / Schedule maintenance of seal coat every 5-8 years
    - Schedule thin overlay every 17-21 years
    - Total reconstruction. This has been deferred, due to lack of funds; the County is in a preservation mode.

- Maintain gravel roads to serve as feeder routes to the paved network.
    - Maintenance is done as needed.
    - Reconstruction is rare due to lack of funding resources.

- Bridge maintenance and replacement. Bridges have a sufficiency rating and a status as adequate, functionally obsolete or structurally deficient. When they get a sufficiency rating of less than 80 and are either functionally obsolete or structurally deficient, they become eligible for replacement.
    - For all local bridges:
        - Before they are considered for a project, the MnDOT District State Aid Engineer visits the bridge along with the County Engineer. The district engineer needs to approve if structure is in poor enough condition to replace before it can become a project.
        - If the structure is a town bridge, the township has to also agree in the replacement and to incur some of the project costs before they are added to the County replacement project list

- Coordinate with County Departments and other jurisdictions to promote the health safety and welfare of the Murray County Transportation System.
    - Tools to enable this may include:
        - Adoption of Complete Streets Policy and Implementation,
        - Americans with Disabilities Act Transition Plan,
        - Use of the Development Agreement for large development projects in and near Murray County that are likely to affect land use and the road network,
        - Active Living and Safe Routes to School Planning and Implementation,
        - Highway Safety Plan

The Five Year Road and Bridge Plan is posted on the Murray County website.

Trail Development

Trails planning within and for Murray County is fully covered in the Conservation, Parks, and Open Space Chapter

Aeronautics

The Slayton Municipal Airport is located to the west of Slayton, south of TH 30 and east of TH 267, outside city limits in Slayton Township (Figure 6-4). It is classified as an Intermediate airport, an airport having a paved and lighted runway less than 5,000 feet in length, capable of accommodating all single-engine and most twin-engine aircraft as well as some light jet aircraft. The medical hospital also utilizes the Slayton Airport. The airport is also used frequently for aircraft during crop spraying activities.

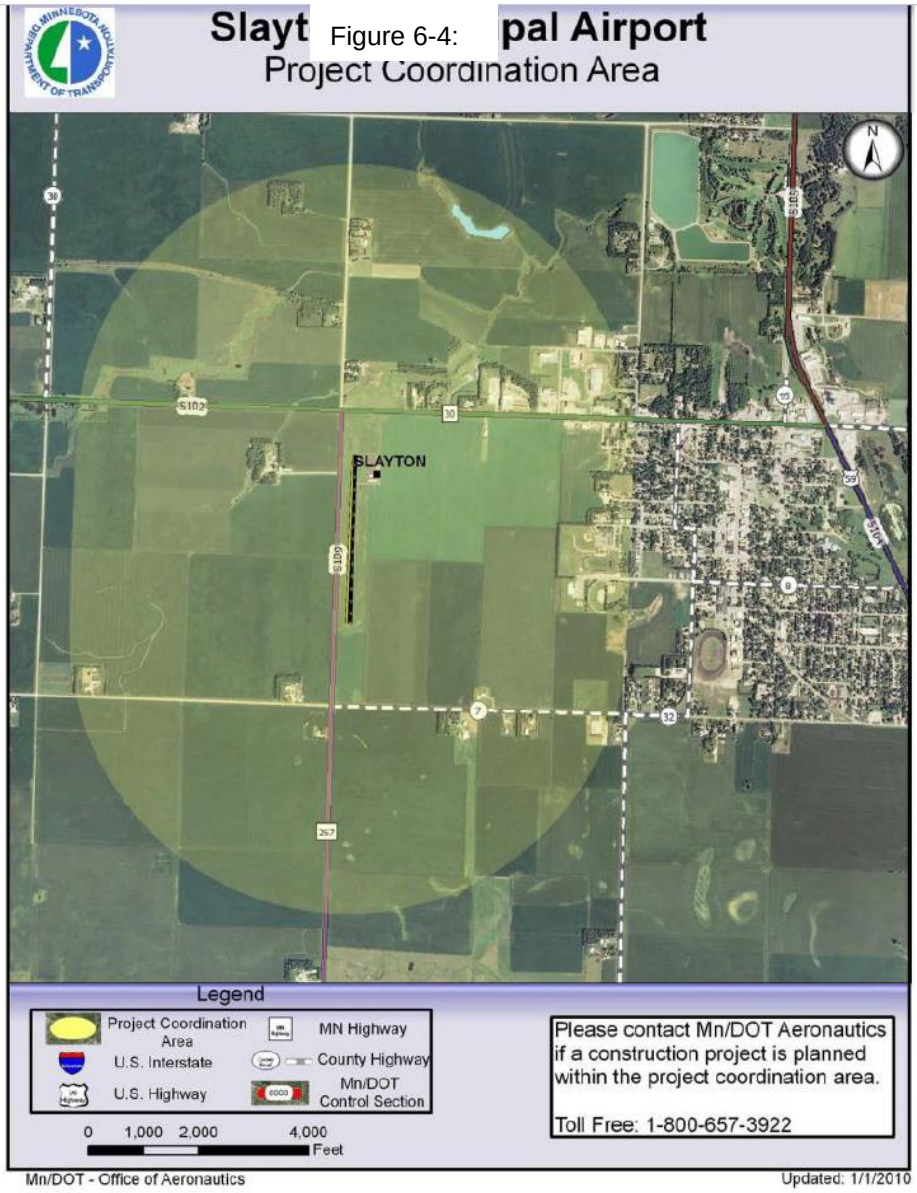


Figure 6-4:

The Slayton-Murray County Joint Airport Zoning Board was created by the City of Slayton and the Murray Board of County Commissioners and adopted airport zoning in February 1979 for an approximate two-mile radius around the Municipal Airport runway. This ordinance establishes five airspace obstruction zones and three safety zones, with restrictions on development density, use and heights. The City of Slayton Administrator is named to administer the regulation.

The Mn/DOT Office of Aeronautics also reviews development projects within a similar coordination area to reduce the probability of long-term land use conflicts.

Airports are an essential public facility that serves an important public transportation role and public good. The Murray Zoning / Subdivision regulations should treat the airport obstruction and safety zones as an overlay district with more restrictive regulations than the underlying district.

Railroads

There are no railroads in Murray County.

Transit

The Murray County Heartland Express was established in 1991 to provide general public transportation in Murray County. As of August 1, 2016 the transit program merged with Community Transit of Western Community Action, recently renamed to United Community Action Partnership. Community Transit under a service agreement with Murray County administers both bus and volunteer driver transportation. Minnesota Department of Transportation funds are allocated each year based on an approved management plan to provide the public portion of the system. MNDOT uses State and Federal funds and requires a local match. Local match is provided through fare revenues, contributions and donations. Federal capital funds and local county funds are used for bus purchases. Contracts with other providers, agencies and organizations allow for additional transit service beyond the public transit management plan. Transportation is provided to nutrition sites, the downtown areas for shopping, local grocery stores, libraries, preschool classes, medical appointments, work and other vital community services.

A majority of the riders are senior and/or disabled. The system transports many children to their daily preschool classes from local daycare centers and homes. The variety in clientele brings together riders of all ages and promotes community involvement and independence.

The system will provide dial-a-ride service on weekdays and utilize volunteer drivers in evening and weekends based on driver availability.

Future Transportation Considerations

As mentioned at the beginning of the transportation section, an efficient and functional transportation system is vital to the economic stability of an area. As such, the transportation in Murray County constitutes a very large investment of taxpayer dollars. The economic well-being of Murray County lies with the production, marketing, and transportation of basic agricultural products and tourism generated activities. The County is dependent on the transportation system to reach the region, State, National and International markets. The transportation corridors provide vital links within and outside the County. Transportation is important to both the economic well-being of the area as well as providing access for the residents.

The following comprise some common planning practices that promote effectiveness within the transportation system and add life to the system. This is critical to the success of the development of local government budgets.

Load Weight Restrictions

Ideal roads that are designed to handle loads weighing nine or ten tons are expensive, which is why there are very few of these roads (compared to the lower tonnage capacity roads) in Murray County. In Murray County, the township roads can normally handle 3-5 ton loads, the county road network 5-7 tons, and County State Aid network up to 9 and 10 tons is the long term goal.

The County should develop an ordinance that encourages developments requiring heavy tonnage roadways to be built adjacent to existing 9 and 10 ton roads. This is because some new developments may need roadways with increased tonnage carrying capacity in order to conduct their business. As such, developers may ask on behalf of the new development that the roadway be upgraded at the County's expense, placing an unfair burden on taxpayers. However, the development may be allowed to occur if it is willing to pay for the costs associated with upgrading the road.

Access Management

Mn/DOT defines access management as "an effort to maintain the effective flow of traffic and the safety of all roads while accommodating the access needs of adjacent land development." Access management is one way Murray County can manage its current road system in order to reduce various traffic-congested areas and reduce the amount of traffic accidents that occur.

Effective access management begins with thoughtful community development and roadway design. In essence, access management is a planning tool that limits the number, spacing, and design of accesses along highways. Mn/DOT proposes that practices that promote good access management are to:

- Avoid strip commercial development
- Provide an adequate local road network
- Ensure appropriate site development
- Communicate new developments to Mn/DOT that will occur along a trunk highway within one mile of a trunk highway so the DOT can review the project and provide recommendations.

Airport

It is a wise planning practice to limit or restrict development surrounding public airports. This will reduce the potential for accidents and destruction of property. The County should work with the City of Slayton and the airport to educate property owners on airport zoning provisions and to ensure unplanned development does not encroach upon these areas. Currently, the city has identified the area to the east of the airport for future land use as commercial and industrial expansion. The County and City need to coordinate future land use activity to ensure a smooth transition when annexed by the city.

Transit

Access to transit allows people without transportation independence. A majority of the riders of Community Transit are senior and/or disabled, and it is expected the number of seniors will increase and the public transit will help keep people in the community active. Advertisement of the bus and the volunteer driver program and their features is important to promote ridership and sustainability of the program.

CHAPTER 7. LAND USE

The Land Use element of the Comprehensive Plan identifies Murray County's responsibilities in regards to its communities, water bodies, shorelands, feedlots, and other land uses. Since the County should protect its cultural, economic, and natural environments, every effort has been made so that this Plan coordinates its goals and implementation strategies with both the local communities and regional plans in order to appropriately reflect the values of the County and the importance that its citizens place on the environment.

The issues addressed in the Land Use Section are arranged in the following sections:

- Introduction
- Purpose
- Issues Concerning Land Use for Murray County
- Existing Land Use
- Future Land Use
- Official Land Use Guidance and Controls

INTRODUCTION

Over the years, Murray County's economy has remained agriculturally based. While recent areas of development include the county's shorelands, wind power development, and tourism, its location in Minnesota has provided the County with land that is very conducive to corn and soybean farming. Some of the more hilly lands are more suitable for pasture, but for the most part, agricultural land uses during the last 20 years have remained agriculturally productive and little unincorporated urban growth has taken place (with the exception of the Lake Shetek and Lake Sarah area).

Current and future land use patterns will all be influenced by the types of different land management systems Murray County chooses to employ. Presently, Murray County's implementation tools are the zoning ordinance (shorelands, flood plains, feedlots, etc.), subdivision controls, and environmental health regulations. This regulation of the land effects immediate and surrounding areas. For example, zoning a certain parcel of land for dense industrial use will indirectly influence what types of development that can and will take place in areas adjacent to it.

The County must address the land use issues that are brought on by potential growth and potential recession. Main objectives of the land use element of a comprehensive plan should be to:

- Plan for Land Uses to prevent unnecessary urban / rural conflicts and identify tools to implement
- Prevent forms of Urban Sprawl
- Prohibit development in restricted shoreland areas, and any bodies of water not suited for development
- Encourage rural housing development to occur in planned areas
- Prevent destruction of environment and degradation of ground water

Land uses will have a potentially substantial effect on the County's citizens and its ability to provide necessary services to those citizens. By carefully and systematically planning for calculated growth, conflicting land uses should be brought to a minimum and desired growth in appropriate areas will be allowed to take place.

PURPOSE

The main function of the land use section is to describe public and private uses of land in the County, and to guide both Murray County officials and community leaders when they make land use decisions. While the Comprehensive Plan provides a legal basis for ordinance development and implementation, it should also be used as a basis for county decision-making regarding future land use developments. This plan will identify potential problem areas and provide goals and strategies for solving these problems. The goals and policies identified in the Implementation section should also serve as a guide for County and Community Leaders when they make public decisions regarding developments occurring within Murray County.

LAND USE ISSUES FOR MURRAY COUNTY

In 2007, the County updated their Comprehensive Plan, from the 1992 Plan. This update incorporates changes since the 2007 Comprehensive Plan. While there are many strong foundations in local land use, there are a few distinctive features that the County should build on. The Murray County Comprehensive Planning Advisory Committee identified the following as land use issues currently facing the County and those issues that will affect the County in the future.

Strengths in Land Use

- Abundance of prime agricultural farmland.
- Several lakes where development could occur
- Land uses being used as tourism or scenic purposes
- Municipal Sewer and Water
- Room for development
- No major rural and urban conflict areas
- Good infrastructure (County highway facilities)
- Space within existing municipalities for development

Weaknesses in Land Use

- Decreased number of farmers, number of rural residences, and total population
- Decreases in population have made it difficult for smaller communities and some townships to survive low density population
- Deficiency in equestrian facilities
- Lack of railway, interstate, and higher education facilities
- Lack of Planning and Management within the County

Opportunities for Land Use

Murray County has several possibilities in regards to its use of the land, these include:

- Lake Development
- Tourism
- Renewable Energy Development
- Industrial and Economic Development
- Cropland
- Livestock Production
- Water Retention
- Increased habitat areas
- Bedroom communities
- Recreation Development Various uses for trails (ATV's, horses, hiking, snowmobile, etc.), fishing, and hunting
- Removal of marginal lands from production
- Declining population (more room for feedlots)
- Lots of travelers through the County
- Room for increased campsite areas (Currant Lake and the Fulda Lakes)
- Buffer strips more attractive to landowners through incentive programs
- Housing and Lodging Development

Threats in Land Use

While Murray County has many opportunities to continue to grow in the 21st century, there are issues that must be addressed, they include:

- Improper development of the County's lakes
- Potential for poor water quality
- Struggle for smaller communities and townships to survive and operate
- Declining population

EXISTING LAND USE

Environment, transportation systems, and social community all affect the way the land is developed. The land and its resources should be managed properly in order to achieve maximum planned and efficient growth. Improperly used or developed land can have negative effects on the environment, the use of city and county taxes, the use of existing infrastructure (infrastructure as used in this document encompasses roads, sewer, water, and electrical utilities), and property values.

Land in Murray County is typical prairie environment and has a significant amount of variation in land elevation, ranging from more than 1,900 feet above sea level on the crest of the Coteau des Prairies Slope (Buffalo Ridge) in Chanarambie Township, to 1,250 feet above sea level on the Coteau des Prairies Slope in Holly Township. Since the landscape in Murray County is of a relatively young geological age, it has a less developed surface drainage pattern. While the artificial drainage network is extensive, the lack of natural surface drainage development is demonstrated by the various un-drained depressions and lakes as well as by the streams that have few tributaries.

Except for the south and west portion of Murray County that contains the Buffalo Ridge, the County is generally level with moderately rolling agricultural land. Bordering Murray County are Lyon and Redwood Counties to the north, Cottonwood County to the east, Nobles County and Rock County to the south, and Pipestone County to the west.

Land Use and Cover

Land use within Murray County remains primarily agricultural, with urbanization typically occurring around established communities. Information from the University of Minnesota indicated that 79 % of the acreage in Murray County was cultivated in 2000. Only 1.2% of the County was considered to be covered by impervious surfaces. Table 7-1 shows the different land uses within Murray County in 2000. The 2012 Census of Agriculture reported that there are 407,919 acres in farms of which 374,929 (81.3%) are in crop land. The Census of Agriculture has reported that the acres of cropland increased in 2007 to 390,676 and decreased in the 2012 Agricultural Census. Realistically, about 80% of the land in Murray County is in cropland.

Table 7-1: Land Use and Cover, 2000

	Acres	Percent
Agriculture	363,393	78.88%
Forest	10,424	2.26%
Grass/Shrub/Wetland	53,842	11.69%
Water	9,073	1.97%
Urban	23,933	5.20%
Total	**460,673**	

Source: UofM Remote Sensing Laboratory

Developed Municipalities

Throughout Murray County's history, the majority of development has occurred within the incorporated areas of Currie, Dovray, Lake Wilson, Hadley, Slayton, Avoca, Chandler, Iona and Fulda. However, some development occurs in the unincorporated communities of Currant Lake, Wirock, and Lime Creek with significant development continuing around the county's lakes, most notably lakes Shetek and Sarah.

Townships

Murray County townships are dominated by agricultural use. Murray County land use controls, such as zoning and subdivision regulations cover the townships and unincorporated areas. The current zoning density zoning restrictions are 1 housing unit per 40 acres. Most of the communities within the Murray County townships are closely tied with agriculture and all have generally small populations.

The Murray County Environmental Services Office has compiled data on all permits per township from 2000 to 2015; as well as a yearly permit summary by building type. The Environmental Office reports that 3,918 permits have been issued over the past 16 years for structures, such as agricultural, livestock, and homes, as well as accessory use permits, impervious surface permits and others. While the number of permits per year change (ranging from 279 to 187), the average per year has been 245 permits per year. Of the total permits, 1,075 were issued within shoreland /lakes areas of the County. Figure 7-1 graphically represents the average number of permits in the Agriculture District by township over the past 16 years, with the most permit activity per year occurring in Chanarambie and Slayton Townships, and the least in Holly and Skandia Townships. Likewise, permits averaged per year in the lakeshore areas of the County are shown in Figure 7-2 with the greatest average number of permits issued per year in Lake Sarah, Lake Shetek and Mason Townships.

Figure 7-1. Average permits per year in Ag District 2000-2015

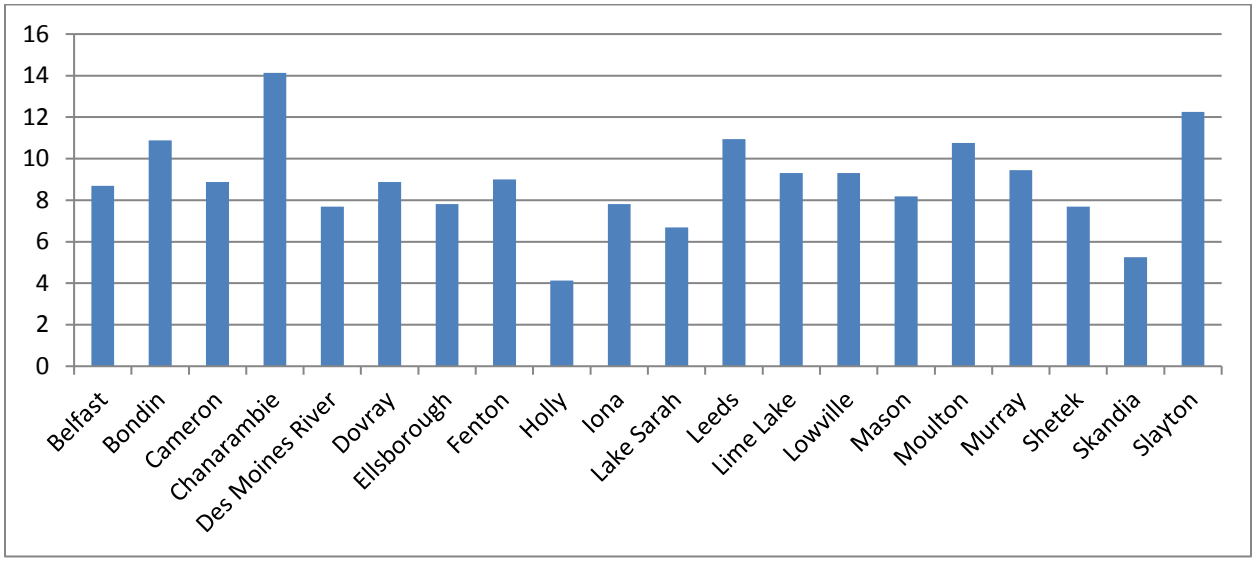


Figure 7-2. Average permits per year in Township with lakes 2000-2015

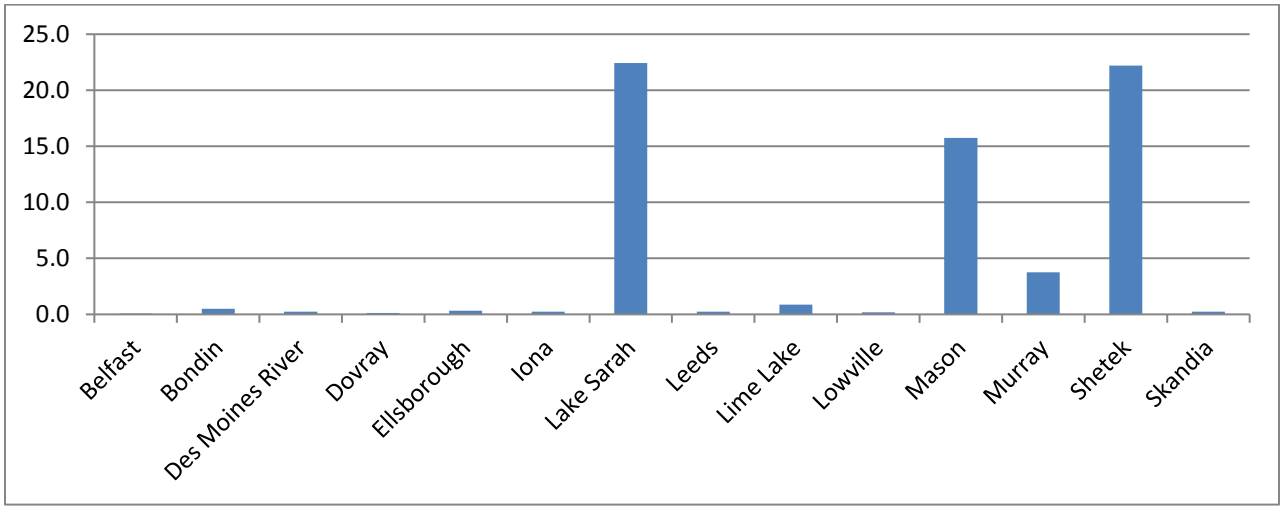


Table 7-2 identifies the number building permits issued by building type over the past 16 years in 5 year increments with the exception of 2015. For both non-livestock and livestock buildings, more permits were issued for new structures than for expansions of existing. The trends for new non livestock and livestock buildings averaged 84.8 and 16.6 per year over the last 16 years and the trend appears to be increasing.

Homes in the Agricultural District and in the lakes were also examined for both new and expansion. In the Ag District, home expansion permits dominated the permit activity; however the number of permits issued have decreased in recent years. New or replacement homes have maintained an average of 9.4 permits per year. New or replacement homes / cabins in the shoreland districts have decreased over the time frame with an average of 13.4 per year, the highest number of permits (22) was in 2000 with the lowest of 8 permits in 2011. Permits for expansion ranged from 7 to 20 with an average of 11.9 per year.

Table 7- 2. Murray County Building Permit Summary 2000 to 2015

	2015	2010-2014	2005-2009	2000-2004	Average/yr
Ag Buildings (Non-livestock)					
New	67	534	424	398	84.8
Expansion	5	37	23	39	6.2
Livestock Buildings					
New	15	101	77	88	16.6
Expansion	2	14	14	26	3.4
Homes - Ag					
New/Replacement	4	51	52	47	9.4
Expansion	10	80	106	127	19.6
Homes/Cabins - Lakes					
New/Replacement	12	67	69	83	13.4
Expansion	10	69	51	70	11.9
Total Permits	125	953	816	878	165.4

Source: Murray County Environmental Office

Based on the data, both home expansion and new/replacement permits over the past six years have been about the same in the Shoreland District. In the Agricultural District, expansion of existing homes has occurred about twice as often as new construction.

Murray County's major lakes have seen an increase in development, not only from newly recorded subdivisions, but also in new home construction on existing lots and the conversion from seasonal to year-round residences. The majority of the newly created subdivisions are in the second and third tiers from the lakes, with only a small number of lots with direct lake access. Some of the older subdivisions adjacent to the county's major lakes include lots that are substandard, meaning they are less than 100 feet in width on a General Development Lake or less than 200 feet in width on a Natural Environment Lake. As population increases on the lakes and more people are seeking to live there year-round, development pressure will intensify. It is important to stress the need for infrastructure and utility services such as roads, water, stormwater control and garbage collection.

Several problems have arisen in terms of development within shorelands across Minnesota since shoreland regulations were established in the 1970s. For example, small lots that were platted in shoreland areas were originally intended for limited use, such as a vacation cabin for a family, one or two weeks out of the year. However, over time, these small lots began attracting vacationers from a wider area and their use became much more intense. In addition, some smaller resorts, established on certain lakes, went out of business and eventually sold their land to would be homeowners, which resulted in undersized lots requiring septic system and individual drinking water wells. The continued addition of impervious surfaces on all lots in shoreland also increased the amount of runoff into the lakes and further loss of water quality.

These poor land use planning techniques led to more new legislation and regulations concerning shorelands. Zoning controls began instituting minimum lot widths and standards, density standards, and impervious surface standards.

There continue to be differences in opinion among farmers, conservationists and those living around bodies of water. Some believe that farmers need to perform better manure management practices and fertilizer application rates. Farmers are concerned that those living on lakes should do more to prevent runoff from lawns that are heavily fertilized, from entering the lakes. This is not to say that all people living next to a lake within Murray County are negatively impacting their environment. Some developments have been constructed on appropriately sized lots and are served by a centralized sewer system, but there are those that have platted or purchased lots that do not meet all standards.

Environmental consequences worsen through the granting of variances. This leads to bigger houses being built on smaller lots, increased impervious surfaces, limited distances between lots, destruction of natural vegetation, and increased run-off. All of these problems cannot be blamed on small lots, as even lots developed to today's standards can become a problem as more three car garages, patios, driveways, and sidewalks are built, increasing the amount of impervious surface.

FUTURE LAND USE

New and scattered low density rural land uses should be discouraged. However, it should also be recognized that there is limited available housing in the County and Region; businesses have indicated that they have considered expansion, but there is no workforce to fill the jobs. Some businesses in the Region bus employees in from Worthington, and Sioux Falls because of the labor shortage. Some dairies in adjacent states have housing options near the farming operation for the workers, thus enabling workers to live near their work areas and increase the reliability of workers traveling to work.

While preserving natural landscapes is important, it should be balanced with the need to preserve a viable tax base for the County.

Rural Housing

Those people wanting to live within the rural areas of the County must remember that they will be moving into an agricultural area, thus, they will deal with reciprocal setbacks as there will be various noises, dusts, and odors. These things come from normal agriculture practices and include noise from livestock, fans, motors, machines, dust from tillage and harvesting, odor from manure and livestock, herbicides, pesticides, silage, compost, and other agriculture products. Agriculture is a 24 hours a day, seven day per week, 365 days a year operation. As long as potential rural dwellers realize this, there is potential for Murray County to meet the needs of rural housing demand.

Some rural households will most likely continue to be abandoned. This is not just because they are in a rural setting, but rather, some of these rural sites are aging and in need of repair and some sites may also possess old inadequate wells. Often, only lower income families will choose to live in these aged structures. Some owners of these rural sites choose to rent them out and decide not to spend a great deal of money in keeping them in good repair. After they have become uninhabitable, there is no incentive to keep them around and they are plowed under. Farmers also realize the benefit of not having to pay taxes on the site, so it is actually in their best interest to have the site removed. However, these sites are an important part of history and many favor the preservation of these sites. The current tax structure could be altered to promote the retention of these rural farm sites.

Rural housing development should be encouraged by designing development sites based upon the presence of adequate infrastructure such as blacktop roads and adequate water supplies. If need warrants, development could be allowed to take place within a half mile of an existing hard surface road. Proposed development at long distances from existing paved roads or those that depend on older/inadequate bridges should be discouraged, saving the road authority money on appropriate road and bridge maintenance costs.

General rural housing development should require a plat to ensure proper planning. Rural housing could be encouraged in the northwest portion of the County, such as areas adjacent to Currant Lake that are not necessarily within shoreland. These developments should generally follow the 1 residence per 40 acre standard with a minimum of housing on 5 acres. Low-density development, such as 1 residence per 5 or 10 acres instead may include lands adjacent

to incorporated areas within the County, potentially 2nd, 3rd and 4th tier development on Lake Shetek (the presence of infrastructure is essential for any new development), rural portions of Lime Lake, areas along Plum Creek, lands adjacent to Beaver Creek, or lands adjacent to the Des Moines River.

New Housing Trends. Recent legislation, housing development activities in nearby counties, and housing trends have occurred since the last plan update. The following housing options should be considered for incorporation into the Murray County ordinance update:

Temporary Family Health Care Dwellings. 2016 legislation was passed with an opt out feature for local units of government. Murray County chose an opt out because they believe there are areas within the County that may be appropriate for siting these types of dwellings, however, they want to be able to address health, safety, and general welfare standards, and will consider addressing Temporary Family Health Care Dwellings in ordinance updates.

Tiny Homes. The County will consider tiny homes as they update their ordinance to ensure that the health, safety, and general welfare of Murray County citizens are addressed.

Housing to accommodate agricultural workers. The County may consider amending the ordinance to permit housing to accommodate agricultural operations, while ensuring appropriate public or private infrastructure is in place to support it.

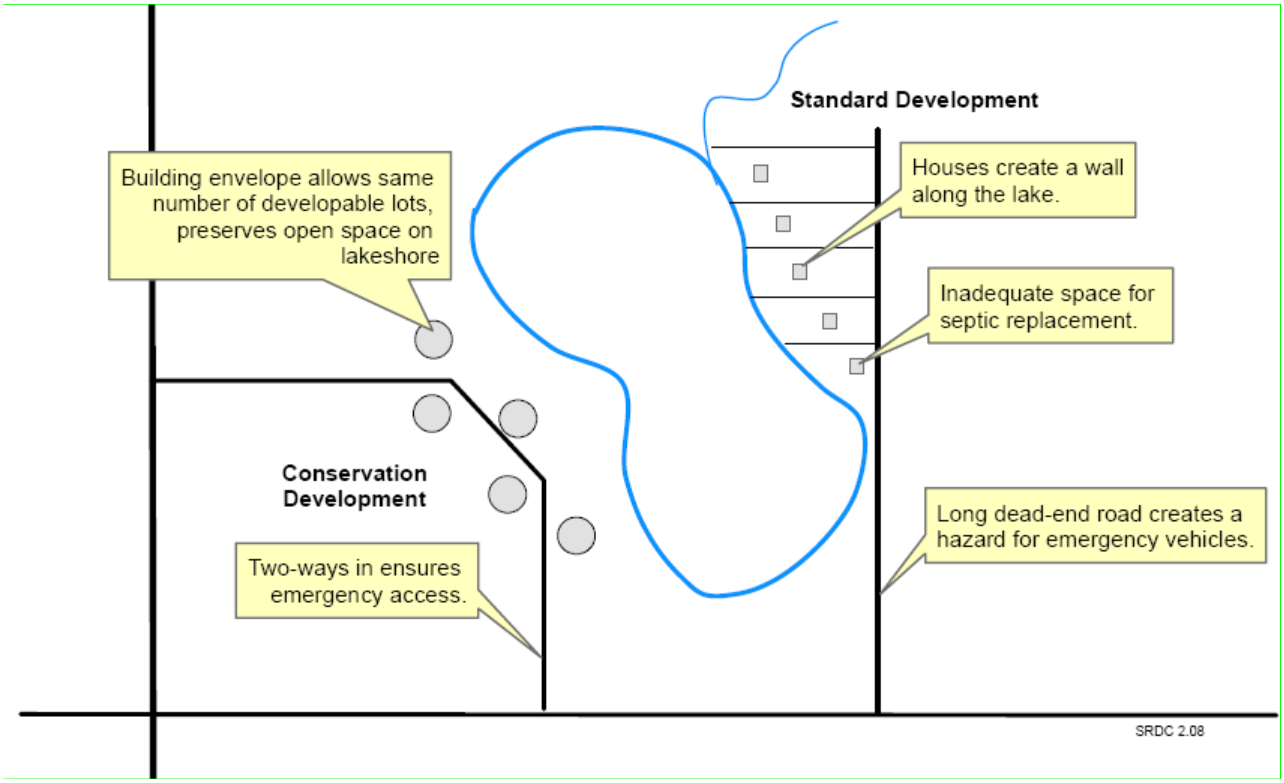
Conservation Development

Conservation Development patterns which cluster housing is another effective means Murray County could pursue in encouraging "smart growth" practices within its borders. In Conservation Development, several home sites are grouped together or "clustered" in a rural setting. These clusters typically have smaller lots and fewer roads, they are condensed for services, and they retain a sense of openness, often featuring protected open space as a development amenity.

Low Impact Development (LID), for example, is a conservation design technique being promoted by watershed management organizations in Minnesota. LID is a process intended to manage stormwater by replicating natural filtration features of a site's pre-development hydrology. Conservation Development and LID projects both rely on creative street and lot design, with runoff typically retained to minimize impervious surfaces and create attractive building sites.

Areas within Murray County that could potentially be appropriate for conservation design exist in several areas. These opportunity areas include some shoreland areas of Lake Sarah, Lime Lake, and possible 2nd tier development on Lake Shetek. Other potential areas include the unincorporated communities of Currant Lake, Wirock, and Lime Creek. Finally, some prime areas for cluster development exist and include the area along Lime Creek just west of the unincorporated community of Lime Creek. Figure 7-3 provides a comparison between Standard Development and Conservation Development.

Figure 7-3. Standard Development and Conservation Development Comparison



Conservation design has both positive and negative features. The positives include the preservation of actual land, the sharing of essential services (1 well, 1 septic system, minimal amount of roads), and the sharing of open spaces. Often implemented through specific cluster zoning, conservation development is designed to fit the same amount of housing as a normal planned unit development (PUD) using substantially less actual land, which means there is more land left for open space.

Summary

As long as there remains a supply of (decent, safe, and sanitary) rural housing, and demand for that rural housing is limited, rural home sites should be encouraged through careful development practices. Other types of developments should be encouraged to occur within existing corporate limits of existing municipalities or within appropriate urban growth boundaries. The long-term viability of smaller communities is one reason why this development should be encouraged within municipalities that are presently operating with a citywide sewer system so they can have access to these facilities and other infrastructure such as roads, police, and fire protection. Development could also be encouraged on abandoned or former rural farmhouse sites to avoid creating new urban/rural conflicts. These sites can potentially use pre-existing wells and septic systems (if the site wasn't previously abandoned), and the County can attempt to preserve its aesthetically pleasing rural environment.

Future urban development should be encouraged based on existing infrastructure, soil conditions, and adjacent land uses to strengthen Murray County communities and add to the tax base. Plus, more residents living within sewered communities means overall costs would be lowered and less demand would be placed on the need for septic systems. Murray County will be able to prevent unnecessary urban-rural conflicts and it can preserve its prime agricultural land for crop production and other agriculturally related activities. Using prime agricultural land for urban development places greater amounts of pressure on marginal lands for crop production and these marginal lands are usually a source for wildlife habitat and are generally more erodible, droughty, less productive, and cannot be easily cultivated. Development of marginal lands should be discouraged.

Commercial Land Use

Commercial development within Murray County is located within established communities. County Zoning provides for limited development adjacent to many of these areas with the "B-1" General Business District. The purpose of the B-1 district is to allow for a broad range of retail, wholesale, repair, and service establishments to be built within unincorporated areas of the County. The County should continue to support uniform groupings of commercial areas where adequate infrastructure is in place to support it; these areas are mainly found in downtown areas of established communities, and potentially along outer edges of certain communities. Potential for these developments may also exist along certain highways and strategic highway intersections.

Strategic highway locations for commercial development include highways and intersections leading into communities, such as Trunk Highways 59 and 30 in Slayton. While typically more appropriate inside municipal boundaries with city services provided, commercial development in these areas may include establishments such as gas stations, truck stops, restaurants, and motels. Locating these various highway-oriented businesses can create access management difficulties. As the number of accesses along a stretch of road is increased, the potential for traffic conflicts also increase. Development measures to limit the number of highway accesses along major corridors should be implemented. Planning for joint use accesses or frontage roads could be ways to reduce points of conflict. While these are strategic locations, open commercial development should be encouraged only in limited cases. Presently, commercial development within the vicinity of Valhalla Island is in place to serve the west side of Lake Shetek and other necessary services are provided in established communities such as Slayton and Currie. Consideration for expansion of commercial land use corridors to address tourism would be: West of Slayton on Highway 30, North side of Valhalla Road, The Tracy Gun Club - Breezy Barn to Amber Beacon, and near Pete's Corner. Commercial businesses that require large areas either for display or for parking (auto dealerships, farm implement dealers), should be permitted on community peripheries to prevent conflicts with residential areas.

The City of Slayton recently updated their future land use plan and identified the area to the airport as commercial and industrial. Any development of that land before the City annexes it should be with consultation with the City of Slayton.

Industrial Land Use

Industrial land uses that occur throughout the County include gravel and sand pits, warehousing, fertilizer plants, and other similar uses. Industrial uses within communities can (like business development) pose a series of land use conflicts and access management difficulties. Increasing the number of accesses along industry-laden roads also increase the potential for traffic accidents. Limiting the number of accesses on a given road, implementing frontage roads, and allowing for joint uses of accesses, could be implemented in order to reduce traffic conflicts and increase safety.

Industrial expansion should generally be encouraged within incorporated areas rather than in outlying rural locations. Industrial expansion should encourage the development of industry already doing business within the County. While some industrial uses have a "Not In My Backyard" (NIMBY) effect on residents, present day planning allows the mixing of industrial, residential, and commercial areas to some extent. The lighter industries can be mixed with other types of uses, often with minimal negative effect. This mixing allows for decreased drive distances and times, and less congested streets during peak driving times. However, heavier polluting and noise generating industries should be encouraged in homogeneous groupings along the outer urban fringes.

Agricultural Land Uses

As the agricultural industry continues to change, Murray County should continue to support its farmers and protect these prime agricultural lands. While there is not a large amount of farmland being converted to urban uses within Murray County, the potential is still there for urban/rural conflicts. Presently, Murray County's Zoning Ordinance allows one (1) rural residence per 40 acres. This has both positive and negative effects as it allows for new housing development anywhere in the County as long as it is not too close to a pre-existing site. The more rural residential sites allowed, the more urban/rural conflicts will be seen as farmers will be prohibited in where new livestock developments can be placed. Not only is the development of feedlots already prohibited in terms of shoreland (both streams and lakes), but also they will continue to be hampered by rural residents who do not want to live near a livestock facility. Alternatively in support of agricultural operations, permitting of housing for farm workers / families should be considered through a conditional use permit to enhance the viability of nearby existing and future agricultural operation and employment required for the operation.

The loss of farmers within Murray County is generally due to the changing agricultural industry. Farming operations have generally seen a trend towards increasing specialization and falling away from diversity. With the lack of demand for farmers, comes an increase demand on municipalities. Some farmers obtain supplemental employment within the municipalities and some even move off the farm entirely (either due to employment change or retirement). The rural farmhouse sites they leave behind become in danger of being abandoned and converted to cropland.

Murray County has been and will most likely continue to be dominated by agriculture. As such, urban development should generally take a secondary role to agriculture in all areas except those that are legitimately required for such development. As mentioned in the Housing

Development Section, appropriate urban development lands are found within or adjacent to established developments or along paved highways.

Since rural county land uses are generally agricultural, the County should encourage Best Management Practices (BMP's) for erosion control and the County should also encourage the installation of buffers and grass/legume strips in order to protect waterways. The County should pursue a combination of enforcement and incentive programs to ensure that public waters are adequately buffered.

Energy Facilities and Infrastructure

The collection of energy through renewable energy production requires a large amount of rural land. However, this form of producing energy is a sustainable form of "green" energy that will benefit more than just Murray County. Safety, health, and aesthetic issues should be considered when siting energy facilities and associated infrastructure. Studies show that the most compatible land use adjacent to wind farms is agricultural land uses, solar farms require 5-7 acres per MW. The following examples should be considered when siting energy facilities and infrastructure:

- Encourage development at adequate distances from roads due to safety and road construction concerns
- Avoid placement of turbines within known bird flight lines
- Utilize MnDOT Glare Analysis tool solar facility proposals in the airport influence area
- Encourage the development of buffer zones around wind farms
- Native prairie impacts
- Impact of placement of turbines between wetland areas
- Appropriate setbacks from homes
- Placement and impacts to overlay districts.
- Potential health and safety impacts as a result of placement of an energy facility and its facilities

Wind. There are many factors to consider when siting wind generating facilities, such as average wind speed, proximity/access to electrical transmission facilities, State and Federal incentives, and the market price for power. Reasonable buffers between wind turbines should be considered, such that these buffers provide open space between the turbines, public lands, and other sensitive resources. Buffers also help to avoid disrupting wind rights on neighboring properties. While it may be cost-prohibitive to bury higher capacity lines, as many lines should be located underground as possible to eliminate future hazards and transmission failure. A Model Wind Ordinance has been developed that can provide guidance for future zoning ordinance updates.

Currently, within Murray County, several wind energy developments have been sited. Since new transmission lines were sited in the region, more wind development activity has been generated. Murray County has permitting authority on wind projects up to 25 MW; larger projects are the responsibility of the State. Murray County is encouraged to utilize the

"Development Agreement", an agreement that helps the County and township with many of the road, bridge, and land use issues that come into play with a large renewable energy development.

Solar. Murray County initially adopted standards for wind energy in the Zoning Ordinance in 2001, which were repealed in 2009 when a stand-alone Wind Energy Ordinance was adopted for the ease of amending wind standards without opening the entire zoning ordinance. Following an inquiry for a possible solar development in the County in early 2010, the Commissioners directed the Planning Commission to research the impacts of solar and amend the Wind Energy Ordinance to include not only solar, but also any future renewable energy facilities. At the time, the only ground mounted solar farm in Minnesota was located at St. John's University in Stearns County; a 400 kV Solar Farm with tracking solar arrays on the university grounds. Using Stearn's solar ordinance standards as a template, the Planning Commission recommended the Wind Energy Ordinance be renamed to the Renewable Energy Ordinance, and included standards for solar and other renewables. The amendments were adopted in November, 2010, and an application for the Slayton Solar Farm was received in March, 2011.

Slayton Solar is a 2 MW farm located on 19 acres of land on the southwest side of Slayton, just outside the city's municipal boundaries, and within the same section of land as the Slayton Airport. Power generated through the fixed tilt arrays at this facility is fed into the substation across the road that services the City of Slayton. At the time of installation, the Slayton Solar Farm was the largest ground-mounted solar farm in the State of Minnesota.

State statute states that the State permits energy facilities 50 MW and larger (with the exception of wind); legislation has been introduced to regulate solar like wind. If passed, Murray County would consider becoming a delegated county for solar facilities as they are with wind. There has been interest in solar development in Murray County, and the MISO queue is monitored periodically to help identify any projects that are undergoing the required studies for transmission. Likely areas for the development of large solar facilities would be near substations.

Substations and transmission lines are an important part of energy infrastructure, both in transmitting generated power from the renewable energy facilities and for transmitting power to individual users on the farm and in town. System providers must plan ahead to maximize their effectiveness while being sensitive to other current and future users of the land they cross. New substations and transmission lines must follow sometimes overlapping established County, State and Federal rules and regulations. There may be instances where the County will ask providers to take additional steps to safeguard public health and safety, such as burying transmission lines to avoid hazards from ice and wind storms. Conflicts can be best avoided if project developers work closely and early on with the County Zoning Office and County Highway Engineer.

Conservation

Murray County possesses an assortment of various conservation lands. The County has various Wildlife Management Areas (WMA), Waterfowl Production Areas (WPA), Reinvest in Minnesota (RIM) land, and Conservation Reserve Program (CRP) lands.

During the mid 1990's, Murray County saw a shift of emphasis on CRP eligibility. The norm for CRP land went from highly erodible land to riparian areas.

Areas of land use conflict and potential change within the conservation areas and all areas in general, are greatest where land will be converted from agricultural uses to residential development. This will be of greatest concern in the shoreland areas where not only agricultural uses will be affected, but also surface and ground water quality, and fish and wildlife habitats. The County should require a buffer of 500 feet around WMA's, WPA's, and other recreation areas designed to prohibit urban or residential type development. This way, development will not be allowed to occur all around a specific wildlife/recreation area, which could destroy not only its aesthetic value but also its functionality as a wildlife habitat. In addition, safety concerns will be addressed in regards to minimum distance regulations for hunting areas.

Vegetation management should also be of concern to the County. While there are zoning regulations that address this concern, these regulations are often inadequately enforced. Natural vegetation areas not only provide a link to the County's past, but they also provide aesthetically pleasing environments and a home to wildlife. Enforcement of vegetation management should be strengthened.

Murray County should continue to pursue the conservation and restoration of natural resources within the County. Further development and explanation of the shoreland ordinance will help to accomplish this goal. Shoreland protection should be viewed as a guide to the proper placement of uses based on the natural resource in question.

Increasing specialization in the economy, and in farming in particular, impacts the way "idle" or conservation lands function within the landscape. Farm operations that do not have diverse rotations and/or livestock may be less willing to hold land that is not productive for the purpose of supplying public benefits. Increasingly, habitat is provided through government investment, either through payments to land owners or through public land acquisition. The changing land ownership pattern is a function of agricultural and economic specialization.

Shorelands

To allow for sustainable development within shoreland areas, several guidelines should be followed. Existing infrastructure such as roads, and water systems should be utilized as much as possible. Appropriate setbacks and buffers are also important. Land use conflicts may be better avoided with greater distance and buffering between residential and concentrated industrial/agricultural uses. Finally, placing commercial activities in locations that improves community appearance is beneficial to both the business as well as the community.

The current form of housing development can result in a "wall" of housing around a lake, which can destroy the natural look and feel that attracted residents in the first place. In addition, as Lake Shetek begins to incur more 2nd tier development (and eventually 3rd tier development), household and lawn care products used in the lakeshore and the amount of impervious surfaces and runoff will all increase. This also raises a question as to who will provide funding for the increased services that the area will no doubt require. As development continues to spread further away from the lake, increased expense for roads, school busing, police protection, and fire protection will result. Further questions will be raised as to who will provide adequate fire protection.

The Future of Shoreland Development

While the development of Murray County's lakes is aiding in reducing the overall population declines, adequate protection of the lakeshores must be implemented in order to assure a long-term use of this resource. The lakes remain a great way for the County to attract permanent residents but the protection and assurances of appropriate development remain vital to lake development sustainability. All decision makers including County Board, Planning and Zoning Commission, and Board of Adjustment members, who are assigned to planning within these areas, should be adequately trained for dealing with these issues.

As 2nd tier (and eventually 3rd tier) development becomes more common on Lake Shetek, increased development demand will be placed on the County's other lakes. While this is not necessarily to be discouraged, standards for development should be high and growth should be encouraged to occur on appropriate lakes within designated areas. Lakes close to an incorporated area should be considered as there would be a ready supply of city services available; Lime Lake, the Fulda Lakes, Summit Lake, and Lake Wilson fit this category.

Development proposals in shoreland areas must demonstrate that they can meet the high standards of Murray County's citizens. Land should not be subdivided without adequate access for emergency services, public access to lakes and streams, nor long-term protection of conservation areas. For example, neglecting to provide a second road access to a subdivision could prevent ambulances from reaching residents if the primary road is blocked. Failing to provide adequate facilities neglects residents' long-term health, safety and welfare.

For the most part, Murray County has a relatively high number of lakes but the peripheries of most of these lakes are not suitable for residential development. Many of these areas should only be developed using Conservation Development and cluster zoning or planned unit development. Table 7-3 is a list of lakes that could be potentially used for development and it is the committee's recommendation that those lakes not listed below should be preserved from incurring development.

The current ordinance requires revision that will allow the Shoreland to be implemented as an overlay district.

Table 7-3. Developable Lakes Within Murray County

Lake	Committee Recommendations
Lime Lake	Develop when there is access to central sewer system, Avoid development on steep blanks and bluffs, ensure development is compatible with topography
Fremont Lake	Develop when there is access to central sewer system, due to its classification as natural environment the County should consider surface water management in order to limit motor boat travel (eliminating desire to have the lake dredged)
Bloody Lake	Already incurred a large amount of development, preserve the remaining area due to the fact that it is surrounded by areas of high groundwater sensitivity, and it is close to a number of riparian wetlands.
Fox Lake	Developable areas along the south side (potential development should take into account existing topography), preserve east and west sides that are located in sensitive groundwater areas, development allowed with access to central sewer, and due to its classification the County should consider surface water management in order to limit motor boat travel (eliminating desire to have the lake dredged)
Currant Lake	Potential development areas exist on the Northeast and on the south side of the lake, remaining areas should be preserved.
Summit Lake	Falls within city jurisdiction (Hadley), appropriate for development based on infrastructure
1st Fulda	Development encouraged based on infrastructure
2nd Fulda	Most of which falls within city jurisdiction (Fulda), appropriate for development based on infrastructure
Lake Shetek	Limited development in areas dependent on adequate infrastructure
Lake Sarah	Limited development, potential areas include the north side, development restricted to 1st tier dependent on adequate infrastructure
Lake Wilson	Minimal areas left to develop and only in 2nd tier (northeast side of the Lake, 2nd tier on the north side of 60th Ave.), Potential exists only if land-owner decides to sell land for development; preserve remaining natural areas around the Lake
The Inlet	Restrict all development, the inlet is surrounded by groundwater areas sensitive to pollution, the area is also attractive to preservation

Variances

The Murray County Planning Commission is concerned that variances (especially within the shoreland district) may be issued too inconsistently. There is also concern the issuance of these variances may not meet legal testing and may be undermining the integrity of the County Zoning Ordinances and the health of the County's natural resources. The commission made this recommendation for the following reasons:

- Expanding extent of impervious surfaces is accelerating run off of precipitation and pollutants into the county's water bodies.
- Accelerated development of the shoreland is removing vegetative buffers and important aquatic habitat such as fish spawning areas.
- All natural aesthetics are endangered
- Snow removal will become a larger problem
- Those already living on the Lake may, in effect, lose the reason they moved to the Lake in the first place.

Preservation

There are several areas on Lake Shetek that may not be appropriate for new development. Lakes not listed in Table 7-3 should be preserved from urban development. The Scout Camp, the Lutheran Camp, and the Baptist Camp areas on Lake Shetek should receive no development, even if removal of a camp was to occur.

Summary

Development on any lake within the County should meet adequate standards specific to that respective lake. There should be adequate controls concerning setbacks, storm water management, density requirements and lot size, maximum amounts of impervious surfaces, and sewage treatment.

Feedlots and Shorelands

It is important to remember that the term shoreland does not apply to just lakes. While the shoreland around lakes represent a 1,000-foot boundary, a shoreland also exists 300 feet out from either side of all streams and rivers within the County.

Current County regulations require that no new feedlot can be constructed within 1000 feet of any lake shoreland and 300 feet of any creek, river, or stream shoreland and that any existing feedlot cannot be extended any closer than they already are. These regulations are appropriate and should be adequately enforced.

OFFICIAL LAND USE GUIDANCE AND CONTROLS

Sustainability in terms of County land use requires meeting the needs of the population, wildlife, and natural resources. In order to maintain this sustainability, the land use policy must reflect a standard procedure of meeting all three of these needs. Since Murray County does have authority over land use decisions within its borders, the County should take into consideration the different fundamentals of land development. It should also look at the collective impact of the various community comprehensive plans and evaluate how the impacts of their decisions will affect the delivery of services and management of the land.

Protection of Agricultural Land Uses

Since Murray County continues to heavily depend on agriculture, production at the various levels needs to be preserved and protected as both a natural and economic resource. Throughout Murray County's past, the economy has been heavily tied to agriculture and there is no indication that this dependence will change. Since rural residents tend to oppose livestock production, and scattered rural housing reduces the ability to expand livestock operations and production, continuing to protect prime agricultural land from scattered or leap frog development will be important in accomplishing this objective.

Preservation of Natural Resources

The County should concern itself with the protection and conservation of the soil, water, air, and ecosystems within the County. These natural resources need to be maintained in a sustainable manner. Protecting large blocks of habitat is important in order to sustain healthy ecosystems and air can be made cleaner by encouraging the use of cleaner burning fuels such as soy diesel and ethanol. In addition, hydrogen sulfide from poorly designed manure storage continues to remain a potentially serious problem.

Practicing conservation tillage techniques, installing grass waterways, and protecting the riparian corridors along waterways can conserve the soil and help make water flowing in streams and rivers cleaner. This will also allow for considerable nesting cover to be replaced on the landscape as well. Implementing best management practices in agriculture and encouraging the construction of citywide sewer systems throughout the County can preserve the water quality within the County.

Intensive Development

Certain types of development that are intensive and large scale should be directed to the most adequate/compatible localities. Encouraging the development of intensive facilities in specific areas should be based on the adequacy of the existing infrastructure or presence of natural resources to avoid the need to build new facilities and minimize negative effects on wildlife.

Separation

Land uses within Murray County should continue to be built with appropriate buffers and boundaries. There are many different types of buffers that can separate land uses-including landscape strips and setbacks. At the County level, land-planning buffers between different types of land use may need to be an entire land use type. This type of zoning implementation is becoming more common with uses such as feedlots and in areas such as shorelands. This method of zoning does not allow specific uses within their boundaries. The County should also encourage setbacks, or adequate separation of high nuisance land uses from public recreation facilities including parks and trails. Likewise, adequate separation distances should be accounted for before the placement of parks, trails, and other recreational uses next to existing high nuisance land uses. These "high nuisance" land uses could be:

- Heavy industries that produce smoke, noise, and odor,
- High Traffic Areas, and
- Feedlots

Requiring adequate separation of land uses ensures specific resources are protected, health and safety concerns are addressed, and the quality of life is raised.

Urban Buffers

Where setback buffers have been used to separate incompatible rural land uses such as residences and feedlots, urban buffers can also help separate incompatible land uses in areas where cities intend to encourage urban development. The County can work with cities and townships to take a much closer look at the Urban Buffer—in particular the area within one-mile of municipal limits—to encourage orderly annexation and planned growth. A more deliberate, cooperative approach allows local units of government to make better decisions regarding investments in infrastructure and services, while also giving property owners some predictability about future development patterns. Working together, all parties can build the best Murray County for everybody.

CHAPTER 8. COMPREHENSIVE PLANNING IMPLEMENTATION GUIDE

In many ways, the planning process for Murray County is just beginning with the development and approval of this comprehensive plan. Formal adoption of this plan was the first step in setting the future direction of the County, not the last. Formal adoption establishes an integrated policy direction for the County, including a description of County goals and objectives as well as policies and implementation strategies for how these goals and objectives are to be realized. It is imperative that the County continue to refer to the plan periodically and update it when need warrants. Without continued referral, the comprehensive plan is an ineffective document and the County will continue to develop its resources and land without a planned approach. The following information laid out in this implementation chapter is designed to provide a series of steps or functions that need to occur in order to put the Murray County Comprehensive Plan into action.

GOALS, OBJECTIVES AND POLICIES

Goals and Objectives

A successful comprehensive plan is composed of measurable statements of fact framed by a community's hopes and dreams. Goals and objectives are brought into effect through policies and specific, strategic implementation tasks.

Goals—Goals are broad statements of direction and purpose, reflecting the long-term vision and desires of the County and local citizens. Goals spell out a desired future.

Objectives—Objectives are more precise targets necessary to achieve goals. An objective should be a detailed statement of quantitatively or qualitatively measurable results the plan hopes to achieve.

Policies—Policies state methods, strategies or techniques to achieve goals and objectives. Policies provide specific guidance for future decisions. Development proposals (e.g. subdivisions, conditional use applications, variances) should demonstrate how their projects meet and exceed the policies of the Comprehensive Plan.

For example, your goal may be to build a house. Objectives would include hiring an architect, completing a site survey, securing permits, providing a foundation, and enclosing the structure before the snow flies. In the process, you may establish policies to preserve existing trees, use energy-efficient materials, or install broadband telecommunications where feasible.

Tasks—Tasks listed below enumerate just some of the many individual action items necessary to implement this plan, along with local, State and Federal rules and regulations. As individual implementation tasks may help accomplish multiple goals, objectives, and policies, they are listed at the end of this chapter.

Goals, **Objectives** and Policies (*Land Use Policies*) selected by consensus as outlined below:

A. DEMOGRAPHICS AND HOUSING

A.1 Population is stabilized

Retain and increase County population.

A.1a Encourage provision of adequate and affordable daycare (all ages).

A.1b Consider needs of families and young adults for employment and recreation.

A.1c Support initiatives for first time homebuyers.

A.2 Aging Population Has a High Quality of Life

Prepare for increasing proportion of population of retirement age.

A.2a Encourage provision of adequate and affordable services for aging population.

A.2b Consider needs of aging for accessible facilities, transit and housing.

A.2c Development proposals should explain how they meet the requirements of the Americans with Disabilities Act (ADA).

A.3 Affordable Housing is Available in Quality and Quantity to Meet Local Needs

Facilitate new housing and housing rehabilitation and improvement.

A.3a Encourage County EDA to include housing issues in their workplan.

A.3b Encourage improvements that eliminate health and safety issues.

A.3c Encourage energy efficiency and consider incentives for alternative energy systems.

A.3d Review best practices from other units of government, such as incentives.

A.3e Consider allowing workforce housing for agricultural uses.

B. ECONOMIC DEVELOPMENT

B.1 Agricultural Economy is Strengthened and Diversified

Facilitate value-added agricultural processing where practical.

B.1a Work with County EDA.

B.2 Murray County is Attractive to Tourism

Provide opportunities for tourist-oriented economic activity.

B.2a Encourage County EDA to include tourism issues in their workplan.

B.2b Development proposals should minimize impacts on tourist destinations and natural resources.

B.2c Consider developing an area plan for tourist-oriented destination areas.

B.2d Consider tourism corridor development for visitor needs.

B.3 There is a Supportive Environment for Sustainable Development

Facilitate entrepreneurial job creation and existing business retention & expansion.

B.3a Work with County EDA.

B.3b Support the development of broadband infrastructure.

B.3c Support energy efficiency and use of renewable energy.

C. HISTORIC AND CULTURAL FACILITIES

C.1 Historic Structures and Outstanding Archeological Sites are Preserved, Maintained, and Used to Enhance and Reinforce Community Identity

Attract visitors and vacationers to Murray County from other areas.

C.1a Work with County EDA, County Parks Dept. and State Park.

C.1b Inventory and evaluate all historically significant buildings, structures and sites within the County.

C.2 Historic and Cultural Facilities are Supported and Improved

Preserve and appropriately develop culturally significant resources.

C.2a Development proposals should minimize impacts on historic and cultural facilities.

C.2b Develop a systematic Facilities Plan for the County Fairgrounds.

C.2c Develop a systematic Facilities Plan for End-O-Line Park.

C.2d Develop Communications Plan.

D. CONSERVATION, PARKS AND OPEN SPACE

D.1 Natural Resource Base and Environmentally Sensitive Lands are Protected

Encourage wise use of land, water, wooded areas, native vegetation, agricultural areas, scenic areas, and significant historic and archaeological sites.

D.1a Delineate land use districts based on land types.

D.1b Support acquisition and restoration of wetland areas to be preserved for groundwater recharge, surface water conservation, recreation, and wildlife.

D.1c Discourage new development in Shoreland areas, unless specifically designated in this plan.

D.1d Encourage Low Impact Development and conservation design to preserve natural resources.

D.2 Ground and Surface Water is Protected and Preserved

Implement and update the County Water Plan

D.2a Prevent further degradation of stream and lake water quality.

D.2b Assure long-term quality and quantity of groundwater supplies.

D.2c Prevent soil erosion through comprehensive drainage management.

D.2d Support the Minnesota State Buffer Law.

D.3 Murray County Residents Have a System of Parks and Open Spaces that Protect Important Natural, Historic and/or Cultural Areas and Landscapes.

Improve and protect parks and open spaces.

D.3a Development proposals should address impacts on parks and open space.

D.3b Maintain a systematic Capital Improvements Plan and Facilities Plan for the County Parks System.

D.3c Encourage development of linked, multi-use trails and natural areas.

E. INFRASTRUCTURE AND COUNTY FACILITIES

E.1 County Infrastructure and Facilities are maintained.

Adequately and effectively provide for needs of County residents and businesses.

E.1a Develop a systematic Capital Improvements Plan and Facilities Plan for all County buildings and sites.

E.1b Work with local units of government, including schools, townships and cities, to provide accessible public facilities.

E.2 Technology is Available and Used by Residents, Businesses and Local Government

Promote availability to local citizens.

E.2a Consider provisions in zoning for electric and communications facilities.

E.2b Encourage utilities to bury electric and communications lines to improve public safety.

E.2c Support County staff training and equipment in technology to provide improved services to elected officials and the public.

E.3 Drinking Water, Wastewater and Solid Waste Disposal Needs are Met

Comply with State and Federal rules and regulations

E.3a Restrict potential sources of pollution in DWSMAs.

E.3b Support communities seeking funding for appropriate local sewer/water provision.

E.3c Continue to support and enforce State rules for sewage collection and treatment.

E.3d Enforce County regulations regarding failing and non-conforming on-site sewage treatment systems.

E.3e Support recycling and proper management of solid waste.

E.3f Support the enforcement of the MPCA Closed landfill program through the closed landfill overlay district.

E.3g Support the efforts of rural water systems to locate and maintain sources of good quality and quantity drinking water.

E.4 An Adequate Transportation System is Provided Composed of Highways, Increased Public Transit and Aviation.

Maintain and improve access to services.

E.4a Work with County Highway Department on Transportation Capital Improvements Plans and road maintenance policies, to assure maintenance of existing County and Township roads and bridges.

E.4b Consider provisions for review of public access, streets and roads by County Engineer in zoning and subdivision ordinances.

E.4c Implement access management systems to improve safety and efficiency of State highways, preserve community character and protect public investment.

E.4d Encourage development near existing transportation corridors.

E.4e Discourage cul-de-sac and long dead-end roads to preserve public safety.

E.4f Encourage conservation development.

E.4g Support provision of public bus and volunteer driver program service.

E.4h Work with public airports to ensure compliance with State and Federal safety regulations, and protect public investments in the aviation system.

E.4i Support Townships as they develop and implement road maintenance policies.

E.5 A safe transportation network for all users

Provide for a safe and compliant transportation system through Best Practices.

E.5a Develop, adopt, and implement best practices such as Complete Streets, ADA Transition Plan, and Highway safety Plan to ensure safety and accessibility of all transportation users.

E.5b Support other jurisdictions planning efforts that address pedestrian and bicycle movement, such as Community Active Living Planning and implementation and Safe Routes to School Planning and implementation.

F. LAND USE

F.1 Agricultural Land is preserved for crop and livestock production

Protect agricultural land.

F.1a Review and update feedlot ordinances to promote agricultural activities, while protecting natural resources and neighboring residences.

F.1b Promote Agricultural Best Management Practices (BMPs).

F.1c Discourage rural residential development that will restrict animal agriculture.

F.2 Natural Resources are conserved in balance with Agriculture and Urban Development

Protect wildlife habitat, watersheds and aquifer recharge areas.

F.2a Promote land use practices that protect soil and water quality, particularly in wellhead protection areas.

F.2b Develop zoning standards for Low-Impact Development and conservation design land use techniques.

F.2c Discourage rural residential development that would impact natural resources.

F.3 Energy Facilities and Renewable Energy

Provide a monetary benefit to County residents while minimizing negative impacts to natural resources and local residents.

F.3a Revise the County Energy Ordinance for small-scale distributed power generation systems to reflect renewable energy technologies.

F.3b Support local review of energy and renewable energy projects.

F.3c Energy and renewable energy projects should address all impacts on natural resources and existing residences.

F.3d Encourage projects under State review to meet local development standards.

F.3e Encourage deployment of energy technologies, such as electric charging stations to serve the County and visitors

F.4 New Development Occurs within Municipalities and Designated Areas as Specified in the Land Use Plan

Balance costs and benefits of development outside incorporated areas.

F.4a Work with cities and townships to develop future development plans and orderly annexation agreements within a one-mile buffer around municipal boundaries.

F.4b Support development where appropriate, and where adequate public or private infrastructure can be obtained.

F.4c Support residential development within existing cities.

F.4d Development proposals should address all impacts on public services, including estimated emergency response times.

F.4e Encourage rural residential development in limited areas using conservation design.

F.4f Implement elements of the Development Agreement as appropriate, to address any negative impacts to land use and the transportation network.

F.5 Decision-makers, residents and investors have clear, understandable and usable policies, rules and regulations for development

Demonstrate continual improvement in development policies and procedures.

F.5a Regularly review and update zoning, subdivision, renewable energy, and adult use ordinances.

F.5b Regularly review and update the County All-Hazards Mitigation Plan.

F.5c Regularly review and update the Comprehensive Plan.

F.5d Provide and participate in professional training for planning and development.

F.5e Adequately support enforcement of all local regulations and ordinances.

F.5f Implement Cooperative Planning and Zoning as appropriate.

F.5g Consider a joint Planning Commission and Board of Adjustment to have consistent understanding and enforcement of land use issues.

TASKS FOR IMPLEMENTATION

While Murray County may not have the ability or authority to solve all of the issues identified in the plan, sustainability is related to County leadership. The County leaders must play an active role in coordinating efforts with all units of government. This coordination will help the County achieve successful implementation.

There are several critical tasks for effective implementation of this comprehensive plan:

Regulatory Review – Murray County should be committed to reviewing and revising its regulatory measures when the need arises including the zoning, subdivision, renewable energy, and adult use ordinances. Reviewing and updating these procedures when required will better implement the Comprehensive Plan's policies and recommendations.

Project Scheduling – By using project-scheduling tools such as capital improvements planning, the County will be better able to implement the most important public improvements on a priority basis while staying within budgetary constraints.

Coordination – The County should work with municipality and township governments to encourage new developments to occur in appropriate places. Proper planning will save money, effectively use/develop the land and help protect the environment.

Cooperation – County leaders must continually attempt to ensure that municipal leaders, township leaders, and residents are actively involved in planning meetings, discussions, and decisions.

Comprehensive Plan Review – The Comprehensive Plan itself should be periodically reviewed and updated as need and circumstances dictate. Changes and plan updates are necessary to reflect local ambitions and changing opportunities.

Zoning

Murray County's zoning ordinance lays out rules and regulations that allow particular land uses and activities to occur in specified districts. These districts are designated throughout the County and illustrated on the County Zoning Map. Zoning is typically the primary tool used by local governments to implement various planning policies. The official zoning map divides the County into a series of zoning districts, and the zoning text describes the regulations for the use of land within those specified districts. The zoning ordinance should be effective at addressing subjects such as permitted uses within specific zoning districts, lot sizes allowed, appropriate setback distances, density standards, and design controls.

Implementation Strategies

A first step in the review process should be to compare current and future land use to the official County Zoning Map. All major inconsistencies should be resolved. However, there may be some instances where the maps show inconsistencies but no changes should take place. Often there is a reason for differences between the two such as zoning on urban fringes allowing for growth while the current land use is crop production.

The second step in this process should be to review and update the zoning ordinance and map to implement the guidelines and goals outlined in the Comprehensive Plan. Some of these recommended changes include types of development allowed adjacent to the County's lakes and encouragement of rural housing within specified areas.

Formal training should be provided on legal criteria for all zoning, future land use, and variance decisions. This training would be useful when the Planning Commission, Board of Adjustment, or combination of the Planning Commission and Board of Adjustment, and the County Board of Commissioners make land use decisions. The training should detail what questions need to be asked and what types of responses are required before decisions can be made. This will ensure that all final decisions remain fair and consistent with this comprehensive plan, the updated zoning ordinance, and State and Federal law.

Very rarely should variances be granted. According to State Statutes, a variance can only be granted when a practical difficulty exists which has not been created by the property owner.

Subdivision Regulations

Subdivision regulations are also an important tool to implement the goals and policies of the Comprehensive Plan. A subdivision ordinance establishes standard design principles for the development of new subdivisions according to specified zoning districts. Those subdivision standards that are appropriately enforced can, in conjunction with zoning, help to ensure proper physical development and adequate public facilities in growth areas. Subdivision regulations will detail requirements for easements and right-of-way, road improvements, lot set backs and layouts, utility infrastructure, and other types of issues relating to development.

Implementation Strategies

Develop/Review, update and refine the subdivision ordinance to implement goals and policies of the updated Comprehensive Plan.

Enforce subdivision regulations within County jurisdiction areas.

Implement conservation development options which develops a piece of land by concentrating housing units together and leaves open space available, thereby preserving the natural environment and the rural character of the County.

Capital Improvement Plan (CIP)

Capital Improvement Planning is a very important tool in the implementation process. A Capital Improvement Plan establishes schedules and budget priorities for desired actions or outcomes within a specified period of time. A CIP is mentioned specifically within the Comprehensive Plan as a means to further plan for sustainable development of the County's various facilities. Generally, a CIP is begun by preparing a list of public improvements that have been identified as being necessary over a certain period of time. All projects are then reviewed and prioritized. Next, cost estimates are prepared and potential funding sources are identified. All CIP's should be reviewed for conformity with this Comprehensive Plan.

Implementation Strategies

Develop CIP's in needed departments that start with immediate needs and progress toward long-term needs. All items listed should be prioritized and projected based on projected sources of funds.

Growth Areas

While the population in Murray County continues to decline, the population of its municipalities has been able to remain fairly stable. Therefore, it should not be assumed that no municipal growth will take place in Murray County during the next 20 years. Many new residents will move into municipalities where they can receive amenities not realized by living in "the country". Because of this, the County should anticipate that some communities might look to expand their present borders sometime in the future. An area plan is a more tightly focused document that looks specifically at issues affecting an area of the County or community. Many cities complete neighborhood plans or corridor plans to examine issues, and give property owners and residents more specific information on their immediate area. Some area plans reach across several counties, while others focus on a few blocks of a downtown or tourist-oriented destination such as a resort or park. Area plans could be developed focusing on one-mile municipal buffers of existing city limits. The County should work with communities and adjacent townships to ensure that any growth that occurs does so in areas that are compatible with the Comprehensive Plan's policies and can eventually become part of the annexing city.

Murray County is also experiencing growth in the area around Lakes Shetek and Sarah. Given the nature of development and recent improvement in infrastructure, a specific area plan would be a useful tool to increase predictability of decision-makers, investors, and residents of this area.

Implementation Strategies

Work with communities and townships to appropriately designate the respective community's growth areas.

Work in conjunction with communities and adjacent townships to create an "Orderly Annexation Agreement" for the designated growth areas.

Any annexations contemplated should be adjacent to the respective community.

Cooperation

The Murray County comprehensive planning effort has been developed using citizen involvement and has initiated a healthy line of communication between residents of the County and its leaders concerning the best interests of the future of Murray County. This plan has, and will continue to have, a direct effect on the County's citizens. All of the County's residents should continue to have the opportunity to contribute to future planning discussions and decisions.

Implementations Strategies

Ample copies of the draft of this plan and future updates should be made for the general public to review and discuss, as well as electronic copies posted to the County website.

Comprehensive Plan Review

This comprehensive plan is not an unchanging or stagnant document and the planning process must continue to occur within the County. Although a lot of work went in to making this document as complete as possible, it will not stay complete due to the ever-changing needs and direction of the County. Some of the goals and objectives within the plan should eventually be realized, and with that, new objectives should be developed. In addition, the County's outlook will have to adjust to new issues or other prevailing factors. Therefore, the plan should be reviewed and updated, as warranted. The County should budget for the updating of the plan at least every five years, including funds for the reconvening of the Murray County Comprehensive Planning Advisory Committee. The Committee should be called together by the Commissioners from time to time in order to ensure the goals and objectives of the plan are being carried out and to review the plan for areas that need to be updated.

If or when changes are requested and found to be appropriate, they should be formally added by amending the plan. All such requested amendments shall be submitted to the Planning and Zoning Commission for review. After a public hearing has been held, the Planning and Zoning Commission shall make a recommendation to the Board of Commissioners who will then make a final decision.

Implementation Strategies

1. The Murray County Comprehensive Plan should be reviewed by the Murray County Comprehensive Planning Advisory Committee and the County Board of Commissioners every five years. During this review process, the Advisory Committee should review the plan for outdated policies or for issues that are not being adequately addressed due to unanticipated changes in County direction. After the committee has spent a minimum of one meeting reviewing the plan and identifying needed updates, the Murray County Board of Commissioners should consider any changes or updates and the plan be formally amended.

Specific Issues

As identified throughout the plan, there are many specific issues that the Murray County Comprehensive Plan attempts to address. Some of these special concerns are addressed below.

Agricultural Land Preservation

This Plan indicates in several sections that agriculture continues to remain at the center of the economic future of the County. Of sincere importance to the County is the preservation of the family farm and the ability of these families to remain a productive part of the County's economy. To further address agricultural land preservation and general environment quality, Murray County should continue to encourage best management practices (BMP) in all agricultural activities, which will protect the natural resources of the County. Growth is also encouraged to occur within the municipalities, this way, productive farmland will be preserved and citizens will be able to better utilize existing public services.

Economic Development

Economic development will be an important factor in reaching many of the goals outlined in the Comprehensive Plan. Vital to these goals will be the Murray County Economic Development Authority (EDA) and collaborations between local units of government: County, Municipalities, Townships, Lake Associations, School Districts and the Southwest Regional Development Commission.

Infrastructure/Public Facility Improvements

The maintenance and upgrading of infrastructure systems and public facilities is key to the economic vitality of the County. It is especially imperative that these services can be provided in the most efficient, cost effective and non-duplicative manner possible.

Environmental Protection

The County has substantial flexibility in matters of environmental protection including regulations for items such as shorelands, feedlots, septic systems, erosion control, wetlands, and wellhead protection. The County can also consider items such as a tree replacement ordinance or other methods to encourage sustainable practices. The water plan and solid waste plan are important planning tools in relation to environmental protection. These documents are incorporated by reference as major components of the Comprehensive Plan and undergo periodic review and revisions as provided by rules, statutes, and local changing conditions.

The Murray County Environmental Services Office will play a major role in conducting these activities and planning in general that promotes a sustainable environment. Education is a key factor in providing residents with information in regards to sound environmental and energy conservation practices.