

Community Assistantship Program

Big Stone County Draft Comprehensive Plan

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Big Stone County Draft Comprehensive Plan

Conducted in partnership with the
Upper Minnesota Valley Regional Development Commission

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CURA RESOURCE COLLECTION

**Center for Urban and Regional Affairs
University of Minnesota
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Preamble to the Big Stone County Comprehensive Plan

This Big Stone County Comprehensive Plan represents over three years of planning efforts by the Big Stone County community. The planning process began in 1998, when the County agreed to develop a Regional Plan for Big Stone, Chippewa and Lac qui Parle Counties. The Regional Plan, entitled, *Community Visions*, was adopted by each of the Counties in November, 2001.

Before the Regional Plan was adopted, the County began a second planning process to develop the specific contents of this individual Comprehensive Plan. This later planning process involved widespread participation from each of the local units of government, along with input received from many active citizens during a series of monthly public meetings.

It is the intent of this document to adequately represent the interests expressed throughout the planning process in the form of a Comprehensive Plan that will be used to help guide Big Stone County's future development.

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Chapter One: Introduction to the Big Stone County Comprehensive Plan



This document establishes a Comprehensive Plan for Big Stone County. The primary purpose of the Plan is to provide direction for growth and development by outlining what Big Stone County residents would like to see occur in the future. This Plan accomplishes that in two ways. First, Chapter Seven establishes the County's Goals, Objectives and Policy Guidelines. These describe how land use decisions should be made on a day-to-day basis. Second, Chapter Eight outlines which activities should be completed by the County to ensure the Plan is implemented properly.

The Big Stone County Comprehensive Plan focuses on growth and development issues for the next 20 years, or until approximately the year 2020. The following information is included in this Comprehensive Plan:

County Profile – Chapter One provides a profile of Big Stone County, including information on the County's history, social-demographics, and future population and household estimates.

Natural Resources – Chapter Two introduces the natural resource base of the area, including topography, water features and soils information.

County Land Use – Chapter Three examines Big Stone County's existing land use. Zoning, housing, agriculture, transportation and recreational areas are the major categories examined.

Community Profiles – Chapter Four presents a community profile for each of the eight cities located in Big Stone County.

Township Profiles – Chapter Five presents a township profile for each of the County's 14 townships.

Current and Emerging Issues – Chapter Six describes the types of local and multi-jurisdictional planning issues that will shape the County in the future.

Goals, Objectives and Policy Guidelines – Chapter Seven outlines what specific approaches the County should take to guide land use decisions. The 11 goals of the 1997 Community-Based Planning Act are used to help ensure the County has adequately examined all of the important components of a Comprehensive Plan.

Implementation – Chapter Eight explains how the Comprehensive Plan should be implemented. The primary feature is a temporary “work plan” for the County. In addition, the Chapter explains how the Comprehensive Plan can be updated whenever revisions need to be made.

The Role of the County Board and Planning Commission

On August 5, 1997, Big Stone County along with Chippewa and Lac qui Parle Counties signed an agreement to develop a region-wide comprehensive plan. They then contracted with the local Regional Development Commission, the Upper Minnesota Valley Regional Development Commission (UMVRDC), to facilitate the development of the regional comprehensive plan. On August 4, 1998, Big Stone County signed an agreement authorizing the Upper Minnesota River Pilot Project Joint Planning Board to expand the existing agreement to include individual county and city plans. On May ?, 2002, the Planning Commission voted to submit this Plan to the County Board of Commissioners. The Plan was formally adopted by the County on May ?, 2002.

The Community-Based Planning Act

In 1997, Minnesota passed the Community-Based Planning Act in order to provide a guide for updating comprehensive plans. The Act establishes eleven goal areas that should be addressed when local units of government are involved in the comprehensive planning process. Although the Act establishes the eleven goal areas, the specific objectives and policy guidelines found in this Plan are unique to Big Stone County. Big Stone County’s goals, objectives and policy guidelines are found in Chapter Seven.

Location of Big Stone County

Big Stone County is located in West Central Minnesota, approximately 170 miles west of the Minneapolis-St. Paul metropolitan area and 100 miles south of the Fargo-Moorhead area along the South Dakota border. As Map 1A shows, the County has eight cities and 14 townships. The County is characterized by the Minnesota River and Big Stone Lake which form its western and southern borders, numerous lakes and trees, rolling hills and vast agricultural land. The County shares borders with Traverse County to the north, Stevens County to the north and east, Swift County to the east, Lac qui Parle County to the south, and the South Dakota Border to the west.

A Profile of Big Stone County

This section profiles the people of Big Stone County, including information on the County's history, social-demographics and future population and household estimates. The Big Stone County Historical Society provided most of the information presented in the history section and the social-demographics section is based primarily on U.S. Census statistics. Finally, the population and household projections are based on the County's population trends over the last 40 years. The projections estimate the number of residents the County may lose or gain over the next 20 years.

Sowing the Seeds

~by Vera Woodard Krier~

~article provided by the Big Stone County Historical Society~

Man had moved away far to the south from the area, for the whole face of the land was covered with hard-packed ice, the result of season after season of snow and rain which froze and did not melt. Desolation reigned supreme! The weight of each new snowfall exerted additional pressure, and gradually the whole ice-pack pushed and slid its way southeastward, carrying along all in its path – crushing, grinding and smashing. Low areas were filled with debris from higher regions, mountain tops were ground down and literally thrown into the valleys.

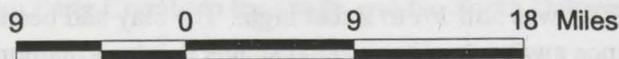
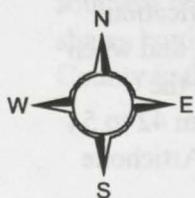
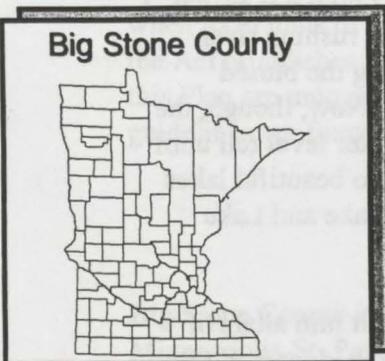
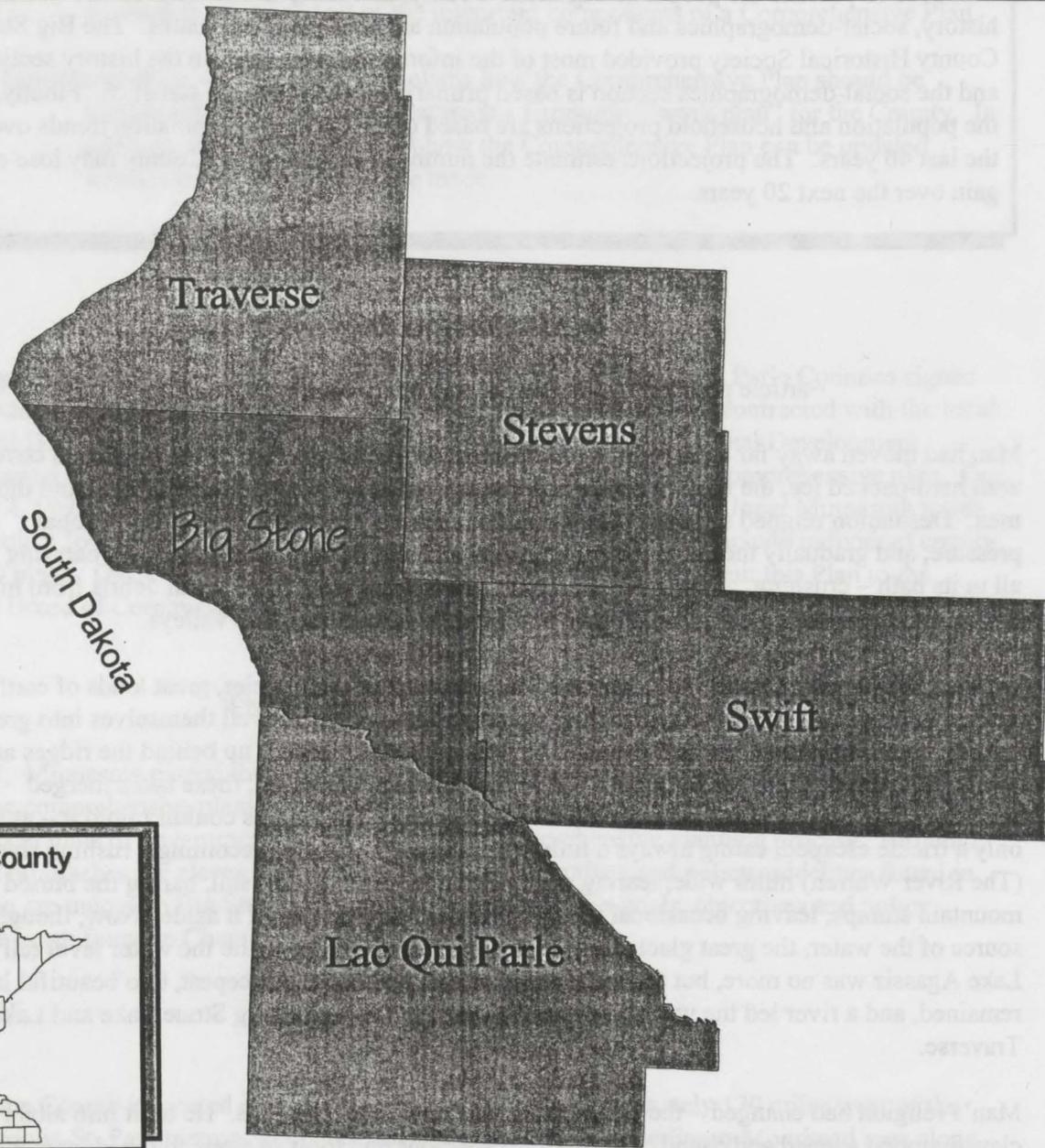
And then the sun came back! All along the southern edge of the glacier, great loads of earth were dumped in hills and ridges. Little trickling streams began, only to swell themselves into great, rushing rivers, eating new paths downward to the sea. Lakes backed up behind the ridges and angrily beat against them for an outlet. But as the thawing continued, these lakes merged themselves into one great inland sea, called Lake Agassiz. The ridges couldn't hold it – at first only a trickle escaped, eating always a little larger channel – finally becoming a rushing river (The River Warren) miles wide, tearing angrily at the loose sand and soil, baring the buried mountain stumps, leaving occasional islands as harder barriers turned it aside. Now, though, the source of the water, the great glacier itself had melted, and little by little the water level fell until Lake Agassiz was no more, but where the angry waters had dug the deepest, two beautiful lakes remained, and a river led the way out of them to the sea. So began Big Stone Lake and Lake Traverse.

Man's religion had changed – the god-elephant was now only a legend. He built him altars of clay, diamond shaped and round. He still used weapons and tools of stone, but had learned to improve them through the centuries. All was not peaceful, though, for many groups wished to gain a part of the new land. So man built walls of clay on high places, and hid behind them, the better to protect himself and to surprise his enemies. These things we know, for a fortification was discovered on the top of the hill at Odessa which is 722 feet long and 20 feet wide, and when surveyed in the early 1900s was still 1½ to 2 feet high. The clay had been carried up to the hilltop from some distance away. Another mound stands nearby – diamond shaped from 42 to 54 feet in diameter. Other mounds have been found on the shores of Big Stone Lake and Artichoke

**Community
Based
Planning**

Map 1A: Big Stone and Surrounding Counties

A cooperative effort
between citizens and
local and state government
to promote sustainability
in Region 6W.



Source: MNDOT BasMap 99
Date: 10/29/2001
Produced By: UMRDC GIS Service Bureau



Lake, some built by these early Mound Builders, and some presumably later by the Indians to be used as places for burial of the dead. These early Mound Builders, down the centuries, vanished, for at the time of the coming of white historians, this section was inhabited by the Indians.

They called themselves Dakotas, loathing the name of Sioux or Nodiosieux (meaning warlike) which their enemies gave them. In this region, the Sissetwoans (Swamp Dwellers) held tribal rights to the land. The tribe contained about 3,800 people with several villages located on or near Big Stone Lake. The principal headquarters were located at Traverse, but two permanent camp sites were built to enjoy the advantages of Big Stone Lake. One of these was located on the big island in the lake, where they were reasonably secure against a surprise attack. A second, on the hill where Big Stone City was later to be, was called Inkpa. This was a favorite rendezvous for the surrounding tribes, and a place where they brought their dead for burial. There were about 30 families in this village, living in summer in portable skin lodges, and in winter in more permanent abodes on the island.

Unrest had been a growing thing in the years preceding 1862, even without the decree that all Indians in the territory must move to the reservation in the fall. The first outbreak came when Inkpaduta, an outcast from his tribe since the murder of a neighboring tribesman, led a massacre at Spirit Lake, Iowa, and later at Springfield. A number of outlaw Indians banded together under Inkpaduta in 1857. When refused further food by a settler at Spirit Lake, they fell upon him and his family, murdering them all, and then proceeding from house to house they repeated the deed, killing all except four women whom they took prisoners. Altogether 47 persons were slain.

For five years a reward was offered by the white government for the apprehension of these outlaws. From time to time a few were brought in, but the leaders were never caught nor punished for their violence. The other tribes, observing this, began to believe that perhaps the whites could be outwitted, overpowered, and driven from this part of the country. Steadily this feeling grew, until on the 18th of August 1862, the Dakotas rose as one tribe to murder every white person that they could find.

Following this outbreak, the Dakotas were banished from the State, and their remaining lands confiscated by the government.

First to come to Big Stone County was Ole Bolsta, who arrived June 10, 1869, settling near Artichoke Lake. He came to America from Norway in 1862, arriving in Montreal with a bit less than five dollars as his only earthly possessions. For a time he worked as a blacksmith in St. Peter, Minnesota, where he married, and then came west in search of a homestead. His son, John Bolsta, born April 29, 1870, was the first white child born in the County.

There were several settlements made along the shore of Big Stone Lake, by Jacob Hurley and his sons at what is now Eternal Springs; John Peterson at what is now Mile Park (1871) and M. I. Matthews at Foster. Mr. Hurley came all the way from Arkansas with a wagon drawn by big-horned Texas oxen, bringing his family, all sick with the ague, hoping that the Minnesota climate would provide a curé.

The 1870 Census gives the following as the population of Big Stone County: 2 families with young children, 2 young couples, 1 bachelor, and a widow whose children ranged in age from a babe in arms to two nearly grown sons, and her young woman helper. By the spring of 1875, there were 85 families in the County.

In March 1874, Governor C. K. Davis issued a decree giving the region the status of a county, and legalizing its organization as such. Jacob Hurley, C. K. Orton and James N. Morrison were made the first County Commissioners, holding their first meeting on April 13, 1874. They levied the first County tax in 1875, amounting to \$228.96. Several lawsuits arose over the levying of these taxes, as test cases to prove whether the organization was really legal. The lower courts decided in favor of the County, but unexpectedly the Supreme Court reversed the decision, and the County was declared unorganized territory, and remained as such until 1881 when it was re-created by an act of the State Legislature. During these years, all County business transactions were administered from the County seat of Stevens County.

In the fall of 1881, Ortonville was voted by an immense majority as the permanent County Seat, and truly, Big Stone County was "Here to Stay."

**Table 1A:
Time-line of Early Events in Big Stone County's History**

1858	- Minnesota become the Country's 32 nd State
1862	- Sioux uprising
1862	- County authorized to organize under act of State Legislature
1869	- The first permanent European and other non native settlers came to the area
1881	- City of Ortonville is incorporated
	- City of Graceville is incorporated
	- City of Correll is recorded
	- Legislative Act declares Big Stone County legally organized
	- Ortonville selected the County Seat by majority vote
1890	- City of Clinton is incorporated
1891	- City of Beardsley is incorporated
1895	- City of Odessa is incorporated
1900	- City of Barry is incorporated
1903	- City of Johnson is incorporated

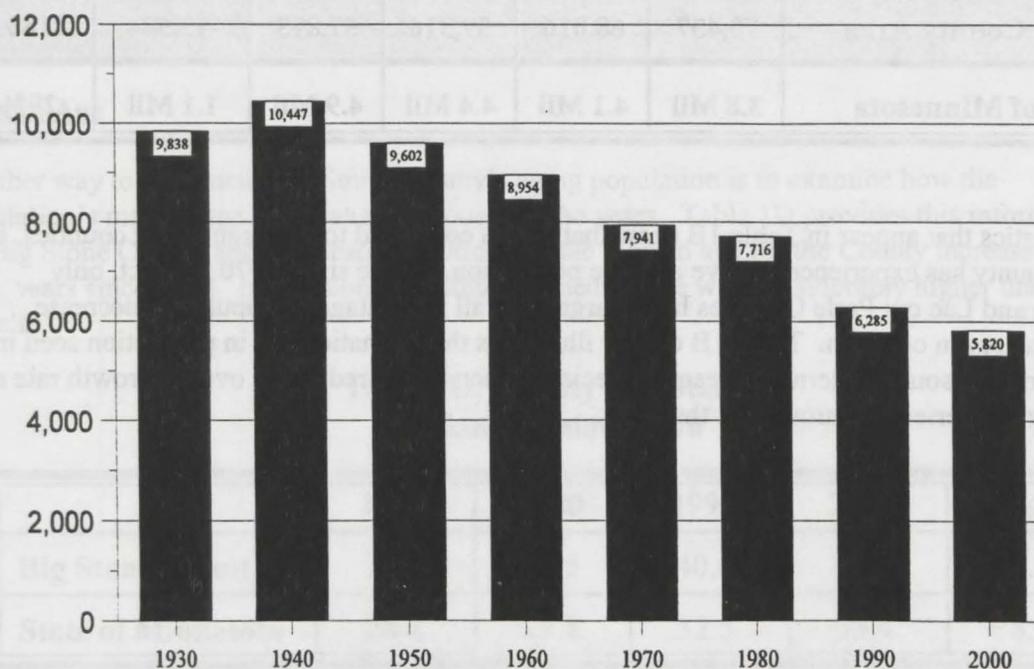
Population Profile

The U.S. Census provides a thorough assessment of the Country's population once every ten years. All of the information presented in this section is taken from Census records, including the recently released 2000 Census. In addition, much of the information presented in this section pertains only to Countywide data, rather than to specific cities or townships. This is because Chapters Four and Five present detailed information on each of the County's eight cities and 14 townships.

Historic Population Levels

One of the most important trends to analyze in a Comprehensive Plan is to determine what historic rates of population growth the County has experienced. Figure 1A presents Big Stone County's population data since 1930. The Figure shows that Big Stone County has lost residents over every decade except the 1930s, declining to its 2000 population of 5,820. The rate of decline has been steady except for a large drop in population over the 1980s. The current population consists of 48.5 percent males (2,824) and 51.5 percent females (2,996). In addition, 99 percent of the population classified themselves as "White" in the 2000 Census, with the "American Indian or Alaska Native" category having the highest percentage among the minority population (0.7%).

**Figure 1A:
Population Data for
Big Stone County (since 1930)**



One of the best ways to compare the County's rate of population growth or decline is to examine the population trends of neighboring counties. Table 1B shows population trends for Traverse and Stevens Counties to the north, Swift County to the east, Lac qui Parle County to the south and Roberts and Grant Counties in South Dakota to the west. The Table includes data for each County from 1970 to 2000 along with the State's information for the same time-period.

**Table 1B:
Seven County Area Gain in Population since 1970**

County (Major City)	1970	1980	1990	2000	30-Year Change	Percent Change
Traverse (Wheaton)	6,254	5,542	4,463	4,134	-2,120	-34%
Big Stone (Ortonville)	7,941	7,716	6,285	5,820	-2,121	-27%
Stevens (Morris)	11,218	11,322	10,634	10,053	-1,165	-10%
Swift (Benson)	13,177	12,920	10,724	11,956	-1,221	-9%
Lac qui Parle (Madison)	11,164	10,592	8,924	8,067	-3,097	-28%
Roberts SD (Sisseton)	11,678	10,911	9,914	10,016	-1,662	-14%
Grant SD (Milbank)	9,005	9,013	8,372	7,847	-1,158	-13%
Seven County Area	70,437	68,016	59,316	57,893	-12,544	-18%
State of Minnesota	3.8 Mil	4.1 Mil	4.4 Mil	4.9 Mil	1.1 Mil	29%

The statistics that appear in Table 1B show that, when compared to its neighboring counties, Big Stone County has experienced above average population decline since 1970. In fact, only Traverse and Lac qui Parle Counties had a larger overall percentage of population decrease among the seven counties. Table 1B clearly illustrates the dramatic drop in population seen in all of western and southwestern Minnesota especially when compared to the overall growth rate of 29 percent experienced throughout the State.

Population by Age Groups

Table 1C shows the breakdown of Big Stone County's population by age categories for 1970, 1980, 1990 and 2000. In addition, the Table also shows Minnesota's information for 2000. The data reveals that, since 1970, the County's population has become increasingly "older." Minnesota Planning projects the percent increase in elderly population will continue to grow at a larger rate than that of the total population over the next 30 years. It is during this time-frame that the "baby boomers" will reach their retirement age. This is a strong indicator of the need for many senior-related services, including senior housing and transit services.

**Table 1C :
County and State
Population by Age Groups**

Age Group	1970	1980	1990	2000	Minnesota in 2000	30-Year Change
Ages 0-19	38%	30%	28%	27%	29%	-11 %
Ages 20-59	40%	44%	43%	44%	55%	+ 4 %
Ages 60-84	21%	24%	25%	26%	14%	+ 5%
Ages 85 +	1%	3%	4%	4%	2%	+ 3 %
Totals	7,941	7,716	6,285	5,820	4.9 Million	- 2,121

Median Age

Another way to document Big Stone County's aging population is to examine how the population's median age has changed throughout the years. Table 1D provides this information for Big Stone County and Minnesota. Notice that the median age for the County increased by nine years since 1970. In addition, the County's median age was considerably higher than the State's.

**Table 1D: County and State
Median Age since 1970**

	1970	1980	1990	2000	Change
Big Stone County	34.6	36.5	40.0	43.6	+ 9.0
State of Minnesota	26.8	29.2	32.5	35.4	+ 8.6

Population Projections

The information presented in this Chapter helps to pinpoint a reliable range of population projections for the County for the next 20 years. Chapters Four and Five provide detailed population and household projections for each city and township located in Big Stone County. These projections should be used to plan for each of those identified areas. Table 1E presents three population projections for the entire County in addition to household projections. For this Plan, an average rate of change was determined by looking at population trends for the past 40 years. This historic-based projection is labeled "Based on the Last 40 Years" in the Table. The slow decline rate was established at 50 percent of the County's historic rate. For example, if the County lost 80 residents over the last 20 years, the slow projection would estimate that the County would lose another 40 people over the next 20 years. The fast population projection in Table 1E assumes that if population trends were to reverse and turn to trends of population gain the County would increase to their 1990 population numbers over the next 20 years.

**Table 1E:
20-Year Population Projections for Big Stone County**

	1960	1970	1980	1990	2000	Change
County's Population	8,954	7,941	7,716	6,285	5,820	-3,134
County's Households	2,603	2,808	3,188	2,463	2,377	-226
County's Population Projections		2005	2010	2015	2020	Change
Based on Slow Decline		5,629	5,438	5,247	5,056	-764
Based on the Last 40 Years		5,438	5,056	4,674	4,292	-1,528
Based on Slow Growth		5,936	6,052	6,168	6,285	465
Households - (2.45 per household)		2,005	2,010	2,015	2,020	Change
Based on Slow Decline		2,298	2,220	2,142	2,064	-313
Based on the Last 40 Years		2,220	2,064	1,908	1,752	-625
Based on Slow Growth		2,423	2,470	2,518	2,565	188

Table 1E suggests that Big Stone County would lose an additional 1,528 residents and 625 households by the year 2020 if it simply experienced the same rate of loss over the next 20 years as it has since 1960. This decrease will have a significant impact on all aspects of life in Big

Stone County. The most obvious problem is the economy: fewer people will make it more difficult for businesses to survive, furthering a cycle of decline. This, in turn, will make it difficult to attract new residents and new business to the area. With this in mind, it becomes even more important to diversify the economy in Big Stone County so that residents are not as vulnerable to the whims of the agricultural economy.

While the current trends show a declining population, it is still important to plan for the possibility of growth. Big Stone County will continue to strive toward bringing more residents into the area, promoting the beauty of the land and all that a rural setting has to offer. When populations do start to increase, the County would be best served to be prepared. One aspect of population projections must be clearly understood: *they only provide an estimate!* The underlying philosophy is not to be “right” as much as it is to be “prepared”. The text box below explains in detail what variables factor into population projections.

A note about population projections...

A population projection is a well-informed estimate of how many people could live in an area in the future. One of the best indicators used to make a reliable estimate is the area’s historic level of growth. For example, if a community has grown by an average of two people a year for the last 20 years, it is often assumed that this average rate of growth will continue into the future.

The difficult part of making population projections is determining whether past trends will continue and, if not, how they will change. The future population of a community is derived from its present population plus births and net migration minus any deaths. Therefore, any factor that influences births, deaths, or migration will alter the projected population. Finally, several things can affect the community’s attractiveness to both current and potential residents: ease and cost of commuting to employment areas; employment opportunities within the community; local housing supply and housing costs; and the community’s overall aesthetics (lakes, scenery, etc.).

As a result of the complexity of making population projections, they should be viewed with some caution. To help compensate for their uncertainty, the population projections used in this Comprehensive Plan provide a low, medium and high range of possibilities.

Household Numbers

A large decrease in the County’s population could mean a decrease in the number of households located in Big Stone County as was seen in the projections in Table 1E. Table 1F shows exactly how the number of households and the household size has decreased as the County has lost population since 1970. Knowing the total number of people and households is important, since

these numbers allow an average County household size to be established (i.e., the average number of people living in each household). Notice that the average household size in Big Stone County has decreased from 3.08 people per household in 1970 to 2.38 people per household in 2000. Families have become increasingly smaller, a fact that may contribute to the decreasing population in rural areas.

Table 1F: Big Stone County's Population, Household Numbers and Household Size since 1970

Year	1970	1980	1990	2000
Population	7,941	7,716	6,285	5,820
Household	2,537	2,873	2,463	2,377
Household Size	3.08	2.59	2.43	2.38

Chapters four and five provide household projections for each city and township in Big Stone County.

Chapter Two: Big Stone County's Natural Resources

Big Stone County is located in West Central Minnesota between the corn belt to the south and the lakes region to the north. As a result, the County has both strong agricultural and natural resource characteristics. This Chapter examines these characteristics, including sections on the County's climate, geology, original vegetation, watersheds, topography, soils, forested areas and water features. Much of the information for this chapter was obtained from the Big Stone County Comprehensive Water Plan and from the Minnesota DNR web page.

Climate

Big Stone County has wide variations in climate, with short and fairly warm summers and very cold winters, all characteristic of the Continental Climate Zone. The average mean high in Big Stone County is 74 degrees Fahrenheit in July and the average low is 12 degrees Fahrenheit in January. Temperature extremes in the area range from -42 degrees in February 1936, to 114 degrees in July 1927. The average annual precipitation in the County is 23.5 inches. About 70 percent of the annual precipitation occurs between May and September. Snowfall in winter months averages approximately 36 inches.

Geology

Big Stone County contains about 532 square miles of land and water, all influenced by glaciation. As a result, the County is covered by glacial drifts consisting of glacial till (a mixture of clay, sand, and silt along with gravel, cobbles and boulders), glacial lake sediments (particle sizes consisting mostly of clay and silt) and glacial outwash (sand and gravel-sized particles).

The topography of the County is closely related to glacial activity, which is responsible for most of the County's natural features. The County is characterized by a gently rolling glacial drift plain containing many closed depressions occupied by an abundance of small lakes and wetlands. The majority of the upland prairie is used for agriculture. Tree cover is concentrated on the banks of the Minnesota River Valley and its tributaries and around many of the lakes.

Original Vegetation

The first map of the original vegetation of Minnesota was initiated by Francis Marschner of the U.S. Department of Agriculture in 1929 and was completed in 1930. The map was based on examination of 240 volumes of survey notes and descriptions, and maps from the original land surveys of Minnesota made by the U.S. General Land Office from the mid 1800s through the early 1900s. This was prior to settlement and activities like cultivation, clearing and logging.

Big Stone County was predominately tall grass prairie, with areas of short grass and flowering prairie. To some settlers coming from Europe and the eastern part of the United States, the prairie looked like a vast wasteland of possibly poor soil, and the dense sod was difficult to breakup with a plow. A group of sea captains and their families arrived in the County in 1879

and felt at home because the waving grass looked somewhat like the sea. Throughout the prairie, numerous wetland communities were dominated by sedges and rushes, rather than with grass. These wetlands are known today as "prairie potholes."

The wooded areas in the County were limited to areas surrounding the lakes and rivers. From the earliest settlers on, farmers have been planting trees in Big Stone County to provide much needed wind breaks. The Big Stone Soil and Water Conservation District has encouraged farmers to plant more trees and shrubs for windbreaks by providing the plants and trees at minimum cost, as well as technical help and tree planting service.

Map 2A displays the County's native vegetation. Map 2A also reveals the location of open water resources found throughout the County, including lakes and large pockets of wet prairie land.

Watersheds and Topography

Big Stone County lies in three major watersheds; the Big Stone Lake Watershed, the Mustinka-Bois de Sioux, and the Pomme de Terre. The Minnesota River drainage system covers almost 80 percent of the County. Major sub-watersheds draining into the Minnesota River include Fish Creek, Salmonsens Creek, Stony Run and Five Mile Creek. The northeast portion of the County is drained by the West Branch of the Mustinka River into the Mustinka-Bois de Sioux Watershed. The eastern corner of the County is drained by Drywood Creek into the Pomme de Terre Watershed. Map 2B shows the locations of these watersheds and the boundaries of the minor watersheds within each of them.

Soils

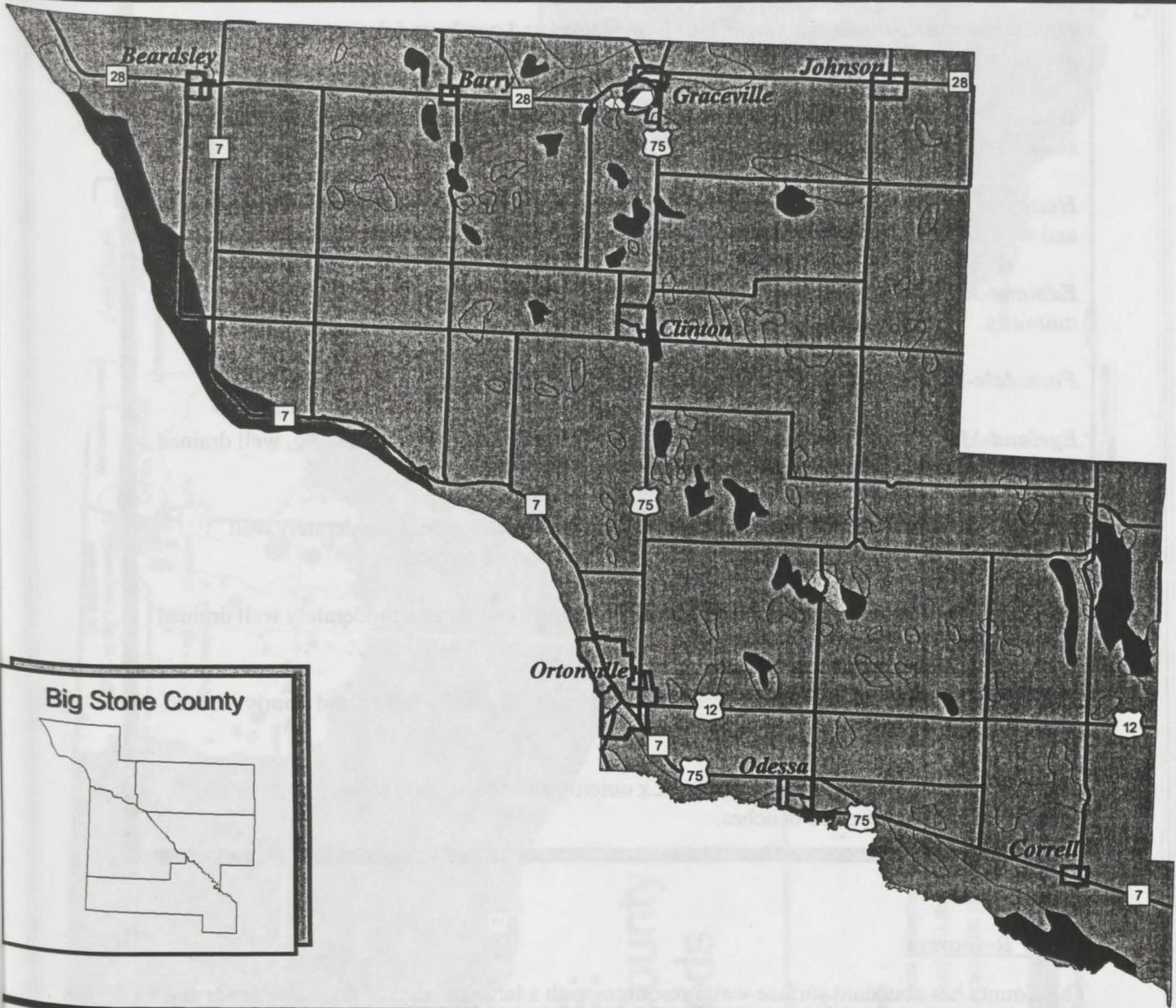
Soils develop from the breakdown of rock minerals and from plant and animal remains which are intermixed with them. The changing of rock into soil is an extremely long process, acting over thousands of years. This process has formed the County's soils from deposits originally left by the glaciers. As an agricultural County, soils are one of its most valuable resources.

Big Stone County has a wide variety of soil types due to the wide variety of glacial material left behind. In addition, the County's diverse land forms all contribute to a wide variety of soil characteristics. Climate, vegetation, and topography were also important in the formation of the County's soils.

Big Stone County's general soil associations and their characteristics are listed in Table 2A.

Map 2A: Big Stone County Pre-Settlement Vegetation

A cooperative effort
between citizens and
local and state government
to promote sustainability
in Region 6W.



Legend

	Cities		Prairie
	Major Roads		River Bottom Forest
Pre-Settlement Vegetation			
	Lakes (open water)		Undefined
	Oak Openings and Barrens		Wet Prairie

Source: MNDNR Data Deli
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau

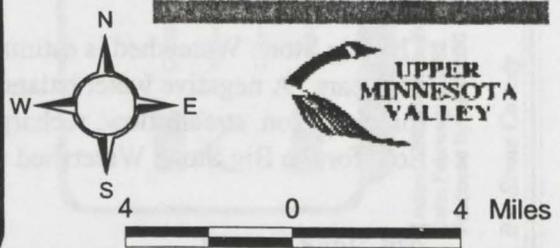


Table 2A: Big Stone County's Soils Association

Hamerly-Parnell-Lindaas Association: Nearly level and gently undulating, very poorly drained to moderately well drained soils on till plains and moraines.

Gonvick-Lindaas Association: Nearly level, moderately well drained and poorly drained soils on till plains and moraines.

Hattie-Fulda Association: Nearly level to rolling, poorly drained, moderately well drained, and well drained soils on till plains.

Edmond-Heimdal Association: Gently undulating to very steep, well drained soils on moraines.

Formdale-Buse Association: Gently undulating to hilly, well drained soils on moraines.

Egeland-Marysland-Estelline Association: Nearly level and gently undulating, well drained and poorly drained soils on outwash plains.

Fordville-Swenoda Association: Nearly level and gently undulating, moderately well drained and well drained soils on outwash plains and stream terraces.

Gardena-Glyndon Association: Nearly level and gently undulating, moderately well drained soils on glacial lake plains.

La Prairie-Lamoure Association: Nearly level, moderately well drained and poorly drained soils on flood plains.

Copaston-Rock Outcrop Association: Rock outcrop and nearly level to hilly, well drained soils on bedrock-controlled benches.

Water Resources

The County has abundant surface water resources with a large number of lakes, wetlands and numerous streams. The surface water bodies receive runoff and act as temporary reservoirs, making them very important in flood prevention and control. Big Stone County has a dozen lakes of more than 300 acres. Approximately 30 square miles of the County's total 532 square miles are water area.

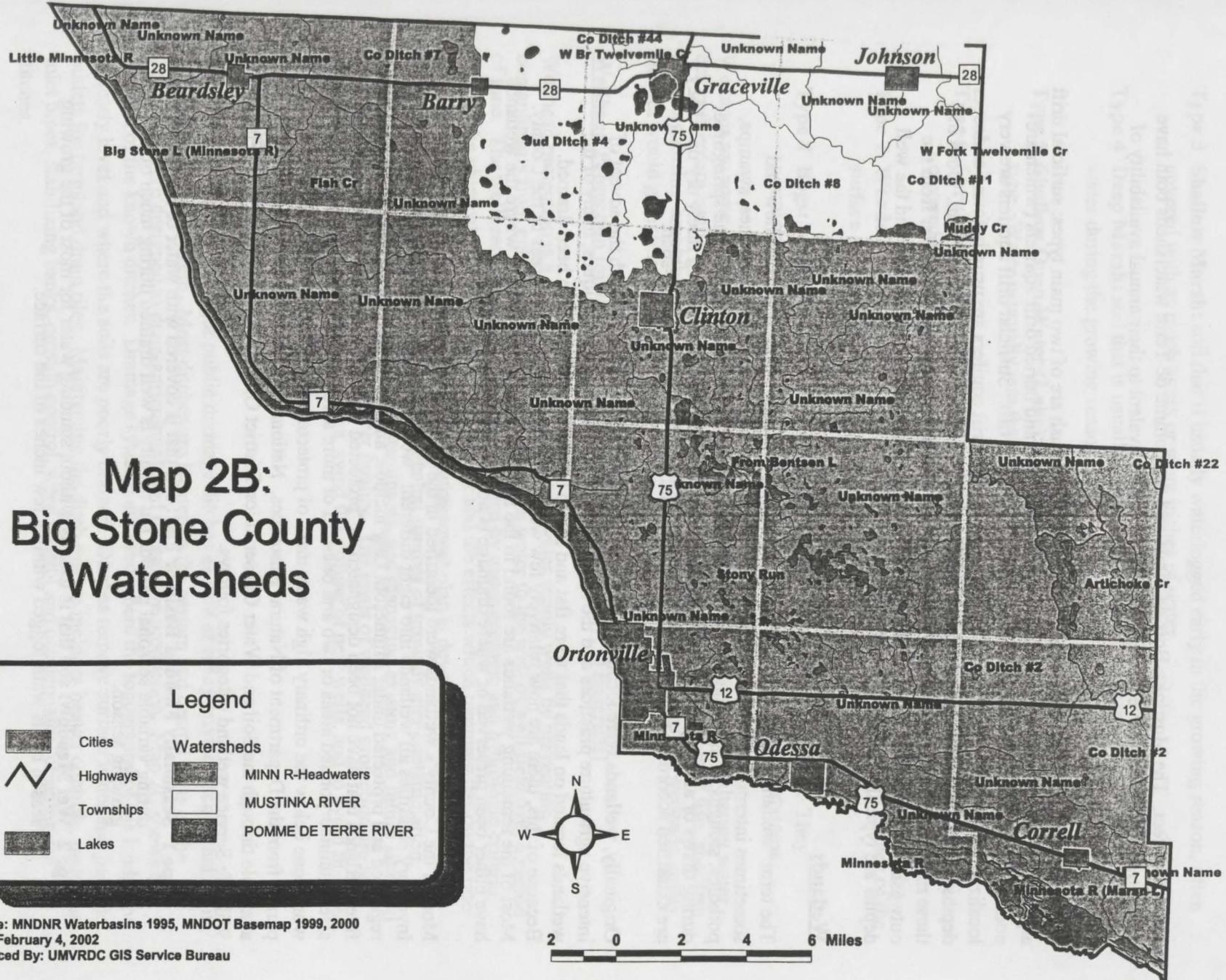
The Big Stone Watershed is estimated to have a positive water balance during both normal and dry years. A negative water balance exists when demand (withdrawal) exceeds input (precipitation, stream flow, rechargeable groundwater). The average water supply and instream flow for the Big Stone Watershed is about 49,000 acre-feet annually; the annual usage is about

Map 2B: Big Stone County Watersheds

Legend	
	Cities
	Highways
	Townships
	Lakes
	Watersheds
	MINN R-Headwaters
	MUSTINKA RIVER
	POMME DE TERRE RIVER



Source: MNDNR Waterbasins 1995, MNDOT Basemap 1999, 2000
 Date: February 4, 2002
 Produced By: UMRDC GIS Service Bureau



3,000 acre-feet. The Mustinka-Bois de Sioux and the Pomme de Terre watersheds both have only a trace of use and have instream flows that are equivalent to their annual availability of water.

Principal aquifers within the County's glacial drift outwash are of two main types: surficial drift aquifers (which are unconfined and are usually shallow) and buried drift aquifers (which are pockets of confined sand and gravel separated by glacial till). Surficial drift aquifers are very localized and usually do not cover a wide area. Buried drift aquifers are usually found at deeper depths. The County also has two minor aquifer types: Cretaceous and Precambrian. Both of these minor aquifers are contained within bedrock. These bedrock aquifers differ from the outwash aquifers in that they typically do not yield as many gallons per minute and the well depths are typically deeper.

Wetlands

The term "wetland" 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 have surface water only in the springtime during thaws or after rainstorms, while others may form shallow lakes which rarely dry up. They are classified according to their depth of water, total area, and seasonal life-span.

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. Most of the remaining wetlands are found in the moraine areas of the County where the wetlands have either been preserved or where drainage is not economically feasible.

Most of the County's wetlands were identified in the National Wetlands Inventory. This Inventory classifies all wetlands into eight different "wetland types." Wetlands which are regulated and protected under Minnesota Law include, and are limited to, all types three, four and five wetlands that have not been designated as "protected waters," which are ten or more acres in size in unincorporated areas or two and one-half or more acres in size in incorporated areas. Any work done below the ordinary high water mark of protected waters and wetlands requires a permit from the Department of Natural Resources. National Wetlands Inventory Maps are available through the Soil and Water Conservation District Office. A definition of U.S. Fish and Wildlife Service wetland categories follows.

Type 1 Seasonally Flooded Basin or Flat: soil that is covered with water or is waterlogged during variable seasonal periods but usually is well drained during much of the growing season.

Type 2 Wet Meadow: soil that is usually without standing water for most of the growing season but is waterlogged within a few inches of the surface.

Type 3 Shallow Marsh: soil that is usually waterlogged early in the growing season, often covered with as much as six or more inches of water.

Type 4 Deep Marsh: soil that is usually covered with six inches to three feet or more of water during the growing season.

Type 5 Shallow Open Water (Lake): shallow ponds and reservoirs are included in this type. Water is usually less than ten feet deep.

Type 6 Shrub Swamps: soil that is waterlogged during the growing season and is often covered by as much as six inches of water.

Type 7 Wooded Swamps: soil that is usually waterlogged at least within a few inches of the surface and is covered with as much as one foot of water.

Type 8 Bogs: soil that is usually waterlogged and supports a spongy covering. They normally occur in shallow basins, on flat uplands, and along sluggish streams.

Wetlands are some of the most productive ecosystems in the world. 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. Without wetlands, many species would go extinct.

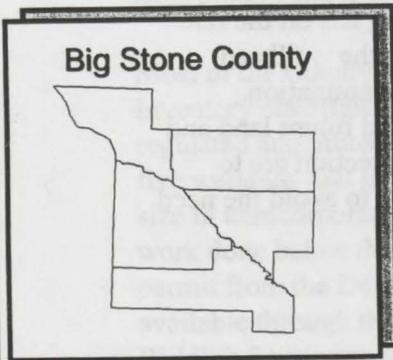
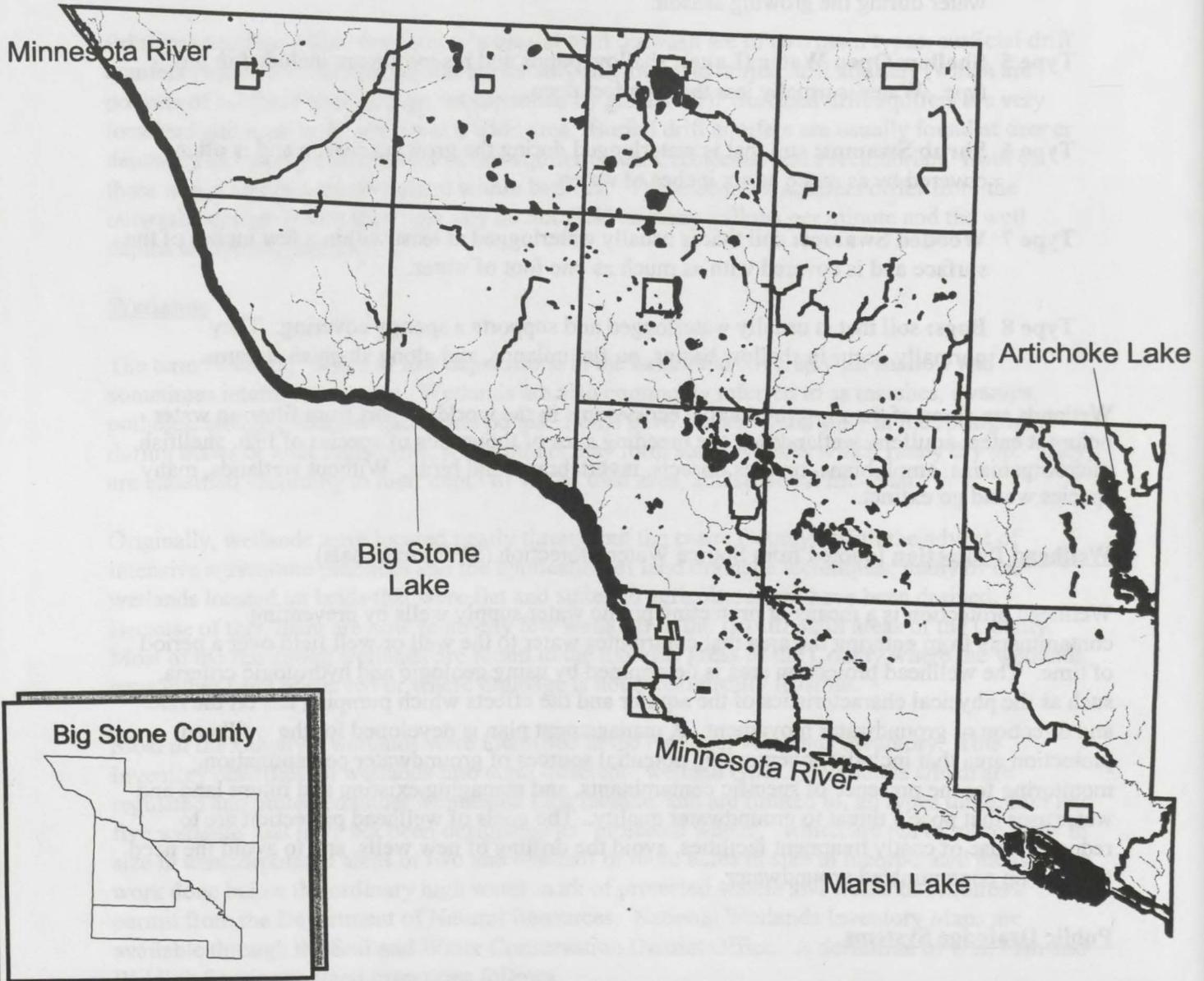
Wellhead Protection [quoted from Source Water Protection (SWP) materials]

Wellhead protection is a means of protecting public water supply wells by preventing contaminants from entering the area that contributes water to the well or well field over a period of time. The wellhead protection area is determined by using geologic and hydrologic criteria, such as the physical characteristics of the aquifer and the effects which pumping has on the rate and direction of groundwater movement. A management plan is developed for the wellhead protection area that includes inventorying potential sources of groundwater contamination, monitoring for the presence of specific contaminants, and managing existing and future land and water uses that pose a threat to groundwater quality. The goals of wellhead protection are to reduce the use of costly treatment facilities, avoid the drilling of new wells, and to avoid the need to clean up contaminated groundwater.

Public Drainage Systems

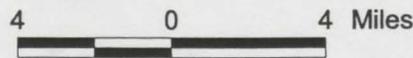
Big Stone County has 28 major public drainage ditches as well as many private ditches that drain into the legal drain system. Most ditches are located in the eastern and central parts of the County, and are designed to drain agricultural land to improve production. Map 2C shows the location of the known ditches. Drainage systems are used where the topography of the landscape is nearly level and where the soils are poorly drained. Ditches remove surface water and provide outlets for farmland drain tiles. Maintaining the ditch system includes beaver controls, installing inlet pipes, stabilizing banks, erosion control, weed control and occasionally "cleaning out" the ditches.

Map 2C: Big Stone County Drainage



Legend

- Intermittent Streams
- Rivers
- Perennial Streams
- Drainage Ditches
- Lakes



Source: MNDOT BasMap '99
Date: 10/25/2001
Produced By: UMRDC GIS Service Bureau



Aggregate Resources (Gravel Pits)

Gravel is used in virtually every element of our built environment. It is used for roads and bridges as well as for private development. The current demand for aggregate resources in Minnesota is the equivalent of one ten-ton truckload per citizen of the State each year. The annual demand for these resources has increased by 50 percent since the early 1980s to more than 50 million tons per year.

To help alleviate growing problems associated with aggregate resources, the Minnesota Department of Natural Resources is currently performing a number of aggregate resource inventories throughout the State. An inventory of Big Stone County's gravel pits was completed in 1991 with an update completed in 1997. The following are the results found in that inventory:

Fourteen pits are currently permitted in the County with most of the mineral extraction taking place at large consolidated pits in Section 31 of Browns Valley East Township and Sections 16, 17, 20 and 21 of Odessa Township. These sites were all permitted in 1991. One new pit located in Section 9 of Browns Valley East is periodically active. One active quarry remains in the County.

Several of the smaller gravel pits receive periodic use and it is questionable if gravel is sold or used only by the owner of the pit. Contact with landowners was not made during this inventory update. It was also difficult to determine whether or not these pits are "active." It was noted in the 1991 inventory that pits containing stockpiles were considered active. Therefore, stockpiles were noted in the update.

Sites that may be pollution potentials were documented but no formal means of determining the amount or type of pollution was made. One site located in Section 10 of Lower Akron Township is obviously polluted (containing various appliances and household garbage) and requires reclamation action. Some sites had side walls that can lead to erosion or safety problems. Any garbage, steep side walls or other obvious safety or pollution hazard were noted on the observation sheets of each site checked. Most sites, however, were very clean and would easily meet the garbage and safety standards set out in the 1991 conditional use permits.

1991 Inventory Results	
49 gravel pits located	3 quarries located
594 approximate acres	83 approximate acres
11 contained garbage	
17 were active	
1997 Inventory Results	
23 sites checked for activity -	
5 active, 12 periodically active,	
5 inactive, 1 quarry	
9 sites checked for pollution	

Waterfowl Production and Wildlife Management Areas

Waterfowl Production Areas (WPA) preserve wetlands and grasslands that are critical to waterfowl and other wildlife. These public lands, managed by the U.S. Fish and Wildlife Service, were included in the National Wildlife Refuge System in 1966 through the National Wildlife Refuge Administration Act. Part of the money collected through purchasing a Duck Stamp in Minnesota goes toward the acquisition and maintenance of these areas. Wildlife Management Areas are regulated by the Department of Natural Resources. Big Stone County has 83 Waterfowl Production and Wildlife Management Areas that appear in orange on the township maps presented in Chapter Five.

Snowmobile Trails

The snowmobile industry has increased greatly over the past few years to develop into a major industry for many parts of Minnesota. Snowmobilers bring business into the area every winter spending money for lodging, food, gas and any other number of items they may require. Promotion of Big Stone County's many miles of snowmobile trails can create a large tourism industry in the County each winter, broadening the County's economic base. Map 3A in Chapter Three (on page 8) shows the location of snowmobile trails in Big Stone County.

100-Year Flood Plain

The Federal Emergency Management Agency (FEMA) is an independent agency of the federal government whose mission is as follows:

To reduce loss of life and property and protect our nation's critical infrastructure from all types of hazards, through a comprehensive, risk-based emergency management program of mitigation, preparedness, response and recovery.

FEMA identifies floodplains based on the risk of flooding in a given year. On FEMA floodplain maps, the area identified as a floodplain indicates that there is a 1 percent chance of a flood occurring in that area in a given year. A flood occurring in an area with a 1 percent chance of flooding is known as a hundred-year flood.

Chapter Three: Big Stone County's Current Land Use

It is imperative to understand Big Stone County's current land use patterns before decisions should be made regarding the County's future land use. This Chapter examines Big Stone County's current zoning districts, parks and recreational areas, housing, transportation and agricultural land uses. In addition, maps of Big Stone County's recreational areas and functional road class are included in this Chapter.

Big Stone County's Current Zoning

Big Stone County's zoning districts are intended to provide for the most appropriate use of land while promoting orderly growth and development. Zoning districts shape current land use patterns by permitting certain uses and requiring conditions to be met prior to altering the landscape. Big Stone County's zoning districts directly impact and guide the land use illustrated on the township maps in Chapter Five. The following provides a brief description of the intent of each zoning district in Big Stone County.

Agricultural Preservation District (A-1)

This District is dedicated to agricultural and related uses in those areas best suited for such activities. It is particularly intended to preserve the County's prime and good agricultural lands for farming by encouraging future non-agriculture development in other Districts.

Agricultural Preservation District (A-2)

The A-2 Agricultural Preservation District, which generally contains "marginal" or "non-tillable" agricultural lands, has some areas that are "prime" or "good." This District is a transition district and is intended to provide a zone that will: a) Allow suitable areas of Big Stone County to be retained in and developed for agricultural use, b) Minimize scattered, non-farm development, and c) Ensure economy in the provision of public services through the clustering of non-agricultural uses in accordance with the Comprehensive Plan for the County.

Natural Areas Preservation District (OS-1)

The purpose of the OS-1 District is to identify areas of the County that are suitable for open space/recreational uses. This District also encourages the protection of unique ecological areas and fish and wildlife habitat. Included in this District are all public lands, lakes and "marginal" and "non-tillable" areas not presently in agriculture. Much of the land in this District is regulated by Big Stone County's Shoreland Management Ordinance and the Floodplain Management Ordinance or is public land owned by U.S. Fish and Wildlife or the DNR.

Urban Development District (U)

The Urban Development District is intended to provide areas in the unincorporated portion of Big Stone County for residential, commercial and industrial uses. The District is divided into three sub-districts:

Residential (R-1)

The R-1 Residential Sub-district is intended to provide a District which will allow low density residential development and on-lot utilities in areas adjacent to urban development, but where essential utility services may not be available, or in the residential groupings of unincorporated communities where it is desirable to encourage orderly growth and eliminate uncontrolled and incompatible use mixes.

Commercial (C-1)

The C-1 Commercial Sub-district is intended to provide a District which will allow compact and convenient limited highway-oriented business, closely related in existing urban areas in Big Stone County and at standards which will not impair the traffic-carrying capabilities of abutting roads and highways.

Industrial (I-1)

The I-1 Industrial Sub-district is intended to provide a District which will allow compact, convenient, limited, highway-oriented industry closely related to existing urban areas in Big Stone County and at standards which will not impair the traffic-carrying capabilities of abutting roads and highways. It is recognized that industrial uses are an important part of Big Stone County's land use pattern. The regulations for this District are intended to encourage industrial development which is compatible with surrounding or abutting Districts.

Shoreland Management Zone

The uncontrolled use of shorelands of Big Stone County affects the public health, safety and general welfare, not only by contributing to pollution of public waters, but also by impairing the local tax base. Therefore, it is in the best interests of the public health, safety and welfare to provide for the wise subdivision, use and development of shorelands of public waters.

"Shoreland" means land located within the following distances from public waters: 1,000 feet from the ordinary high water level of a lake, pond, or flowage and 300 feet from a river or stream, or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater.

Housing

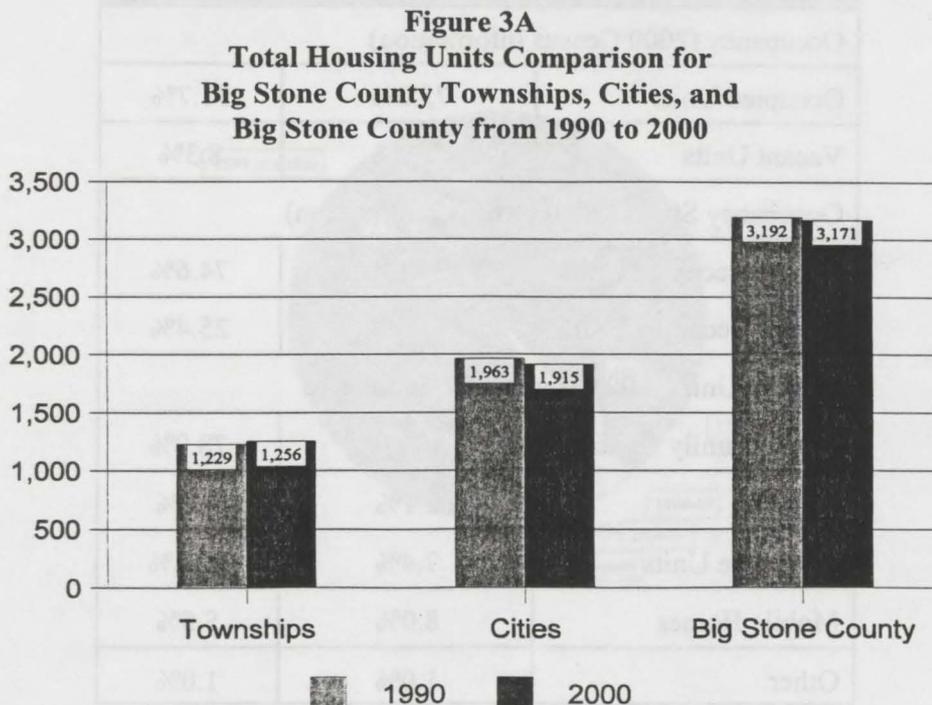
Current trends and population projections for the next 20 years show Big Stone County's population declining and the need for housing going down along with it. Even with the declining population it is important to plan for growth now, rather than be forced to make hasty decisions on how to handle a sudden population boom. It will be important for the County to focus its residential land use efforts on a wide variety of housing stock for all income and age groups. Furthermore, the location of additional housing needs to be re-evaluated on a regular basis. This could be partially accomplished by conducting housing studies once every five years.

Existing Housing

The 2000 U.S. Census provides a recent, official count of housing in Big Stone County. The Census reported 3,171 total housing units, including all single family houses, mobile homes, rental units and vacant dwellings. The 1990 Census reported 3,192 total housing units in Big Stone County. The change in total housing units in Big Stone County from 1990 to 2000 was a loss of 21 dwellings. Figure 3A compares the total number of housing units for all of Big Stone County's townships and cities and Big Stone County as a whole from 1990 to 2000.

Difference Between Housing Units and Households

The U.S. Census reports statistics for both total housing units and households. Housing units are the total number of liveable dwellings that are available. Households refer to the total number of occupied housing units.



As we see in Figure 3A, the majority of housing units in Big Stone County are located in the municipalities. This was true for both 1990 and 2000. However, it should be noted that while the number of housing units located within cities is decreasing, the number of housing units located in the townships is slowly increasing. A contributing factor to the expanding number of units in the townships could be attributed to the lakes, wetlands, and wooded areas in the County that offer attractive locations to build homes.

In 2000, 75 percent of the total housing units in Big Stone County were occupied, leaving 25 percent vacant. The majority of the vacant units were found in the unincorporated areas of the County. Of those units being used in 2000, 85 percent were owner-occupied while 15 percent were inhabited by renters. According to the 1990 Census (the most recent data available for this type of information), single family housing made up nearly 81.2 percent of the total housing stock in Big Stone County. Table 3A compares these and other housing characteristics for Big Stone County and the State of Minnesota based on the 2000 and 1990 Census. Notice that 85 percent of occupied units in Big Stone County were owner-occupied compared to 75 percent throughout the State. In addition, 81 percent of Big Stone County housing stock was single family units, compared with 79 percent in the State. The higher numbers for Big Stone County in these two categories are likely due to the significant number of housing units available in Big Stone County townships.

**Table 3A:
2000 Housing Characteristics for
Big Stone County and Minnesota**

Characteristic	Big Stone County	Minnesota
Occupancy (2000 Census Information)		
Occupied Units	75.0%	91.7%
Vacant Units	25.0%	8.3%
Occupancy Status (2000 Census Information)		
Owner Occupied Units	85.1%	74.6%
Renter Occupied Units	14.9%	25.4%
Type of Unit (1990 Census Information)		
Single Family Units	81.2%	78.9%
Duplex	2.1%	4.2%
3 or More Units	7.4%	22.2%
Mobile Homes	8.0%	5.5%
Other	1.0%	1.0%

Figure 3B shows the breakdown of housing construction by decade for Big Stone County. As Figure 3B illustrates, the large majority of Big Stone County's housing was built before 1940 (87 percent of total housing units). The same information is presented in Figure 3C in the form of a pie chart.

**Figures 3B and 3C:
Big Stone County Housing Construction by Decade
(Based on the 2000 Census)**

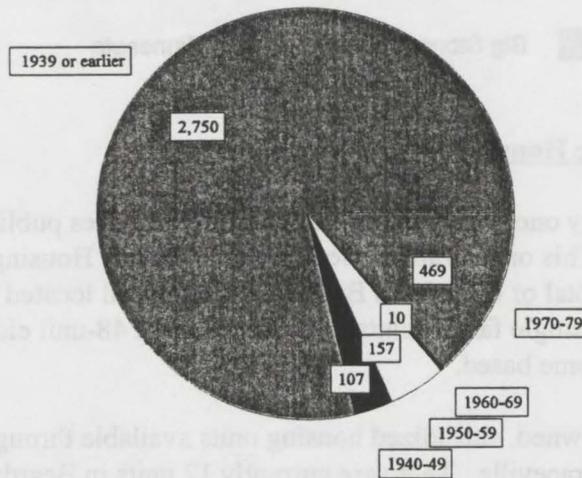
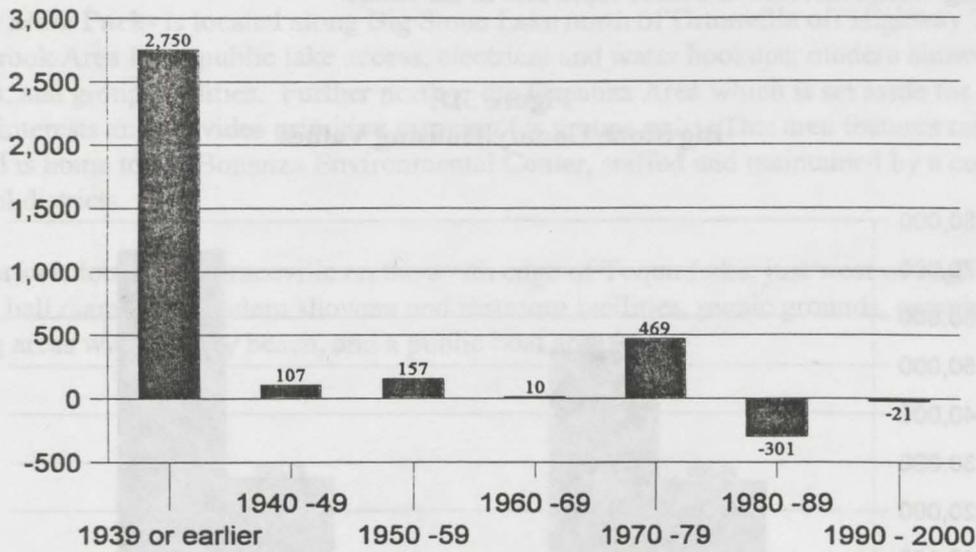
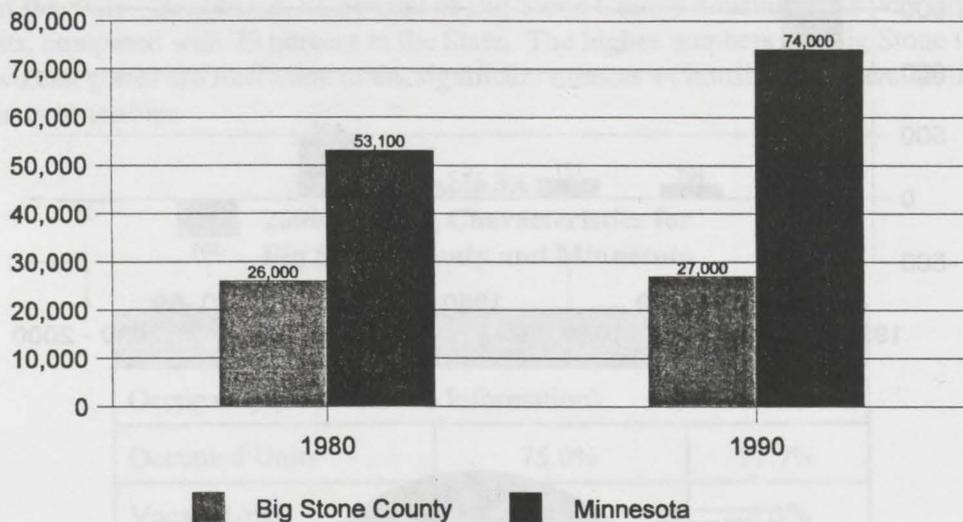


Figure 3D shows the median housing value for owner occupied housing in Big Stone County and for the State. The median value of housing in Big Stone County increased by 3.8 percent from 1980 to 1990, while the median value for housing in Minnesota increased by 39.4 percent. The 1990 median value of housing in the County was 37 percent of the State's median value, down from 49 percent in 1980.

Housing values rise and fall based on the demand for housing in an area. Currently, Big Stone County's population is falling, thus creating a greater supply than demand for housing. Attracting new residents through an expanded economy (including tourism and industry) will help housing values increase at a more rapid rate in the future.

**Figure 3D:
Big Stone County Housing Values**



Big Stone County Public Housing

Big Stone County has only one organization that currently provides public housing opportunities throughout the County. This organization, the Big Stone County Housing and Redevelopment Authority (HRA), has a total of 63 units in Big Stone County, all located in the City of Ortonville. There are 15 single family units in duplexes and a 48-unit elderly living building. Rent in HRA units is income based.

There are also privately owned, subsidized housing units available through Rural Development in Beardsley, Clinton and Graceville. There are currently 12 units in Beardsley, 36 units in Clinton and 24 subsidized units in Graceville. Ortonville also has privately owned, subsidized housing available in the Homerite Apartments. There are 11 subsidized units available here.

Big Stone County Parks

Big Stone County currently has three parks. Map 3A shows the location of these parks along with some of the County's other recreational areas. A description of the parks follows.

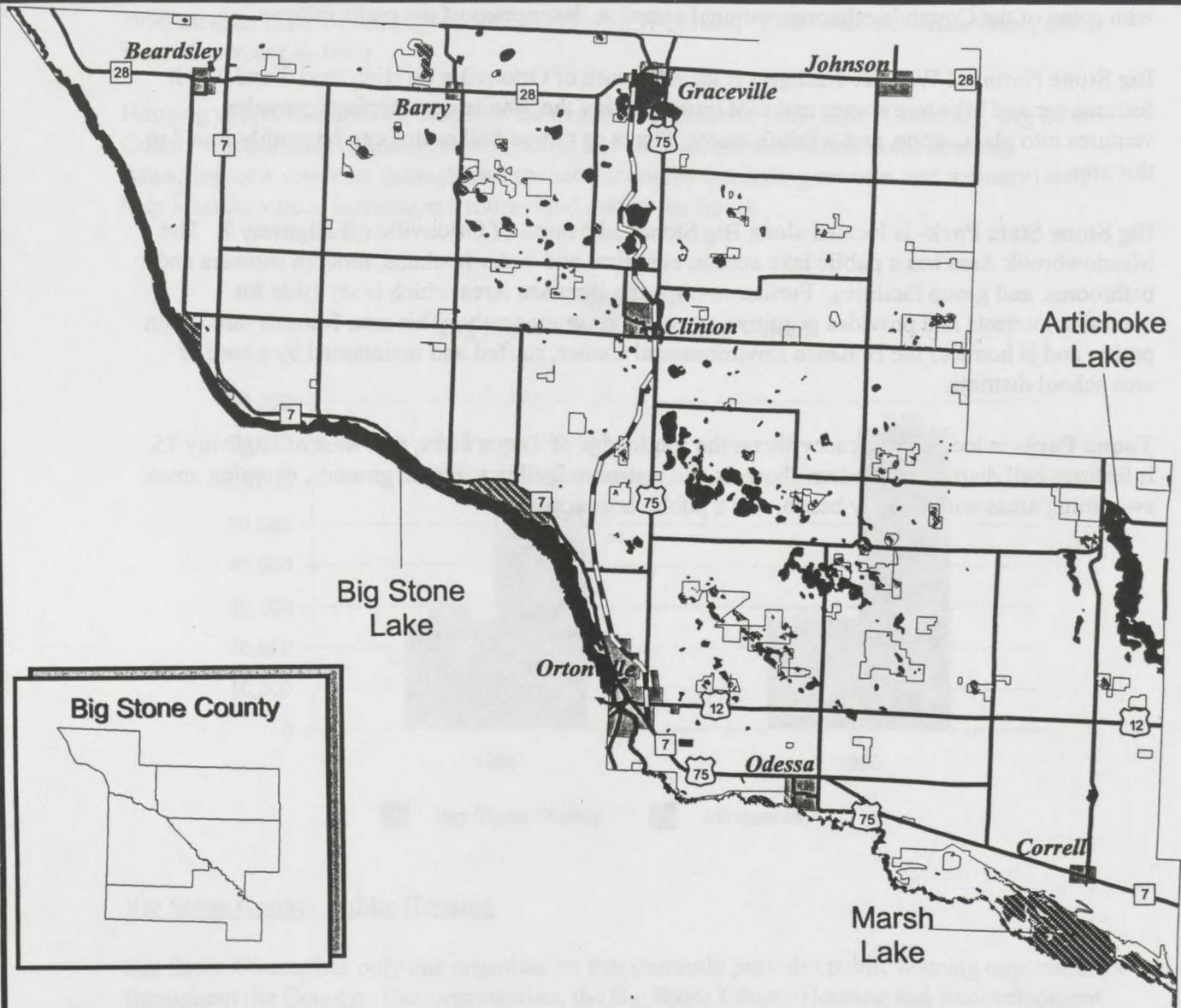
Big Stone National Wildlife Refuge - is located south of Ortonville on Highways 7 and 75. It features car and bike tour routes and foot trails. Hiking the granite outcroppings provides ventures into plant, stone, and wildlife study. Plants as rare as ball cactus can be readily found in this area.

Big Stone State Park- is located along Big Stone Lake north of Ortonville off Highway 7. The Meadowbrook Area has a public lake access, electrical and water hookups, modern showers and bathrooms, and group facilities. Further north is the Bonanza Area which is set aside for naturalist interests and provides primitive camping for groups only. This area features rare virgin prairie and is home to the Bonanza Environmental Center, staffed and maintained by a core of area school districts.

Toqua Park- is located in Graceville on the south edge of Toqua Lake, just west of Highway 75. It features ball diamonds, modern showers and restroom facilities, picnic grounds, camping areas, swimming areas with a sandy beach, and a public boat access.

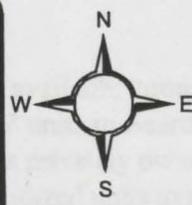
Map 3A: Big Stone County Recreational Areas

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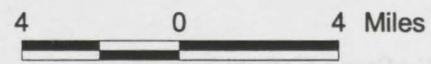


Legend

	Fishing Pier		Rest Area
	Wildlife Management Areas		Lakes
	Canoe Route		Major Roads
	Big Stone Snowmobile Club Trail		Cities
	State Parks		



Source: MNDOT BasMap 99, MNDNR 1999
Date: 10/25/2001
Produced By: UMRDC GIS Service Bureau

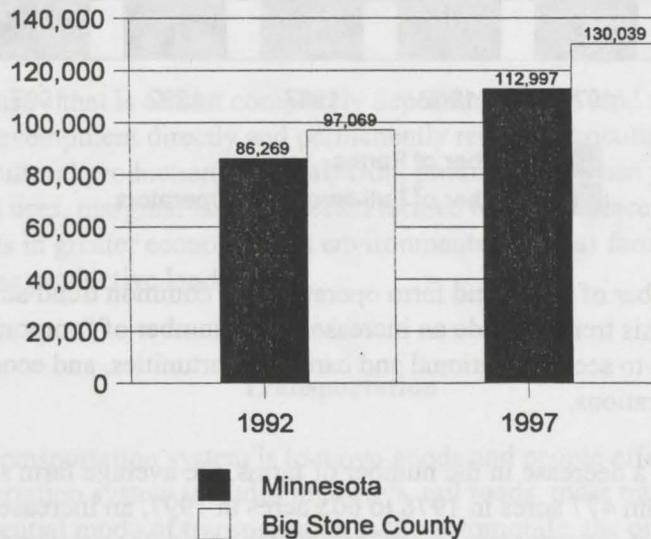


Agriculture

(Information for this section was obtained from the U.S. Census of Agriculture data in 1978, 1982, 1987, 1992 and 1997)

Agricultural activities are a vital industry in Big Stone County. According to figures from the U.S. Department of Agriculture, the total market value of Big Stone County's agricultural products sold in 1997 exceeded \$54 million. This was a 22 percent increase from 1992. In comparison, the total for all counties in Minnesota for the same time period was an increase of 28 percent, putting Big Stone County slightly below the average. Figure 3E compares the average change in market value of agricultural products sold per farm for Big Stone County and Minnesota from 1992 to 1997. Figure 3E illustrates that the average market value of products sold from Big Stone County farms increased by \$32,970 (34 percent increase) while the average for all Minnesota farms was an increase of \$26,728 (31 percent increase).

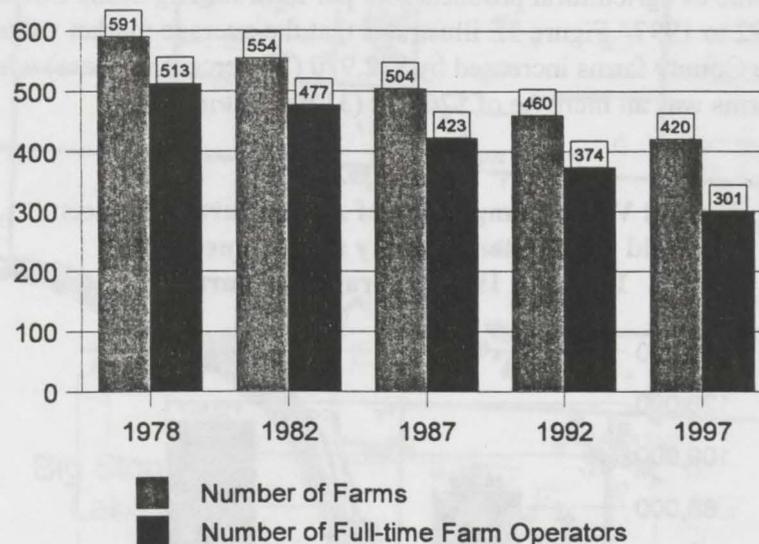
Figure 3E:
Market Value Comparison of Agricultural Products Sold in Big Stone County and Minnesota in 1992 and 1997 (Average Per Farm)



In 1997, crop land sales accounted for 70 percent of the market value of Big Stone County's agricultural products sold while livestock sales accounted for 30 percent. In comparison, 51 percent of agricultural products sold in Minnesota was from crop land while 49 percent was from livestock. The high percentage of crop land sales in Big Stone County shows that, while feedlots are becoming more prevalent in other counties, crop land continues to be the mainstay of the agricultural economy in Big Stone County.

Although agriculture is an important part of the economy in Big Stone County, the number of total farms is declining. Figure 3F indicates that between 1978 and 1997 the number of farms decreased from 591 to 420 (28.9 percent decrease). In addition, the number of full-time farm operators has decreased from 513 in 1978 to 301 in 1997 (41.3 percent decrease).

**Figure 3F:
Total Big Stone County Farmers and
Farm Operators from 1978 to 1997**

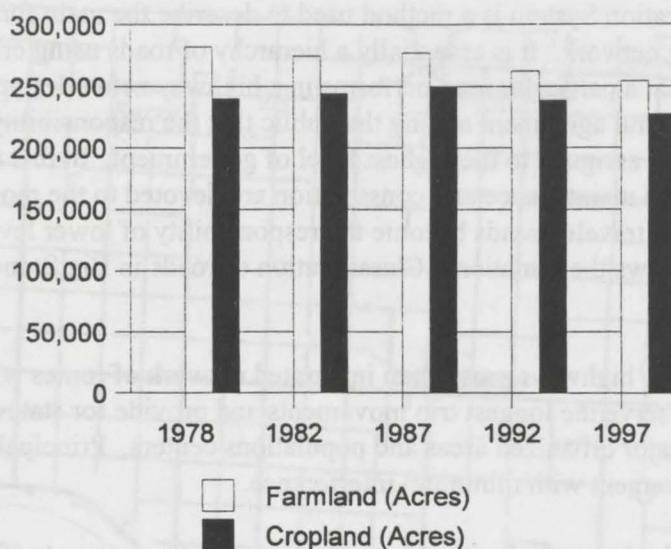


The decrease in the number of farms and farm operators is a common trend across Minnesota. Factors contributing to this trend include an increase in the number of “corporate farms,” youth moving off family farms to seek educational and career opportunities, and economic hardships faced by small farm operations.

Although there has been a decrease in the number of farms, the average farm size in Big Stone County has increased from 477 acres in 1978 to 605 acres in 1997, an increase of 128 acres. This is likely a result of the larger “corporate farms” buying land from the smaller farms as they go out of production.

Although the average farm size has increased in Big Stone County, the total farmland in Big Stone County has decreased from 282,080 acres in 1978 to 253,988 acres in 1997 (10 percent change). Factors causing decrease in total farmland include an increase in urban and rural residential land uses, conservation set-a-side programs that take marginal or environmentally sensitive lands out of agricultural production, expanding wetlands and to an extent, additional public land ownership. Figure 3G shows the change in total farm and crop land in Big Stone County from 1978 to 1997.

**Figure 3G:
Total Farm and Crop Land Acres in
Big Stone County (1978-1997)**



Agriculture is an industry that is almost completely dependant on the land as a resource. Urban and non-farm rural development directly and permanently remove agricultural land (including areas with high agricultural production potential) from production. When prime agricultural land is used for other land uses, marginal lands are often farmed to help replace the loss. This, however, often results in greater economic and environmental costs as farming activities are forced to occur on less productive land.

Transportation

The purpose of any transportation system is to move goods and people efficiently. An efficient and balanced transportation system includes highways, rail roads, mass transit and aeronautics. While the most influential mode of transportation is the automobile, the other types of transportation play an important role in the overall transportation system.

Highways

The current highway network in Big Stone County has been built in response to an ever increasing public demand for improved travel mobility. The local units of government and Mn/DOT are all responsible for assuring that the total highway system operates properly and the roads owned by the different levels of government are integrated into the overall highway system. Big Stone County is well served by an extensive roadway network, which connects the County with the rest of the region and Minnesota. State, County, City and Township roadways all are

included in the roadway network. It is the primary means of transportation for goods and persons within the County and to points outside.

The Functional Classification System is a method used to describe the main function each road performs in the highway network. It is essentially a hierarchy of roads using criteria that describes the function that a particular road performs in a highway network (typically access and mobility). There is a general agreement among the public that the responsibility for the most important roads should be assigned to the highest level of government. In this fashion, the greatest resources for road maintenance and construction are devoted to the most heavily traveled roads. It follows that less traveled roads become the responsibility of lower levels of government. Map 3B shows the Functional Classification of roads in Big Stone County. These roads are defined as:

Principal Arterial- These highways provide an integrated network of routes which carry the highest traffic volumes, serve the longest trip movements and provide for statewide or interstate travel. They serve all major urbanized areas and populations centers. Principal arterial routes provide for through movement with minimum interference.

Minor Arterial- These highways link cities, larger towns and other major traffic generators, such as major resort areas, to each other and to principal arterial routes. They form an integrated network which provides for movements within the State and between counties.

Major Collectors- These routes provide service to the County Seat and larger cities not served by the higher systems. They predominately serve trips within the County and link locally important traffic generators with their service areas and other nearby larger cities with higher order routes.

Minor Collectors- These routes link smaller cities and locally important traffic generators and provide developed areas reasonable access to a higher functioning roadway.

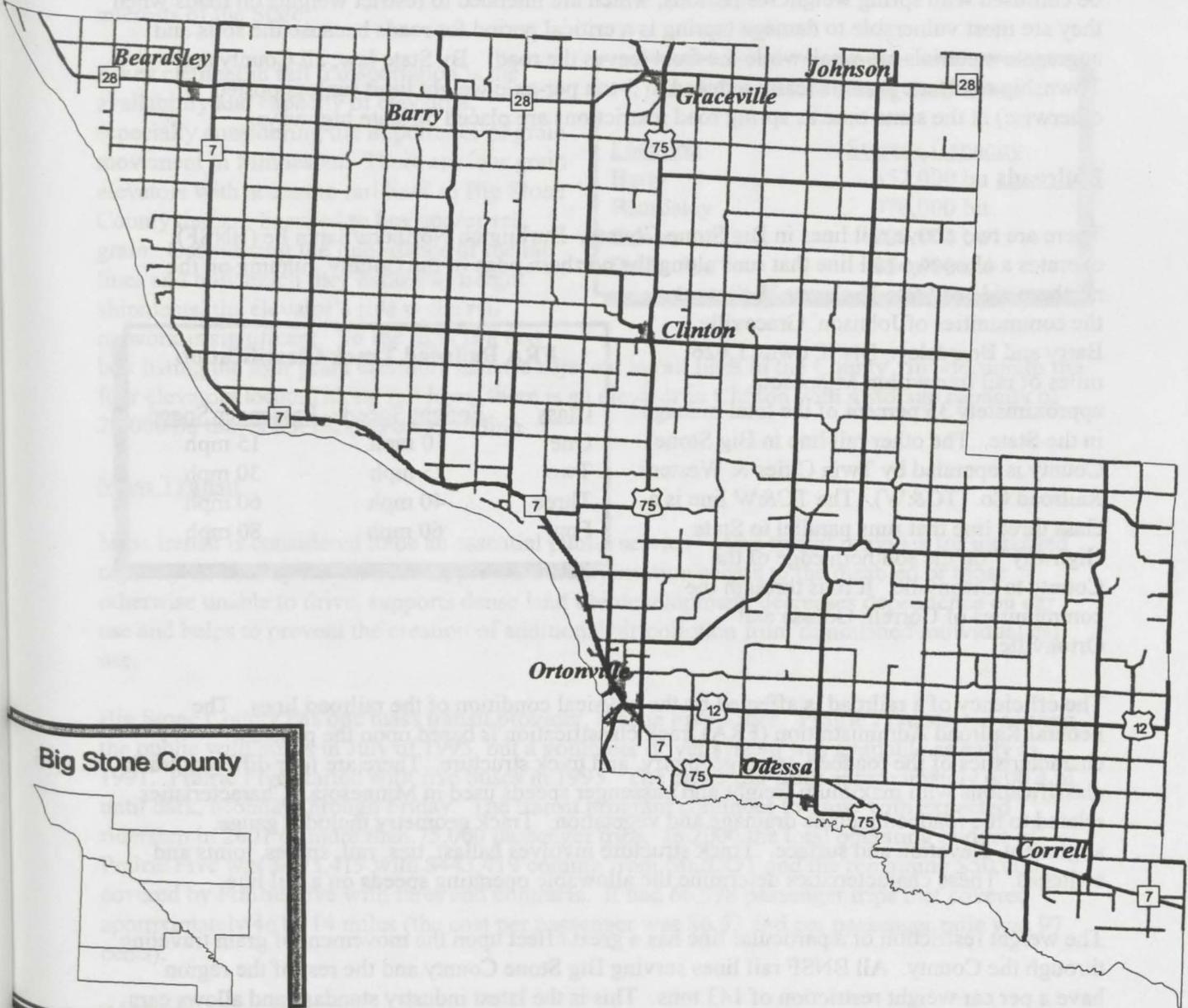
Local Roads- The rural local roads primarily service relatively low traffic volumes and short distance trips.

To the right is a text box that contains a breakdown for Rural Functional Classification Systems. Listed is the suggested breakdown and what actually exists in Big Stone County as reported by Mn/DOT. Map 3B shows the location of roads in Big Stone County and their Functional Road Class.

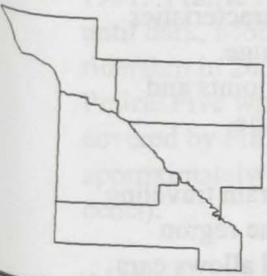
Functional Classification System Breakdown (Rural)		
<u>Road Type</u>	<u>Suggested</u>	<u>Big Stone County</u>
Principal Arterial	2-4%	5.18%
Minor and Principal Arterials	6-12%	9.19%
Major and Minor Collectors	20-25%	21.03%
Local Roads	65-75%	69.78%

Map 3B: Big Stone County Functional Road Class

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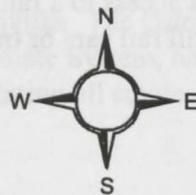
Big Stone County



Legend

Functional Road Class

-  Major Collectors
-  Minor Arterials
-  Minor Collectors
-  None
-  Principal Arterials



4 0 4 Miles



Source: MNDOT BasMap '99
Date: 10/25/2001
Produced By: UMRDC GIS Service Bureau



In order to protect the integrity and prolong the lifespan of the roads, weight restrictions are imposed on paved roads in Big Stone County. These year-round weight restrictions should not be confused with spring weight restrictions, which are intended to restrict weights on roads when they are most vulnerable to damage (spring is a critical period for roads because the soils and aggregate materials are weak while the frost leaves the road). By State law, all County and Township roads are automatically reduced to 5-ton per-axle weight limit (unless posted otherwise) at the same time as spring road restrictions are placed on state highways.

Railroads

There are two active rail lines in Big Stone County. Burlington Northern/Santa Fe (BNSF) operates a class two rail line that runs along the northern edge of the County, running on the northern side of State Highway 28 through the communities of Johnson, Graceville, Barry and Beardsley. BNSF owns 1,626 miles of rail line within Minnesota, approximately 35 percent of the total mileage in the State. The other rail line in Big Stone County is operated by Twin Cities & Western Railroad Co. (TC&W). The TC&W line is a class three line that runs parallel to State Highway 7 on the southern edge of the County to Ortonville. It runs through the communities of Correll, Odessa and Ortonville.

<u>Class</u>	<u>Freight Speed</u>	<u>Passenger Speed</u>
One	10 mph	15 mph
Two	25 mph	30 mph
Three	40 mph	60 mph
Four	60 mph	80 mph

The efficiency of a railroad is affected by the physical condition of the railroad lines. The Federal Railroad Administration (FRA) track classification is based upon the physical characteristics of the roadbed, track geometry, and track structure. There are four different track classifications with maximum freight and passenger speeds used in Minnesota. Characteristics related to the roadbed include drainage and vegetation. Track geometry includes gauge, alignment, elevation and surface. Track structure involves ballast, ties, rail, spikes, joints and switches. These characteristics determine the allowable operating speeds on a rail line.

The weight restriction of a particular line has a great effect upon the movement of grain traveling through the County. All BNSF rail lines serving Big Stone County and the rest of the region have a per car weight restriction of 143 tons. This is the latest industry standard and allows cars to be loaded with around 114 tons of grain. When added to the weight of the new larger rail cars this adds up to 143 tons. Without access to a rail with strength to handle these hopper cars, a shipper must choose between small rail cars or truck transportation.

Mn/DOT's Office of Freight, Rail and Waterways has identified both the rail lines in Big Stone County as primary rail lines. Primary rail lines make national and international connections between producers and markets and ensure protection of the current and future broad economic interests of the State.

A key element in rail transportation is the availability and capacity of elevators, especially considering the importance of grain movement in Minnesota. There are four grain elevators with access to rail lines in Big Stone County that are licensed to buy and/or sell grain. Considering the importance of the rail lines and how much they handle in freight shipments, the elevator's role in the rail network is significant. To the right is a text box listing the four grain elevators that are adjacent to rail lines in the County. In addition to the four elevators located along rail lines, there is an elevator in Clinton with a storage capacity of 20,000 bu that is not located on a rail line.

<u>Location</u>	<u>Storage Capacity</u>
Barry	652,000 bu
Beardsley	978,000 bu
Odessa	220,000 bu
Ortonville	854,000 bu

Mass Transit

Mass transit is considered to be an essential public service. Mass transit provides for increased capacity on heavily traveled roads, provides transportation access to the disabled or those otherwise unable to drive, supports dense land use development, decreases dependence on car use and helps to prevent the creation of additional air pollution from diminished individual car use.

Big Stone County has one mass transit provider, Prairie Five Rides. Prairie Five started serving the public with buses in July of 1995, but a volunteer driver system was available as early as 1991. Prairie Five started with five buses in 1995. The buses run from approximately 6:00 a.m. until dark, Monday through Friday. The transit program continues to grow with expected ridership in 2001 of more than 75,000 passenger trips. In 2000 the total operating budget of Prairie Five was \$493,419 with \$443,419 coming from Mn/DOT and the remaining \$50,000 covered by Prairie Five with fares and contracts. It had 66,978 passenger trips that covered approximately 461,114 miles (the cost per passenger was \$6.63 and per passenger mile was 97 cents).

Airports

Big Stone County has one airport located in Ortonville. The Ortonville airport is classified by the Mn/DOT Office of Aeronautics as an Intermediate System, having a paved and lighted runway less than 5,000 feet capable of accommodating all single-engine and most twin-engine aircraft, as well as some light jet aircraft.

Maintenance of the Transportation Network

The transportation network in Big Stone County represents a huge investment of taxpayer dollars and is essential in supporting many aspects of the County's economy. If some of the elements of this network are neglected or poorly managed, substantial reinvestment may be needed to restore capacity and performance. Listed below are some common planning practices that can promote efficiency and prolong the effective life of the entire transportation system.

Access Management

Access Management is an effort to maintain the effective flow of traffic on all roads while accommodating the access needs of adjacent land development. Essentially, it is a tool that limits the number, spacing and design of accesses along highways. Access Management, when used properly and consistently, can provide safer roadways, more efficient movement of traffic, improve cost-effectiveness and coordinated and managed growth along major roadways. Unfortunately, there are no commonly accepted and consistently applied guidelines for managing accesses and existing access management practices and definitions of appropriate access levels vary throughout the State. However, the Minnesota Department of Transportation Office of Access Management can assist with guidelines and studies that it has developed.

Road Weight Restrictions

The majority of roads in Big Stone County are built to handle 9- or 10-ton per-axle vehicles. Despite the cost of constructing and maintaining a 9- or 10-ton road, it is more efficient to build a sturdier 9-ton road that will last much longer than a road capable of handling only 5- or 7-ton per-axle vehicles. During the spring thaw when roads are most vulnerable, many of the roads are downgraded to a 5- or 7-ton per-axle weight limit. However, it is not uncommon for a new development to be built in a rural area adjacent to a road that is not sufficient to handle heavy commercial traffic making it necessary to use finite government resources on roads that normally would not merit the upgrade. Therefore, the County should create an ordinance that prohibits development that requires a 9- or 10-ton roadway from locating in areas not currently served by a 9- or 10-ton roadway, unless that development is willing to pay for the expense of upgrading the necessary roads.

Airport Expansion

The County and the City of Ortonville need to limit development in areas adjacent to the airports. This will allow for the eventual expansion of the airports by preventing encroachment of incompatible land uses and maintaining runway protection zones. If the area surrounding the airport is allowed to be developed, it will prevent the airport from expanding in the future and may actually require the airport to be re-located.

Chapter Four: Community Profiles

This Chapter includes a community profile for each of the eight cities located in Big Stone County. The profiles include information on the city's residents and number of households, along with a description of the city's major roadways and surrounding natural resources. The population and household information presented uses the 1960 to 2000 Census records. A Current Land Use Map is included that shows where the city's residential, industrial, retail/commercial, public and recreational areas are located. The maps also show urban growth areas (if any were identified) along with an aerial photograph of the surrounding landscape.

How to use the Community Profiles

There are two main features included in each community profile. The first is a table that presents the city's population, household numbers and household size since 1960 (including the recently released 2000 Census data). The second feature is a current land use and urban growth area map. The population and household information is used to establish a "historic-based" rate of population gain or, in some cases, a historic-based rate of population loss.

Population projection is not an exact science, many unpredictable factors can influence the direction population trends take. The best that can be done is to make an educated guess based on the direction population trends have taken in the past. For this Plan, an average rate of growth was determined by looking at population trends for the past 40 years. This historic-based projection is labeled "Based on the Last 40 Years" in the table. Understanding how many factors can influence an area's population, the table also presents what the city's future population would be if either a "slow" or "fast" population growth occurred. The slow annual growth rate was established at 50 percent of the city's historic rate. For example, if a city gained 80 new residents over the last 20 years, the slow projection would estimate that the city would gain another 40 people over the next 20 years. In an attempt to give a broader picture, a fast annual growth rate was also included. Although the area has experienced a declining population across the board, it is important to be prepared for a reverse in this trend back to increasing population numbers. It is reasonable to assume that if the population trends were to turn to population gain, population numbers could possibly increase to their 1990 numbers over the next 20 years. For example, if a community lost 20 people in the 1990s, the fast annual growth rate would project a gain of 20 people over the next 20 years to a total population equal to the city's 1990 population.

The information presented in the second major feature of each community profile, the current land use and urban growth area map, was provided by each of the cities during the planning process. As the name suggests, the maps show the location of each city's major types of land use (i.e., residential, commercial, etc.). In addition, some cities identified where they could logically grow in the future, referred to as the city's "urban growth area." The primary purpose of these areas is to identify where joint planning efforts need to be made by the city, the township(s) and the County. In conclusion, urban growth areas only identify *potential* future growth and, more important, all land use decisions that need to be made regarding these areas should be collectively discussed by all three levels of government.

A Profile of Barry

The City of Barry is located approximately six miles west of Graceville along Minnesota Highway 28. Barry is also the County's smallest City with 25 residents and 12 households (2000 Census). In addition to Minnesota State Highway 28, County Road 7 runs north/south through the center of the City and the Burlington Northern Railroad runs parallel to Highway 28. Barry shares borders with Toqua Township.

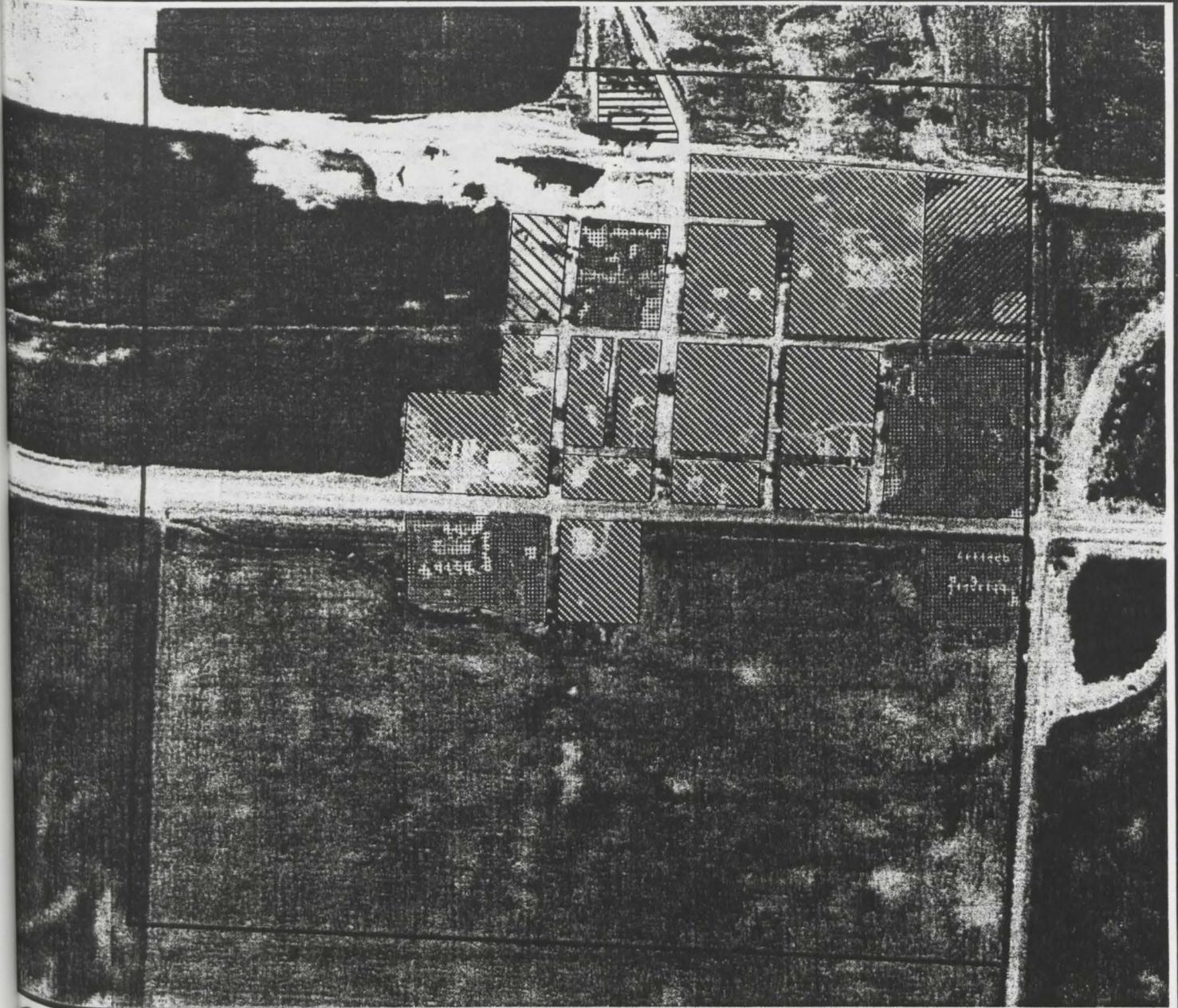
Barry's population has been declining since 1960, losing 35 residents over 40 years, over half its 1960 population (see Table 4A). The City's population projections estimate that Barry should continue to decline at a slow, but steady rate over the next 20 years, possibly bringing the population as low as nine residents in the year 2020. While the population of Barry has been declining, the City has only two fewer households than it did in 1960. The number of households actually increased in the 1970 and the 1980 Census. The explanation for the discrepancy between population and household trends is in the average household size. The number of persons per household has seen a decrease of more than two persons per household since 1960. As a result it is equally, if not more important to look at the number of households and the average household size when predicting population numbers and what they mean for the future of a community.

Table 4A: Barry	1960	1970	1980	1990	2000
Population	60	52	43	40	25
Households	14	15	17	15	12
Household Size	4.29	3.47	2.53	2.67	2.08
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	23	21	19	17	-8
Based on Last 40 Years	21	17	13	9	-16
Fast Annual Growth	29	33	37	40	15
Households	2005	2010	2015	2020	Change
Slow Annual Growth	12	12	12	12	0
Based on Last 40 Years	12	12	11	11	-1
Fast Annual Growth	13	14	15	15	3

Map 4A depicts Barry's zoning. As can be seen in the Map, much of the land within Barry's city limits is not zoned. Much of the zoned land in Barry is either residential or agricultural. There is a small section of industrially zoned land in the northern part of the City. Barry has also zoned an area in the northeastern portion of the town for parks and recreation.

Map 4A: City of Barry Zoning

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Legend

- | | | | |
|---|------------------------------|---|-------------|
|  | UGB (None Identified) Zoning |  | Residential |
|  | City Limits |  | Vacant |
|  | Agriculture | | |
|  | Industrial | | |
|  | Parks/Recreation | | |

Source: MNDOT BasMap '99, USGS DOQ 1991
Date: 12/8/2002
Produced By: UMRDC GIS Service Bureau



400 0 400 Feet



A Profile of Beardsley

The City of Beardsley is located approximately five miles east of the South Dakota border in northern Big Stone County. The City is situated along State Highway 28. The community is also within five miles of Big Stone Lake, the County's largest lake. The City's 262 people and 125 households make it the County's fourth largest City. Beardsley shares borders with Browns Valley Township.

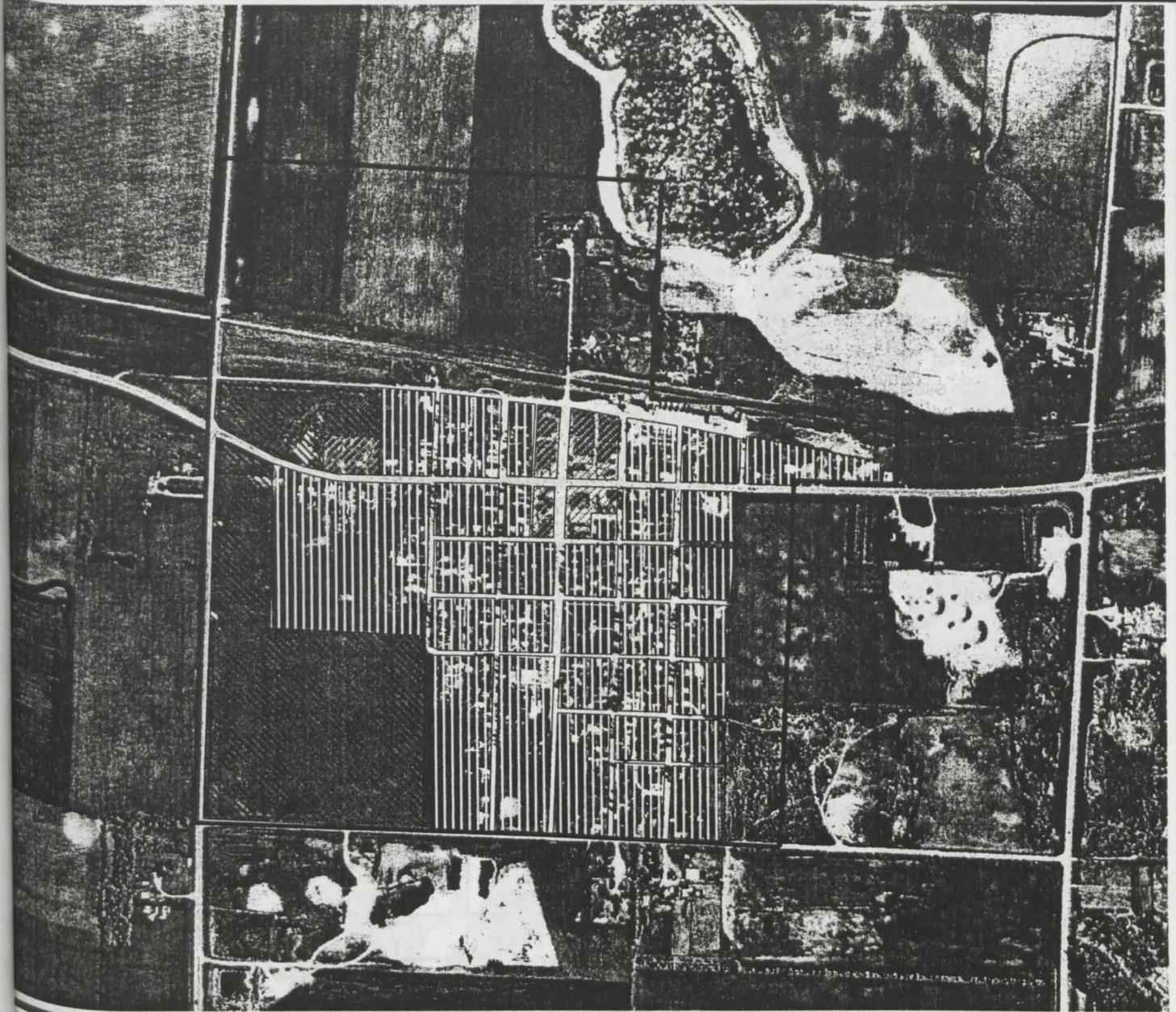
The City's population has been declining since 1960, losing 148 residents. The number and size of households have also seen steady decline since 1980. Information on the number and size of households during the time of the 1960 and 1970 Census was not available. The City's population projections estimate that Beardsley should continue to decline at a slow, but steady rate over the next 20 years, possibly bringing the population to 190 in the year 2020. Beardsley's close proximity to Big Stone Lake could play a significant part in the City's future and affect future growth.

Table 4B: Beardsley	1960	1970	1980	1990	2000
Population	410	336	344	297	262
Households	NA	NA	151	136	125
Household Size	NA	NA	2.29	2.18	2.10
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	253	244	235	226	-36
Based on Last 40 Years	244	226	208	190	-72
Fast Annual Growth	271	280	289	297	35
Households	2005	2010	2015	2020	Change
Slow Annual Growth	122	119	116	113	-12
Based on Last 40 Years	119	113	107	101	-24
Fast Annual Growth	128	131	134	136	11

Beardsley's zoning can be seen in Map 4B. The zoning is almost entirely residential with a large agriculture zone on the western edge of the City. There are also a few blocks of commercial zoning located along Highway 28 running through the center of the City. The northern section of Beardsley, as well as a segment running along the eastern edge have not been zoned. Decisions on what to do with this land will be very important to the City if growth occurs, and Beardsley should be prepared to make these decisions in such a way that will promote orderly growth.

Map 4B: City of Beardsley Zoning

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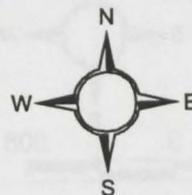
Legend

- | | | | | | |
|--|-----------------------|---|------------|---|-------------|
|  | UGB (None Identified) |  | Ag |  | Residential |
|  | City Limits |  | Commercial | | |

700 0 700 Feet



Source: MNDOT BasMap '99, USGS DOQ 1991
Date: 2/8/2002
Produced By: UMRDC GIS Service Bureau



A Profile of Clinton

The City of Clinton is located 11 miles north of Ortonville and 8 miles south of Graceville along U.S. Highway 75. County Road 11 dissects the City from the northwest to the southeast. County Road 6 runs along the southern edge of the City. In addition, Eli Lake creates the majority of the City's eastern border. Clinton is the County's third largest City with 453 people and 195 households. Clinton shares borders with Almond Township.

Table 4C shows that Clinton has experienced some fluctuation in population trends over the last 40 years, with an overall loss of 112 residents. Clinton's population peaked in 1980 at 622 residents before starting a rapid decline. Between 1990 and 2000 the City lost 121 residents, or 21 percent of the population. Population decline is expected to continue with an expected overall loss of 56 residents between the years of 2000 and 2020. The number of households has also seen significant fluctuation. The number of households peaked in 1980 at 278 and dropped to an all time low of 195 households in 2000, a difference of 83 households. The average household size has also seen some fluctuation, but is experiencing a general downward trend. This is consistent with the shrinking household sizes seen throughout the area.

Table 4C: Clinton					
	1960	1970	1980	1990	2000
Population	565	608	622	574	453
Households	211	218	278	232	195
Household Size	2.68	2.79	2.24	2.47	2.32
20-Year Population Projections					
	2005	2010	2015	2020	Change
Slow Annual Growth	446	439	432	425	-28
Based on Last 40 Years	439	425	411	397	-56
Fast Annual Growth	483	513	543	574	121
Households					
	2005	2010	2015	2020	Change
Slow Annual Growth	194	193	192	191	-4
Based on Last 40 Years	193	191	189	187	-8
Fast Annual Growth	204	213	222	232	37

Map 4C depicts zoning in the City of Clinton. Along the western and northern edges of the City limits there are large tracts of agriculturally zoned land. The southeastern corner is largely residential land. There are public buildings and lands scattered throughout the City limits. There are also a few commercial and retail zones located within the City limits.

Map 4C: City of Clinton Zoning

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local and state government
to promote sustainability
in Region 6W.



Legend

- | | | | | | |
|--|-----------------------|---|-----------------------|---|-------------|
|  | UGB (None Identified) |  | Agriculture |  | Residential |
|  | City Limits |  | Commercial/Retail |  | Vacant |
| | |  | Public Buildings/Land | | |

Source: MNDOT BasMap '99, USGS DOQ 1991
Date: 2/8/2002
Produced By: UMVRDC GIS Service Bureau



800 0 800 Feet



A Profile of Correll

The City of Correll is located approximately 15 miles southeast of Ortonville. Correll is Big Stone County's third smallest City with approximately 47 people and 23 households. County Road 25 runs north out of Correll from the southern part of the City. State Highway 7 runs right through the center of town in a southeast to northwest direction. Correll shares borders with Akron Township. The City is located within a mile of Marsh Lake.

Correll's population has declined rapidly since 1960. The time-period between 1980 and 1990 saw the most dramatic decrease with a loss of 23 residents, a loss of 28 percent of the 1980 population in only a decade. The population is expected to continue to decline at a relatively rapid rate. It is important to note, however, that the number of households has not seen quite as dramatic of a decline. There has been an overall loss of ten households since 1960, a loss of only 30 percent compared to a loss of 53 percent of the population since 1960. One of the major causes of this difference in the rate of decline for household numbers and population numbers is the shrinking household size. The average household size in Correll went from 3.06 in 1960 to 2.04 in 2000, this is a loss of slightly more than one person per household.

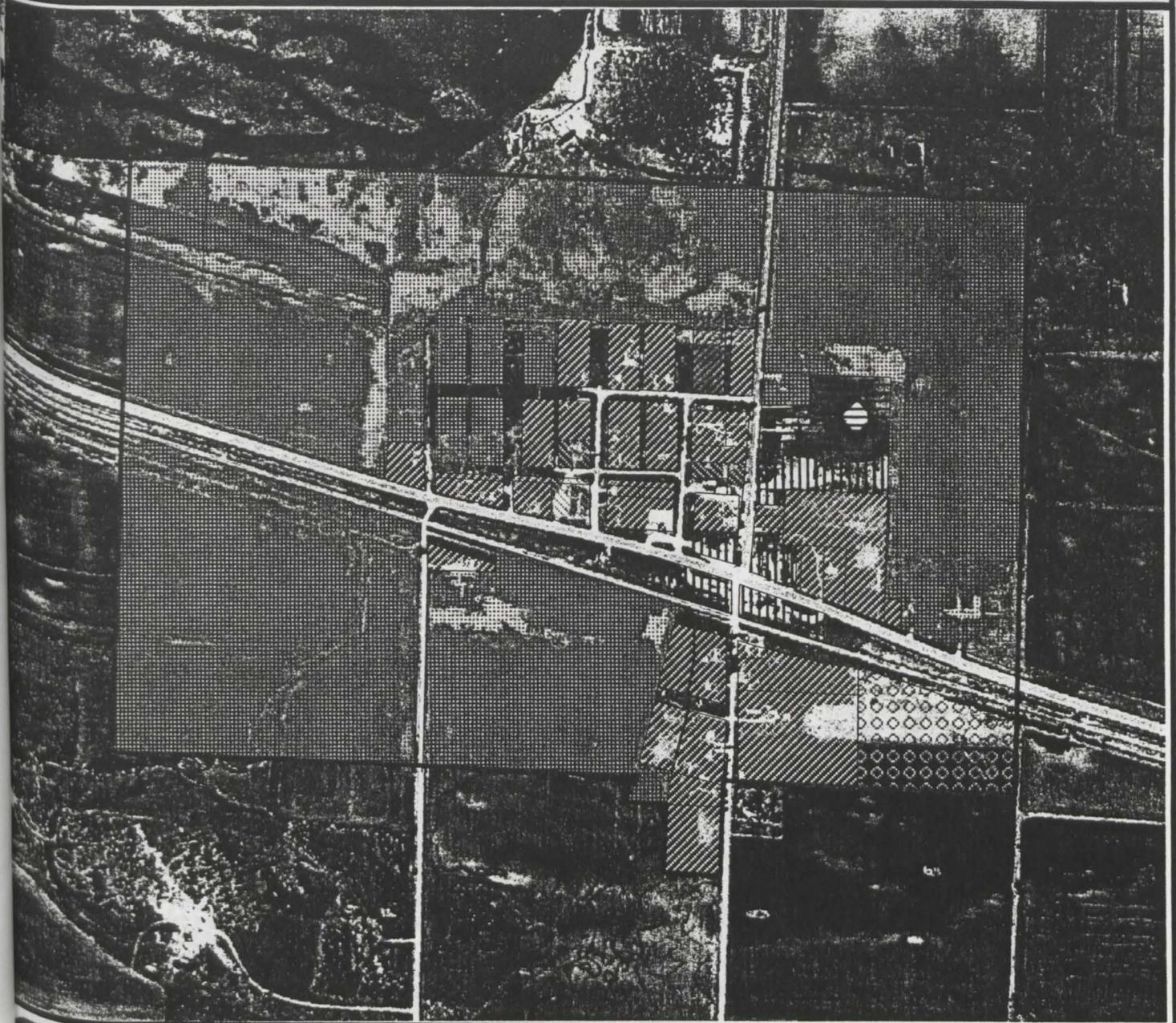
Table 4D: Correll	1960	1970	1980	1990	2000
Population	101	95	83	60	47
Households	33	31	31	29	23
Household Size	3.06	3.06	2.68	2.07	2.04
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	44	41	38	35	-12
Based on Last 40 Years	40	33	26	19	-28
Fast Annual Growth	50	53	56	60	13
Households	2005	2010	2015	2020	Change
Slow Annual Growth	23	22	22	21	-2
Based on Last 40 Years	22	21	20	19	-4
Fast Annual Growth	24	26	27	29	6

Correll's zoning can be seen in Map 4D. Most of the land within the City limits is agricultural land. The residential zones are clustered in the southeastern section of the City limits. The zones are located both north and south of Highway 7. There are also some commercial and recreation zones located along Highway 7 and just off of County Road 25 north of the Highway. Correll also has a park and recreation zone in the northeastern corner of the City.



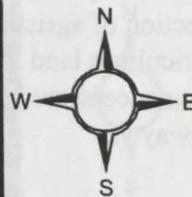
Map 4D: City of Correll Zoning

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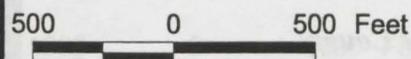


Legend

	UGB (None Identified)		Parks/Recreation
	City Limits		Public Land or B
	Agriculture Land		Residential
	Commercial/Retail		Unknown
			Vacant



Source: MNDOT BasMap '99, USGS DOQ 1991
Date: 2/8/2002
Produced By: UMRDC GIS Service Bureau



A Profile of Graceville

The City of Graceville is located on East Toqua Lake right at the intersection of Minnesota State Highway 28 and U.S. Highway 75. Graceville is located 20 miles north of Ortonville and is completely surrounded by a township that shares the same name. County Roads 13 and 20 run north out of town. The Burlington Northern/Santa Fe Railroad parallels State Highway 28 cutting through town.

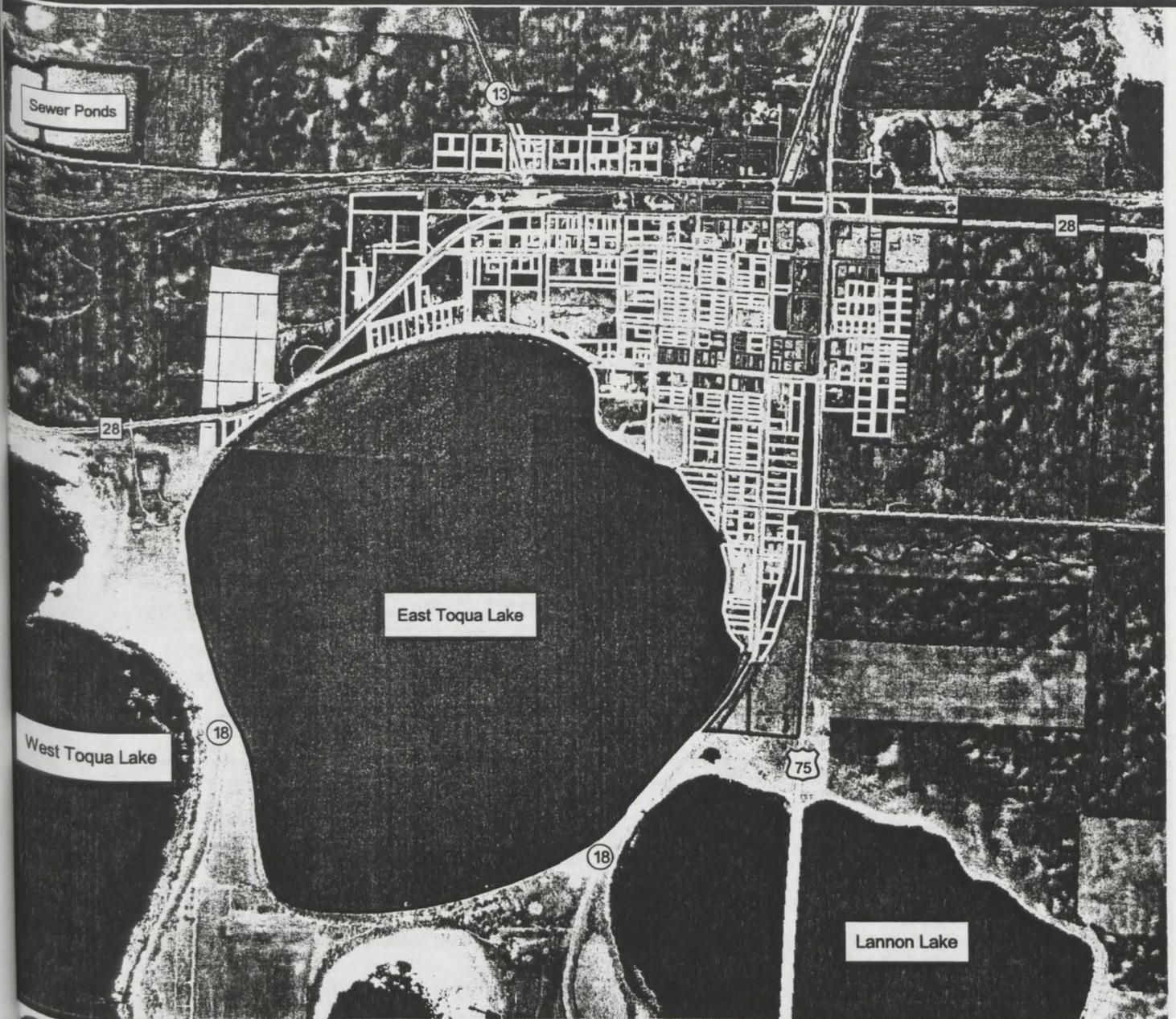
The City's 2000 population of 605 makes Graceville the second most populated City in Big Stone County. Table 4E shows that Graceville lost 218 people since 1960, which was a loss of 26 percent from the 1960 population. However, the total number of households in Graceville has seen a net increase of ten households since 1960. A decreasing average number of persons per household is most likely the most significant contributing factor here. It is important to note that while the current population trends show decline, Graceville's location at the intersection of State Highway 28 and U.S. Highway 75, as well as the attraction of East Toqua Lake create an opportunity for growth that can and should be exploited.

Table 4E: Graceville	1960	1970	1980	1990	2000
Population	823	735	780	671	605
Households	247	249	295	267	257
Household Size	3.33	2.95	2.64	2.51	2.35
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	592	579	566	553	-52
Based on Last 40 Years	579	553	527	501	-104
Fast Annual Growth	621	638	654	671	66
Households	2005	2010	2015	2020	Change
Slow Annual Growth	258	259	260	262	5
Based on Last 40 Years	259	262	264	267	10
Fast Annual Growth	261	265	269	272	15

Map 4E shows Graceville's zoning as of February 2002. Most of the land in Graceville is zoned residentially. Almost all of the City land along the shores of East Toqua Lake is residential. The only exception is a small section of agricultural land in the southernmost tip of the City. There is another small section of agriculture land located on the northern edge of the City. Commercial/retail zoning is concentrated in Graceville's downtown area and along State Highway 28 and U.S. Highway 75.

Map 4E: City of Gracville Zoning

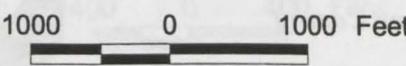
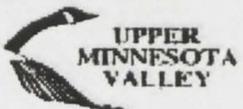
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Legend

	Agriculture		Residential
	Commercial/Retail		Residential-2
	Lake		Urban Growth Boundry

Source: MNDOT BasMap '99, City of Gracville
Date: 2/07/02
Produced By: UMRDC GIS Service Bureau

UPPER MINNESOTA VALLEY

A Profile of Johnson

The City of Johnson is located approximately eight miles east of Graceville, along Minnesota State Highway 28. County Highway 21 runs north/south through town and the Burlington Northern/Santa Fe Railroad runs east/west through town paralleling Highway 28.

The population of Johnson has been generally declining since 1960. The only period of growth since 1960, was in 1980 when Johnson gained four residents. Since 1960, Johnson has lost half its population going from 64 residents in 1960 to 32 residents in 2000. It should be noted that the rate of decline in housing is less than that of the population and the decline appears to have leveled off in the 2000 Census. The difference in the rates of decline for population and households indicates fewer persons per household, a trend that is commonly seen throughout Big Stone County and all rural Minnesota communities.

Table 4F: Johnson	1960	1970	1980	1990	2000
Population	64	53	57	46	32
Households	NA	NA	21	16	16
Household Size	NA	NA	2.71	2.88	2.00
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	30	28	26	24	-8
Based on Last 40 Years	28	24	20	16	-16
Fast Annual Growth	35	39	42	46	14
Households	2005	2010	2015	2020	Change
Slow Annual Growth	15	14	13	12	-4
Based on Last 40 Years	14	12	10	8	-8
Fast Annual Growth	16	16	16	16	0

Johnson's zoning can be seen in Map 4F. The majority of the land within the City's limits is agricultural land. The population is concentrated in the northwest corner of the corporate boundaries. Most of the land here is residential land. There are also a few scattered sections of vacant land in and around the residential area. The City of Johnson had a small segment of land zoned public land within the residential area of the City.

Map 4F: City of Johnson Zoning

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Legend

	UGB (None Identified)	Zoning		Unknown	
	City Limits		A		V
			P		
			R		

Source: MNDOT BasMap '99, USG DOQ 1991
Date: 2/8/2002
Produced By: UMRDC GIS Service Bureau



400 0 400 Feet




A Profile of Odessa

The City of Odessa is located in the southern portion of Big Stone County, approximately six miles east of Ortonville. Odessa is located right on the Minnesota River which forms part of the southern boundary of the City. U.S. Highway 7 joins with U.S. Highway 75 as it runs along the northern edge of town. County Road 21 forms the eastern border of the City running north/south. County Road 19 runs north/south through the City, and County Road 28 runs east/west paralleling the Burlington Northern Railroad as it runs through Odessa. The community is located in the southeastern part of Odessa Township.

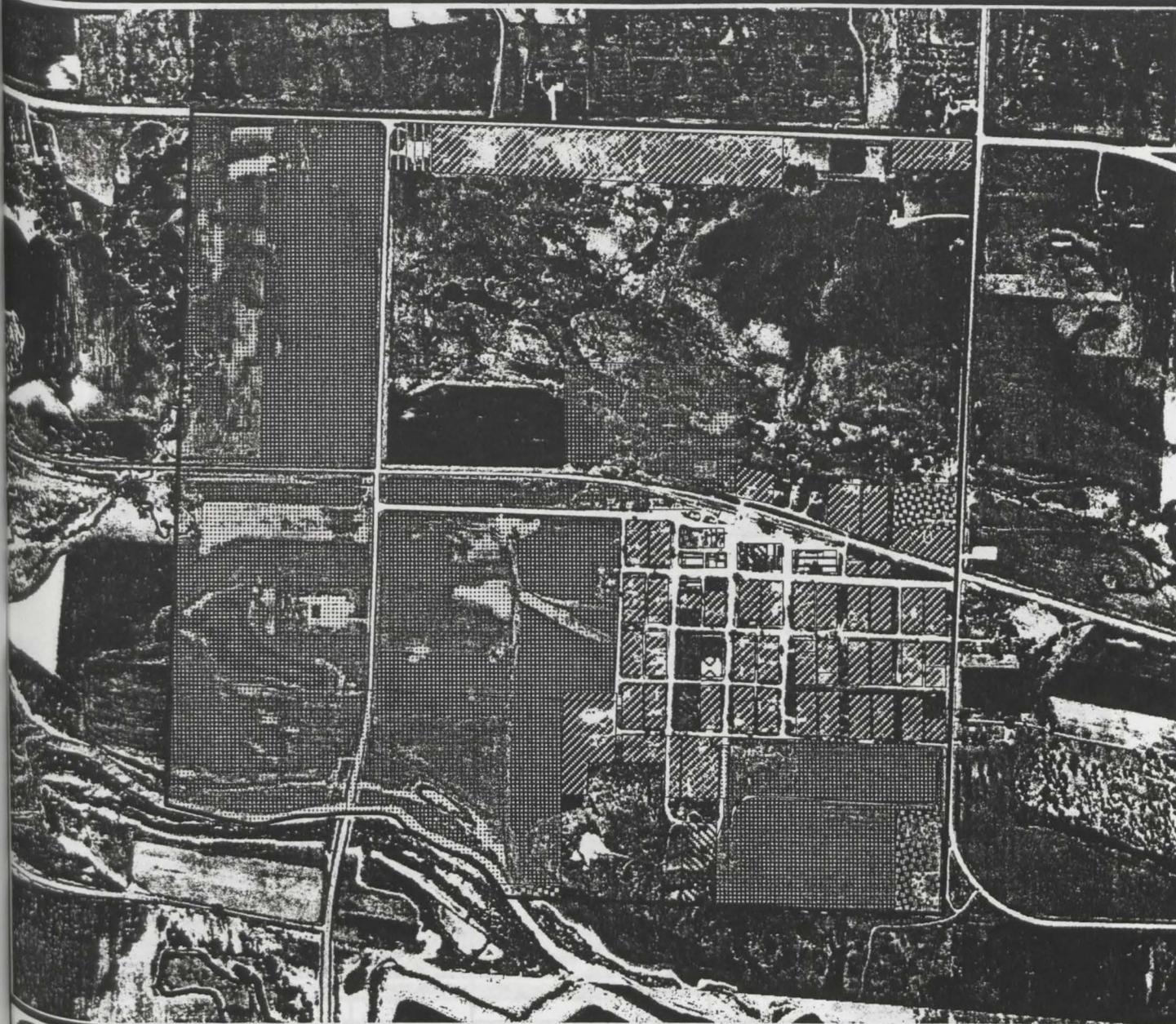
Odessa's population has steadily declined to its current population of approximately 113 residents. The 1960s and 1990s showed the most dramatic declines in population losing 40 and 43 residents respectively. The City has also seen steady decline in both the number of households and the average household size. These trends indicate that the population decline may likely continue into the future.

Table 4G: Odessa	1960	1970	1980	1990	2000
Population	234	194	177	155	113
Households	81	65	61	59	55
Household Size	2.89	2.98	2.90	2.63	2.05
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	106	99	92	85	-28
Based on Last 40 Years	98	83	68	53	-60
Fast Annual Growth	123	134	144	155	42
Households	2005	2010	2015	2020	Change
Slow Annual Growth	54	52	51	49	-6
Based on Last 40 Years	52	49	46	43	-12
Fast Annual Growth	56	57	58	59	4

Map 4G depicts Odessa's zoning. As is the case in many of Big Stone County's communities, agriculture land takes up a significant portion of the land located within the corporate boundaries. Odessa also had a considerable amount of residential land. There is a section of residentially zoned land to the north located along Highway 7/75. The rest of the residential land is clustered in the southeastern corner of the City's corporate boundaries. Odessa also has land zoned for commercial/retail and industrial uses as well as for parks/recreation and public lands or public buildings.

Map 4G: City of Odessa Zoning

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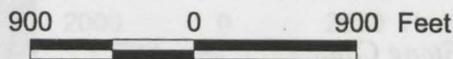


Legend

	UGB (None Identified)		Industrial
	City Limits		Parks/Recreation
Zoning			Public Land or Build
	Agriculture		Residential
	Commercial/Retail		Vacant



Source: MNDOT BasMap '99, USGS DOQ 1991
Date: 2/8/2002
Produced By: UMRDC GIS Service Bureau



A Profile of Ortonville

The City of Ortonville is Big Stone County's largest City with 2,158 residents. It is located in the southern part of the County at the foot of Big Stone Lake right on the South Dakota border. The City is located at the junction of U.S. Highways 12 and 75 and Minnesota State Highway 7. County Roads 30, 32, 37, 64 and 78 all cut through the City. The City is located almost entirely within the township which shares its name. A small section of the City extends up into Big Stone Township.

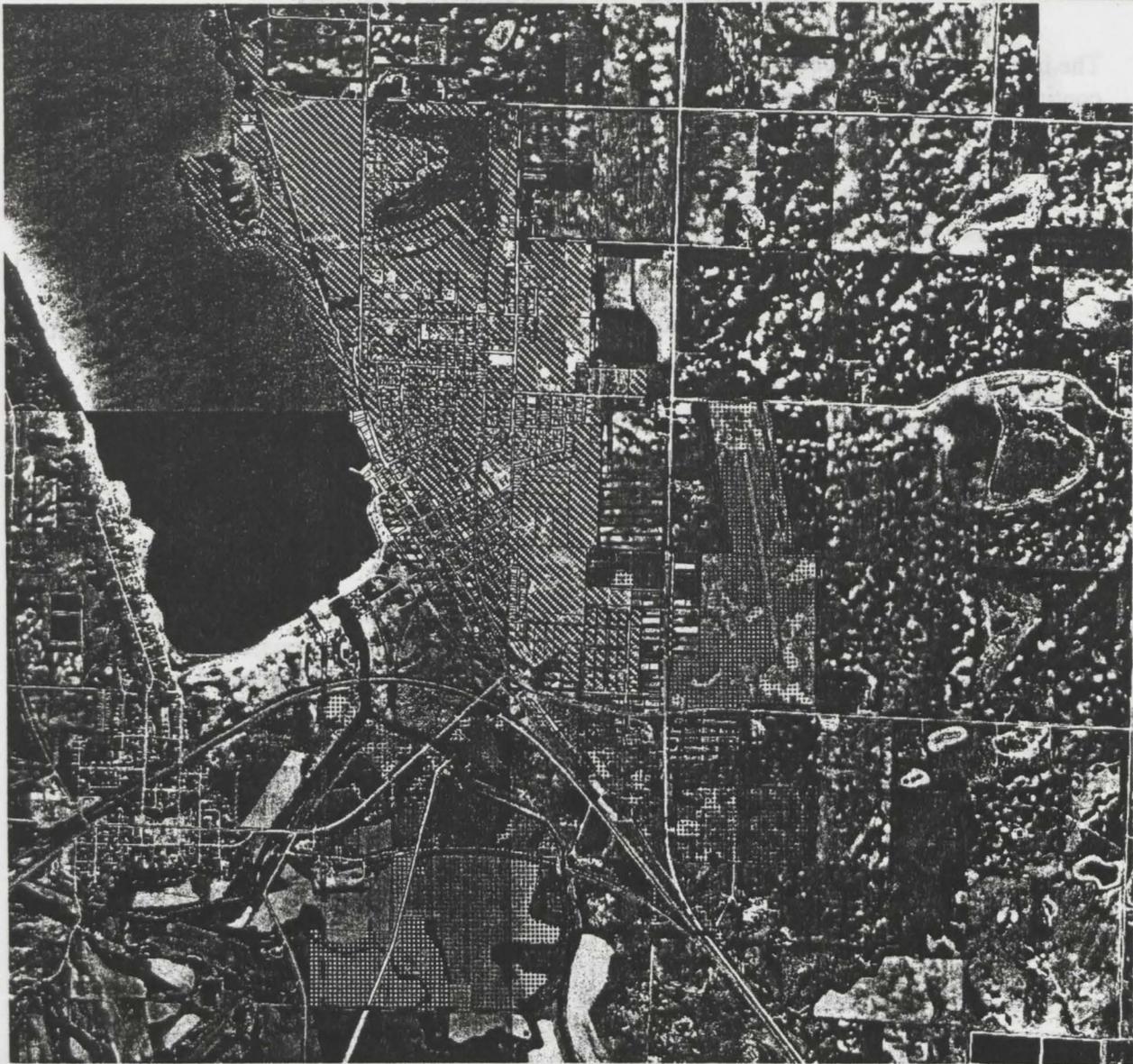
Since 1960, Ortonville's population has seen a steady decline. The biggest drop in population was seen between 1980 and 1990 when the City lost 345 residents. A positive sign is the limited decline seen in the 2000 census, only 47 residents, indicating a possible leveling off of the decline or even a turn toward positive growth trends. The number of households, however, grew until the 1980 Census after which point the number of households began to decline. The 2000 total of 923 households was still higher than the 1960 count of 869. The average household size has seen steady decline in the last 40 years and appears to have leveled off a bit. Ortonville is the economic center of Big Stone County and has many wonderful amenities that would allow for promotion and attraction of new business and residents. Methods of such promotion will be of great concern in the future.

Table 4H:Ortonville	1960	1970	1980	1990	2000
Population	2,674	2,665	2,550	2,205	2,158
Households	869	932	1,062	944	923
Household Size	3.08	2.86	2.40	2.34	2.34
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	2,127	2,096	2,065	2,034	-124
Based on Last 40 Years	2,095	2,032	1,969	1,906	-252
Fast Annual Growth	2,169	2,181	2,193	2,205	47
Households	2005	2010	2015	2020	Change
Slow Annual Growth	926	930	933	937	14
Based on Last 40 Years	930	937	944	951	28
Fast Annual Growth	933	944	954	965	42

Ortonville's zoning is shown in Map 4H. The northern section of the City is largely residential. Industrially zoned land is located in the southern portion of the City with the exception of one small section of industrial land located more toward the center of Ortonville. Commercial/retail zones are located along Highway 75 heading north out of the City and along the downtown area.

Map 4H: City of Ortonville Zoning

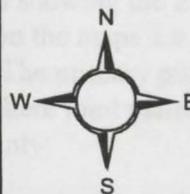
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Legend

	UGB (None Identified)		Industrial
	City Limits		Parks/Recreation
Zoning			Residential
	Agriculture		Unknown
	Commercial/Retail		

Source: MNDOT BasMap '99, USGS DOQ 1991,
City of Ortonville
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



2000 0 2000 Feet




Summary of the Community Profiles

The information presented in Chapter Four suggests that many of Big Stone County's cities will continue to lose population over the next 20 years. The following four factors will influence future growth in these communities the most:

1. **Natural Resources** – Big Stone County has a strong natural resource base that continues to attract both tourists and residents into the area.
2. **Capacity to Grow** – Most of Big Stone County's cities have suitable building sites and have adequate sewer and water capacity to accommodate future growth.
3. **The Economy** – Big Stone County's economy is currently agriculturally based. Efforts need to be made to expand the economic base so that the County is not entirely reliant upon the ups and downs of agriculture.
4. **Rural Character/Community Size** – One of Big Stone County's largest strengths is that it has many communities that offer a high quality of life in a rural environment.

These characteristics each contribute to the likelihood that Big Stone County's cities will either be continuing their decline or turning the trend around to one of population gain over the next 20 years. Those cities that plan for the future will ultimately have the control over what their community looks like as it evolves. For this reason, all of the cities in Big Stone County were asked to identify their urban growth areas. If a city identified an urban growth area, it appears on the city's current land use and urban growth area map. These areas are intended to indicate where joint planning efforts should take place between the city, affected township(s) and the County. For example, if the County needs to make a land use decision for an area that has been identified in an urban growth area, the County should consult with the city before making the decision.

Chapter Five: Township Profiles

This Chapter is similar to Chapter Four except that townships are profiled rather than cities. The profiles include information on the township's residents and number of households, along with a description of the township's major roadways and natural resources. The population and household information presented uses the 1960 to 2000 Census records. This time-span is used to help show the basis for a slow, historic-based and fast population and household estimate for each township over the next 20 years. In addition, a current zoning map is included that shows the township's "current land use" and the location of the urban growth areas (if they exist in the township).

How to use the Township Profiles

There are two main features included in each township profile. The first is a table that presents the township's population and household numbers since 1960 (including the recently released 2000 Census data). The second feature is a current land use map. The population and household information is used to show the basis for a "historic-based" rate of population gain or, in some cases, a historic-based rate of population loss. This rate (either positive or negative) is then applied over the next 20 years to show a "historic-based population projection."

Population projection is not an exact science; many unpredictable factors can influence the direction population trends take. The best that can be done is to make an educated guess based on the direction population trends have taken in the past. For this Plan, an average rate of growth was determined by looking at population trends for the past 40 years. This historic-based projection is labeled "Based on the Last 40 Years" in the table. Understanding how many factors can influence an area's population, the table also presents what the township's future population would be if either a "slow" or "fast" population growth occurred. The slow annual growth rate was established at 50 percent of the township's historic rate. For example, if a township gained 80 new residents over the last 20 years, the slow projection would estimate that the township would gain another 40 people over the next 20 years. In an attempt to give a broader picture, a fast annual growth rate was also included. Although the area has experienced a declining population across the board, it is important to be prepared for a reverse in this trend back to increasing population numbers. It is reasonable to assume that if the population trends were to turn to population gain, population numbers could possibly increase to their 1990 numbers over the next 20 years. For example, if a township lost 20 people in the 1990s, the fast annual growth rate would project a gain of 20 people over the next 20 years to a total population equal to the township's 1990 population.

Another important feature of the township profiles are maps showing the township's "current land use." The only future land use information presented on the maps are for those municipalities that identified a 20-year urban growth area. The primary purpose of these areas is to identify where potential urban growth might occur and where joint planning efforts need to be made by the city, the affected townships and Big Stone County.

Akron Township

Location: Southeast corner bordering Swift and Lac qui Parle Counties

Population: 196

Households: 79

Major Roads: U.S. Highway 12, State Highway 7

Water Features: Marsh Lake; Minnesota River; Fivemile Creek

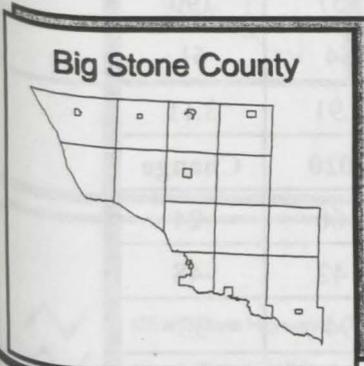
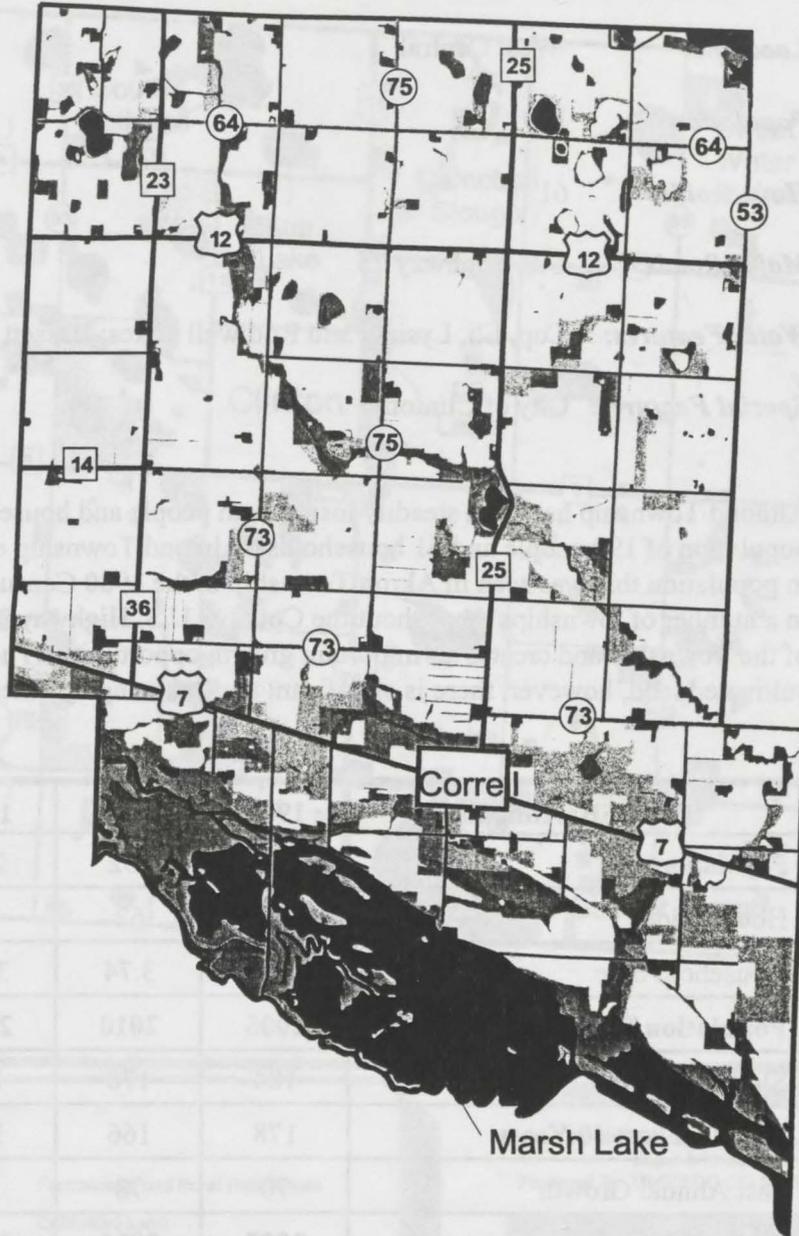
Special Features: City of Correll

Akron Township has lost 40 households over the last 40 years. The most dramatic drop was a loss of 22 households from 1960 to 1970, however the Township made a slight recovery gaining four new households in the 1980 Census. The Township's population has declined from 429 people in 1960 to 196 in 2000. Currently the population of Akron Township is expected to continue to decline, however, the Township's close proximity to the City of Ortonville and Big Stone and Marsh Lakes could provide an opportunity for growth. As Map 5A reveals, most of Akron Township is cultivated land. In the southern portion of the Township, nearer to Marsh Lake and the Minnesota River, there is more grassland and pasture and hayland.

Table 5A: Akron	1960	1970	1980	1990	2000
Population	429	353	306	233	196
Households	119	97	101	88	79
Household Size	3.61	3.64	3.03	2.65	2.48
20-Year Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	182	168	154	140	-56
Based on Last 40 Years	168	140	112	84	-112
Fast Annual Growth	205	214	223	233	37
Households	2005	2010	2015	2020	Change
Slow Annual Growth	77	74	72	69	-10
Based on Last 40 Years	74	69	64	59	-20
Fast Annual Growth	81	83	85	88	9

Map 5A: Akron Township Land Use

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Legend	
	US and State Highways
	County State Aid Highways
	County Roads
	Township Roads
	UGB (See City Map)
	Lakes
	Landuse
	Unclassified
	Urban and Industrial
	Farmsteads and Rural Residences
	Cultivated Land
	Pasture and Hayland
	Grassland
	Forest
	Water
	Wetlands
	Gravel Pits and Open Mines
	Bare Rock, Exposed Soil

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRVDC GIS Service Bureau

Almond Township

Location: West Central

Population: 190

Households: 61

Major Roads: U.S. Highway 75

Water Features: Cup, Eli, Lysing, and Rothwell Lakes; Bassett Slough

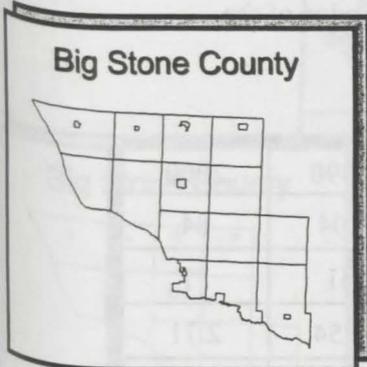
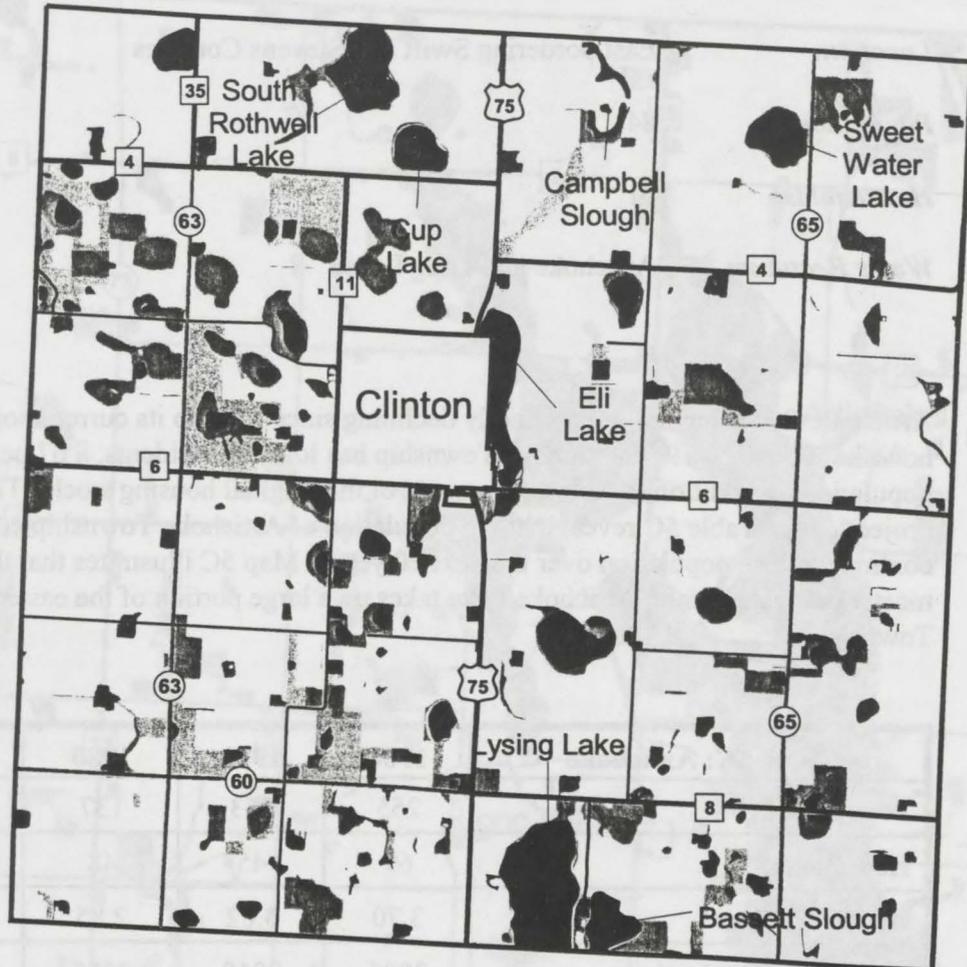
Special Features: City of Clinton

Almond Township has been steadily losing both people and households since 1960 to its current population of 190 people and 61 households. Almond Township experienced the same small rise in population that was seen in Akron Township in the 1980 Census. This phenomenon was seen in a number of townships throughout the County. U.S. Highway 75 cuts right through the center of the Township and creates an important growth opportunity. The Township is largely cultivated land, however, there is significant area taken up by lakes and wetlands.

Table 5B: Almond	1960	1970	1980	1990	2000
Population	286	232	238	157	190
Households	76	62	60	54	61
Household Size	3.76	3.74	3.97	2.91	3.11
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	184	178	172	166	-24
Based on Last 40 Years	178	166	154	142	-48
Fast Annual Growth	70	78	86	94	33
Households	2005	2010	2015	2020	Change
Slow Annual Growth	60	59	58	57	-4
Based on Last 40 Years	59	57	55	53	-8
Fast Annual Growth	63	65	67	68	7

Map 5B: Almond Township Land Use

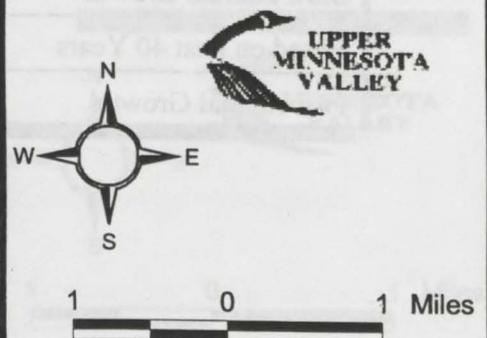
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Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Landuse		Wetlands
	Unclassified		Gravel Pits and Open Mines
	Urban and Industrial		Bare Rock, Exposed Soil

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



Artichoke Township

Location: East bordering Swift and Stevens Counties

Population: 84

Households: 31

Water Features: Artichoke and Long Lakes

Artichoke Township has been steadily declining since 1960 to its current population of 84 and 31 households. Since 1960 Artichoke Township has lost 171 residents, a 67 percent drop in population, in addition to losing 55 percent of the original housing stock. The population projections in Table 5C reveal that the population of Artichoke Township could expect to continue to lose population over the next 20 years. Map 5C illustrates that the Township is mostly cultivated land. Artichoke Lake takes up a large portion of the eastern edge of the Township.

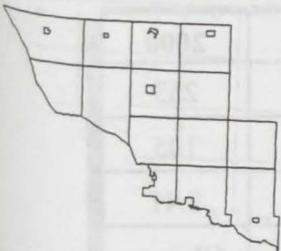
Table 5C: Artichoke	1960	1970	1980	1990	2000
Population	255	163	137	104	84
Households	69	45	48	41	31
Household Size	3.70	3.62	2.85	2.54	2.71
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	74	64	54	44	-40
Based on Last 40 Years	63	42	21	0	-84
Fast Annual Growth	89	94	99	104	20
Households	2005	2010	2015	2020	Change
Slow Annual Growth	29	26	24	21	-10
Based on Last 40 Years	26	21	16	11	-20
Fast Annual Growth	33	36	38	41	10

Map 5C: Artichoke Township Land Use

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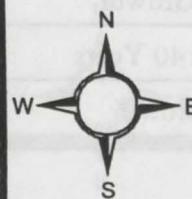
Big Stone County



Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Unclassified		Wetlands
	Urban and Industrial		Gravel Pits and Open Mines
			Bare Rock, Exposed Soil

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRVDC GIS Service Bureau



Big Stone Township

Location: South bordering South Dakota

Population: 253

Households: 105

Major Roads: U.S. Highway 75

Water Features: Big Stone, Olson, Swenson, Thielke, Twin, and Bentsen Lakes; Karl Slough

Big Stone Township's population has fluctuated greatly over the last 40 years with an overall loss of 109 residents, setting the current population at 253 and 105 households. Although the population of the Township went down by 16 people in the 2000 Census, Big Stone Township gained four new households. Big Stone is the second most populous township in the County. The population projections listed in Table 5D indicate that the Township is likely to continue to decline over the next 20 years. Declining household sizes may play a significant part in this decline. Big Stone Township is primarily cultivated land, but it also has a high level of grassland, especially in the southeastern corner near the Twin Lakes.

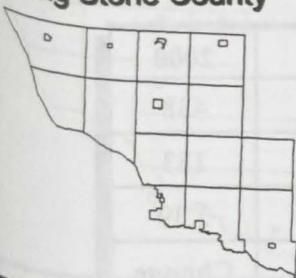
Table 5D: Big Stone	1960	1970	1980	1990	2000
Population	362	349	395	269	253
Households	95	102	119	101	105
Household Size	3.81	3.42	3.32	2.66	2.41
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	247	241	235	229	-24
Based on Last 40 Years	240	228	215	202	-51
Fast Annual Growth	257	261	265	269	16
Households	2005	2010	2015	2020	Change
Slow Annual Growth	104	103	102	101	-4
Based on Last 40 Years	103	101	99	97	-8
Fast Annual Growth	106	107	108	109	4

Map 5D: Big Stone Township Land Use

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Big Stone County



Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Landuse		Wetlands
	Unclassified		Gravel Pits and Open Mines
	Urban and Industrial		Bare Rock, Exposed Soil, Sandbars, and Sand Dunes

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRVDC GIS Service Bureau



Browns Valley Township

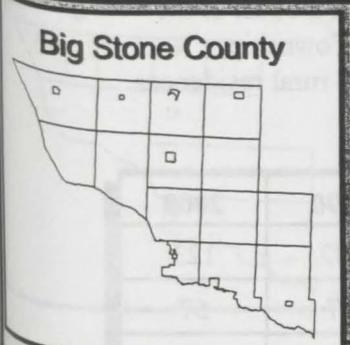
- Location:** Northwest corner bordering Traverse County and South Dakota
- Population:** 438
- Households:** 183
- Major Roads:** State Highways 7 and 28
- Water Features:** Big Stone Lake; Little Minnesota River; Fish Creek
- Special Features:** City of Beardsley

Browns Valley Township's population and household numbers have been declining since 1960 to its current levels of 438 residents and 183 households. The loss of households has been at a much slower rate than the overall loss of population. This can be attributed to the number of persons per household steadily declining over the last 40 years also. Browns Valley Township is almost entirely cultivated land with a strip of grassland stretching along the western border. The grassland runs along the banks of Big Stone Lake.

Table 5E: Browns Valley	1960	1970	1980	1990	2000
Population	755	641	565	494	438
Households	215	210	215	200	183
Household Size	3.51	3.05	2.63	2.47	2.39
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	419	400	381	362	-76
Based on Last 40 Years	399	360	321	282	-156
Fast Annual Growth	452	466	480	494	56
Households	2005	2010	2015	2020	Change
Slow Annual Growth	181	179	177	175	-8
Based on Last 40 Years	179	175	171	167	-16
Fast Annual Growth	187	191	195	200	17

Map 5E: Browns Valley Township Land Use

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Legend			
	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	Rivers		Forest
	UGB (See City Map)		Water
	Lakes		Wetlands
	Landuse		Gravel Pits and Open Mines
	Unclassified		Bare Rock, Exposed Soil, Sandbars, and Sand Dunes
	Urban and Industrial		

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMVRDC GIS Service Bureau



Foster Township

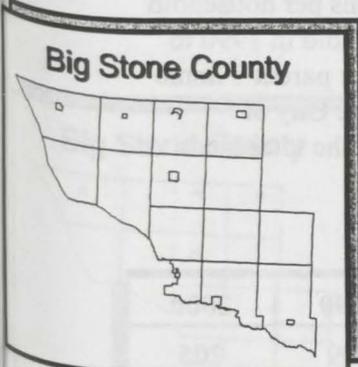
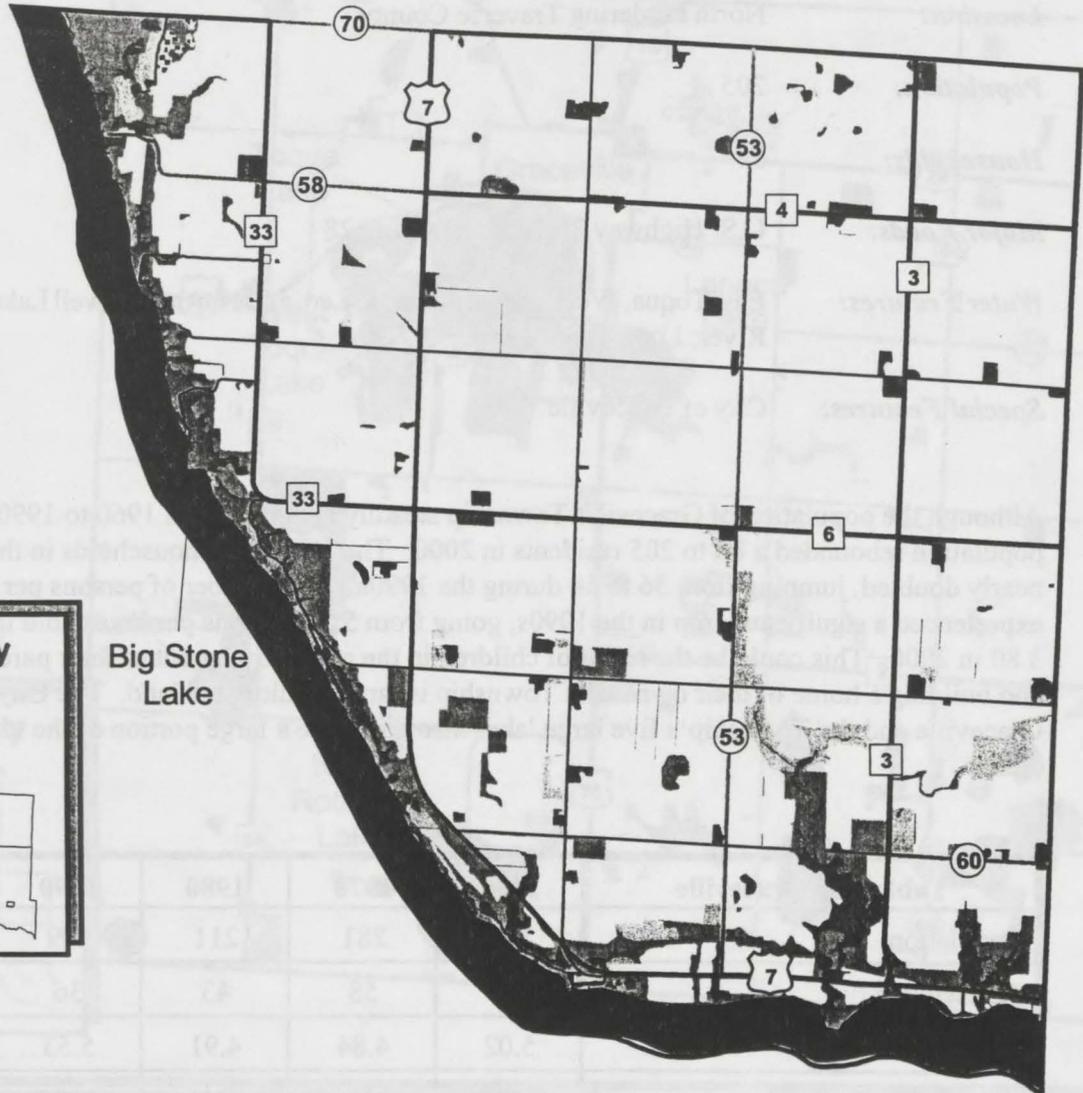
- Location:** Northwest corner bordering South Dakota
- Population:** 123
- Households:** 57
- Major Roads:** State Highway 7
- Water Features:** Big Stone Lake; Fish Creek
- Special Features:** Bonanza Grove and Big Stone Lake State Parks

The population and number of households in Foster Township has decreased over the last 40 years to its current population of 123 and 57 households. Table 5F reveals that the Township experienced a loss of 101 residents and 28 households during the 1980s alone. The number of persons per household has also seen a dramatic drop since the 1960s, falling by more than half. It is also important to note that while the population decreased by nine people in the 2000 census, ten additional households were established in Foster Township. Consistent with the rest of the County, Foster Township is largely cultivated land. The western border of the Township, running along Big Stone Lake, is almost entirely grassland and forest with some rural residences.

Table 5F: Foster	1960	1970	1980	1990	2000
Population	278	192	233	132	123
Households	64	52	75	47	57
Household Size	4.34	3.69	3.11	2.81	2.16
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	114	105	96	87	-36
Based on Last 40 Years	104	85	66	47	-76
Fast Annual Growth	125	127	129	132	9
Households	2005	2010	2015	2020	Change
Slow Annual Growth	57	56	56	55	-2
Based on Last 40 Years	56	55	54	53	-4
Fast Annual Growth	59	62	64	67	10

Map 5F: Foster Township Land Use

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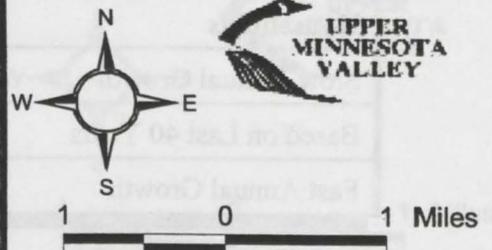


Big Stone
Lake

Legend

- | | | | |
|--|---------------------------|--|---|
| | US and State Highways | | Farmsteads and Rural Residences |
| | County State Aid Highways | | Cultivated Land |
| | County Roads | | Pasture and Hayland |
| | Township Roads | | Grassland |
| | UGB (See City Map) | | Forest |
| | Lakes | | Water |
| | Landuse | | Wetlands |
| | Unclassified | | Gravel Pits and Open Mines |
| | Urban and Industrial | | Bare Rock, Exposed Soil, Sandbars, and Sand Dunes |

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRVDC GIS Service Bureau



Graceville Township

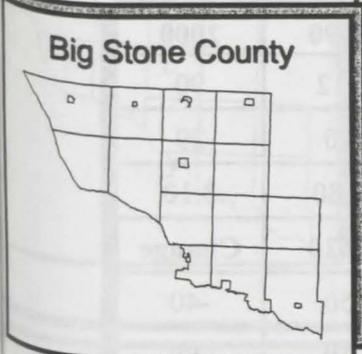
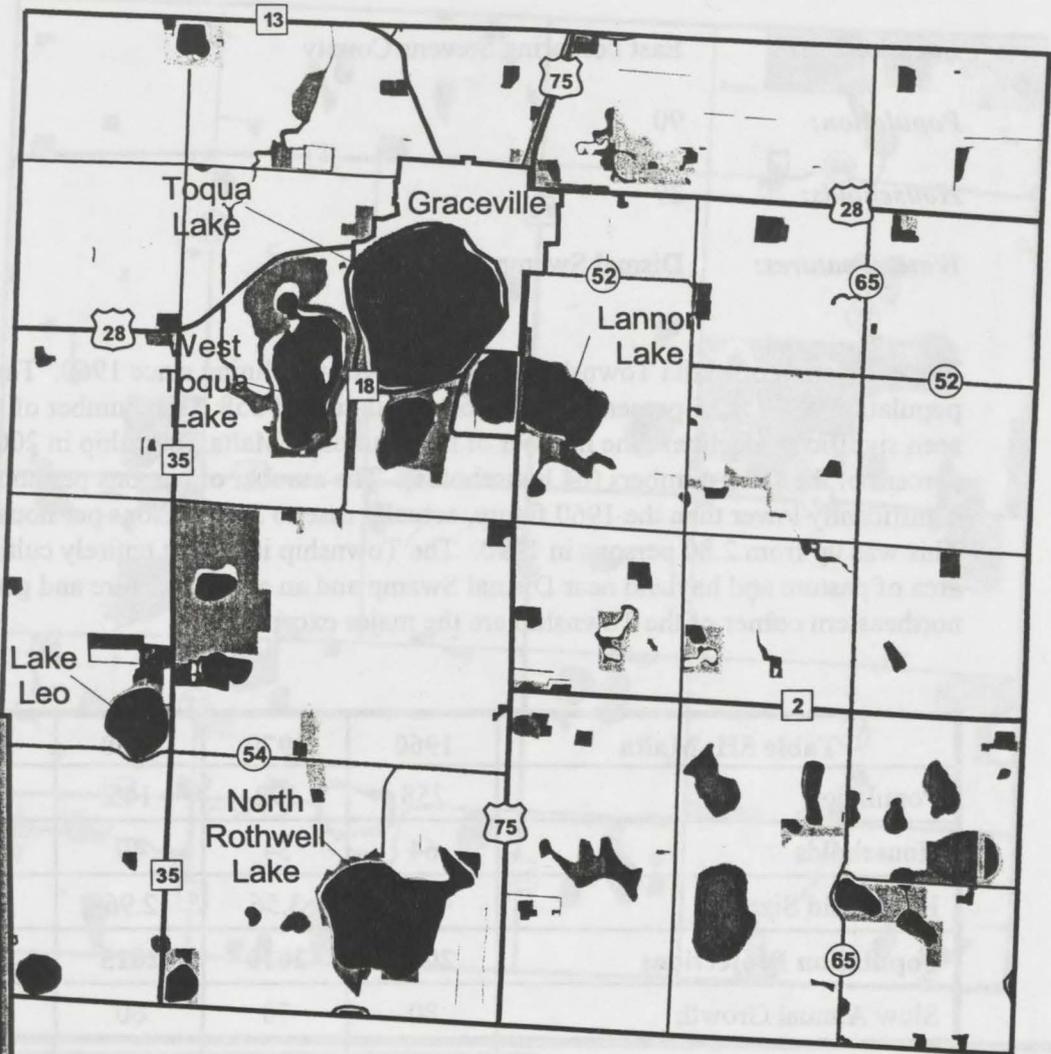
- Location:** North bordering Traverse County
- Population:** 205
- Households:** 54
- Major Roads:** U.S. Highway 75, State Highway 28
- Water Features:** East Toqua, West Toqua, Lannon, Leo, and North Rothwell Lakes; Mustinka River; Lone Tree Slough
- Special Features:** City of Graceville

Although the population of Graceville Township steadily declined from 1960 to 1990, the population rebounded a bit to 205 residents in 2000. The number of households in the Township nearly doubled, jumping from 36 to 54 during the 1990s. The number of persons per household experienced a significant drop in the 1990s, going from 5.53 persons per household in 1990 to 3.80 in 2000. This could be the result of children in the area moving out of their parent's home and building a home of their own. The Township is largely cultivated land. The City of Graceville and the Township's five large lakes also comprise a large portion of the total land area.

Table 5G: Graceville	1960	1970	1980	1990	2000
Population	311	281	211	199	205
Households	62	58	43	36	54
Household Size	5.02	4.84	4.91	5.53	3.80
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	199	193	187	181	-24
Based on Last 40 Years	192	179	166	153	-52
Fast Annual Growth	206	208	209	211	6
Households	2005	2010	2015	2020	Change
Slow Annual Growth	54	53	53	52	-2
Based on Last 40 Years	53	52	51	50	-4
Fast Annual Growth	58	63	67	72	18

Map 5G: Graceville Township Land Use

A cooperative effort between citizens and local and state government to promote sustainability in Region 6W.



Legend

- | | | | |
|--|---------------------------|--|---|
| | US and State Highways | | Farmsteads and Rural Residences |
| | County State Aid Highways | | Cultivated Land |
| | County Roads | | Pasture and Hayland |
| | Township Roads | | Grassland |
| | UGB (See City Map) | | Forest |
| | Lakes | | Water |
| | Landuse | | Wetlands |
| | Unclassified | | Gravel Pits and Open Mines |
| | Urban and Industrial | | Bare Rock, Exposed Soil, Sandbars, and Sand Dunes |

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



Malta Township

Location: East bordering Stevens County

Population: 90

Households: 29

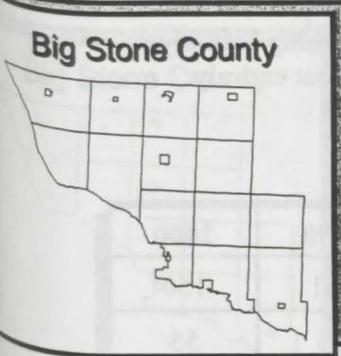
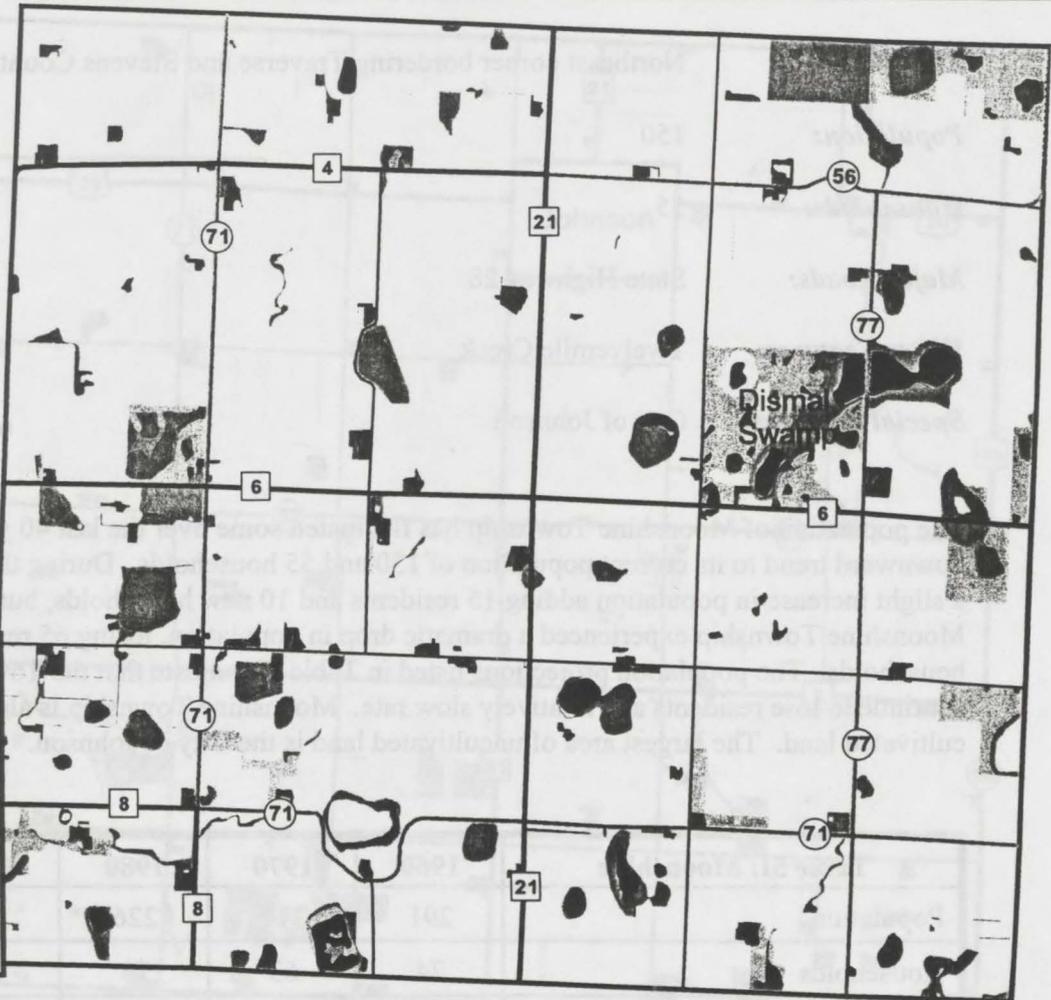
Water Features: Dismal Swamp

The population of Malta Township has been rapidly declining since 1960. The current population of 90 is 35 percent of the 1960 population of 258. The number of households has also seen significant decline. The number of households in Malta Township in 2000 (29) is only 45 percent of the 1960 numbers (64 households). The number of persons per household, while significantly lower than the 1960 figure, actually rose to 3.10 persons per household in 2000. This was up from 2.80 persons in 1990. The Township is almost entirely cultivated land. An area of pasture and hayland near Dismal Swamp and an area of pasture and grassland in the northeastern corner of the Township are the major exceptions.

Table 5H: Malta	1960	1970	1980	1990	2000
Population	258	192	145	112	90
Households	64	54	49	40	29
Household Size	4.03	3.56	2.96	2.80	3.10
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	80	70	60	50	-40
Based on Last 40 Years	70	50	30	10	-80
Fast Annual Growth	95	101	106	112	22
Households	2005	2010	2015	2020	Change
Slow Annual Growth	27	25	23	21	-8
Based on Last 40 Years	25	21	17	13	-16
Fast Annual Growth	32	35	38	40	11

Map 5H: Malta Township Land Use

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in Region 6W.



Legend

County State Aid Highways	Cultivated Land
County Roads	Pasture and Hayland
Township Roads	Grassland
UGB (See City Map)	Forest
Lakes	Water
Landuse	Wetlands
Unclassified	Gravel Pits and Open Mines
Urban and Industrial	Bare Rock, Exposed Soil, Sandbars, and Sand Dunes
Farmsteads and Rural Residences	

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



Moonshine Township

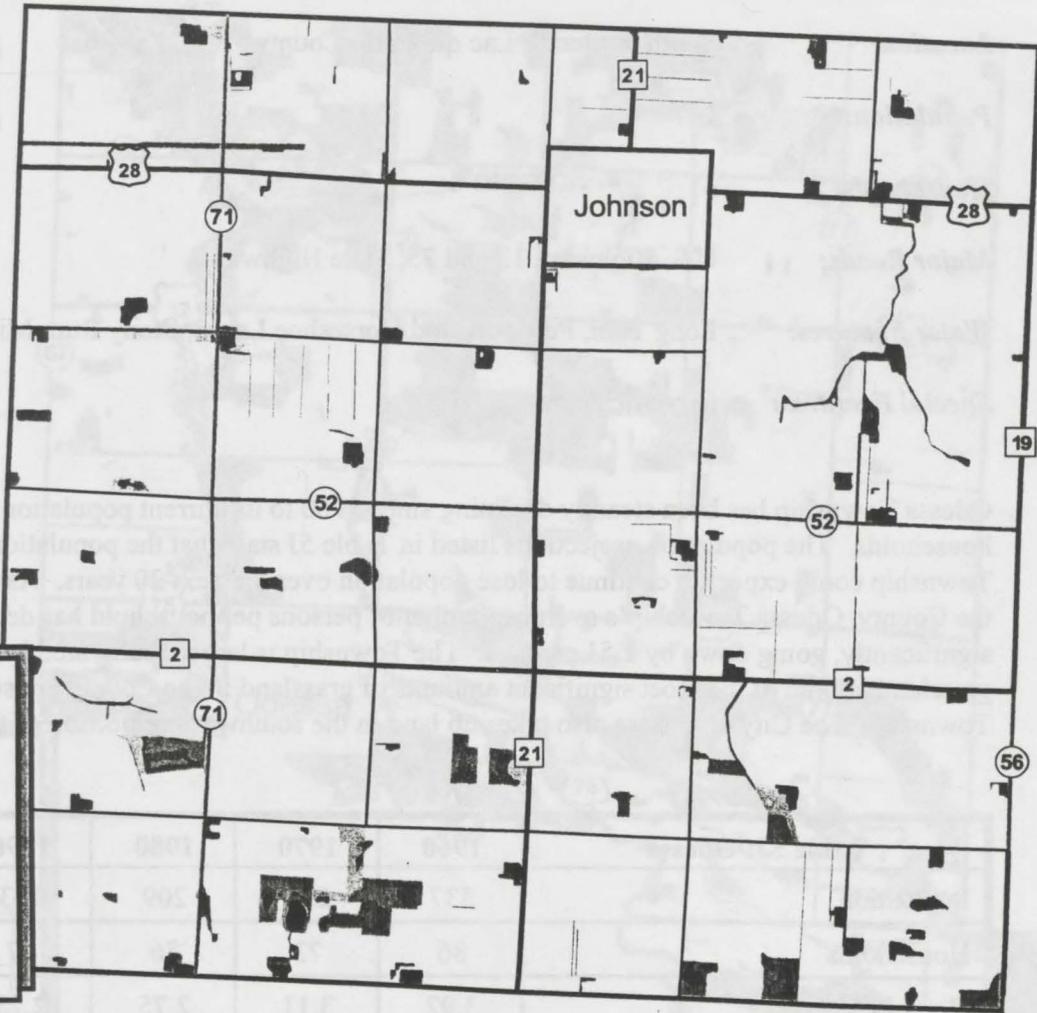
Location:	Northeast corner bordering Traverse and Stevens Counties
Population:	150
Households:	55
Major Roads:	State Highway 28
Water Features:	Twelvemile Creek
Special Features:	City of Johnson

The population of Moonshine Township has fluctuated some over the last 40 years with a general downward trend to its current population of 150 and 55 households. During the 1970s there was a slight increase in population adding 15 residents and 10 new households, but in the 1980s Moonshine Township experienced a dramatic drop in population, losing 65 residents and 15 households. The population projections listed in Table 5I indicate that the Township is likely to continue to lose residents at a relatively slow rate. Moonshine Township is almost entirely cultivated land. The largest area of uncultivated land is the City of Johnson.

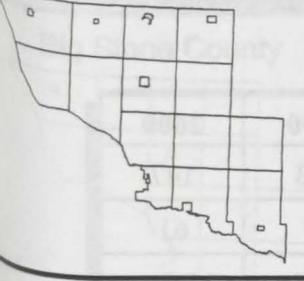
Table 5I: Moonshine	1960	1970	1980	1990	2000
Population	291	211	226	161	150
Households	74	63	73	58	55
Household Size	3.93	3.35	3.10	2.78	2.73
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	142	134	126	118	-32
Based on Last 40 Years	133	116	99	82	-68
Fast Annual Growth	153	156	159	161	11
Households	2005	2010	2015	2020	Change
Slow Annual Growth	54	53	52	51	-4
Based on Last 40 Years	53	51	49	47	-8
Fast Annual Growth	55	56	57	58	3

Map 5l: Moonshine Township Land Use

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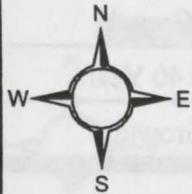
Big Stone County



Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Landuse		Wetlands
	Unclassified		Gravel Pits and Open Mines
	Urban and Industrial		Bare Rock, Exposed Soil, Sandbars, and Sand Dunes

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMVRDC GIS Service Bureau



Odessa Township

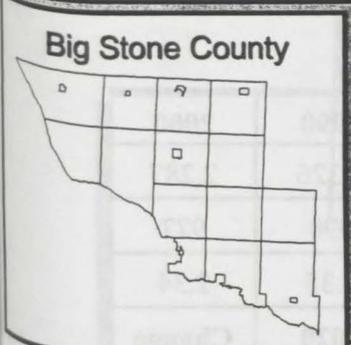
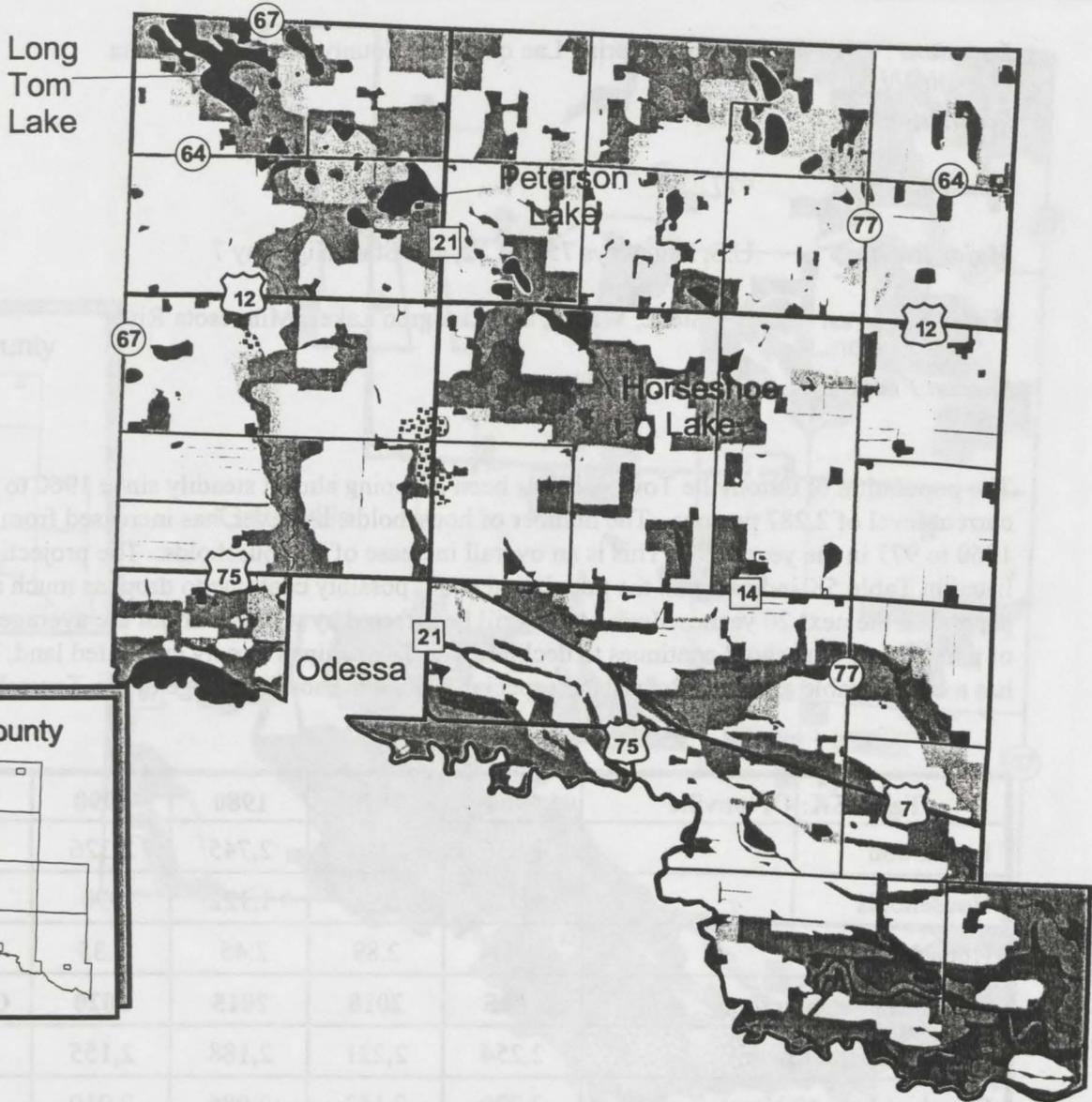
- Location:** South bordering Lac qui Parle County
- Population:** 147
- Households:** 61
- Major Roads:** U.S. Highways 12 and 75, State Highway 7
- Water Features:** Long Tom, Peterson, and Horseshoe Lakes; Stony Run; Minnesota River
- Special Features:** City of Odessa

Odessa Township has been steadily declining since 1960 to its current population of 147 and 61 households. The population projections listed in Table 5J state that the population of Odessa Township could expect to continue to lose population over the next 20 years. As with the rest of the County, Odessa Township's average number of persons per household has declined significantly, going down by 1.51 persons. The Township is largely cultivated land and grassland. Some of the most significant amounts of grassland in the County are seen in Odessa Township. The City of Odessa also takes up land in the southwestern portion of the Township.

Table 5J: Odessa	1960	1970	1980	1990	2000
Population	337	227	209	183	147
Households	86	73	76	67	61
Household Size	3.92	3.11	2.75	2.73	2.41
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	136	125	114	103	-44
Based on Last 40 Years	124	101	78	55	-92
Fast Annual Growth	156	165	174	183	36
Households	2005	2010	2015	2020	Change
Slow Annual Growth	60	58	57	55	-6
Based on Last 40 Years	58	55	52	49	-12
Fast Annual Growth	62	64	65	67	6

Map 5J: Odessa Township Land Use

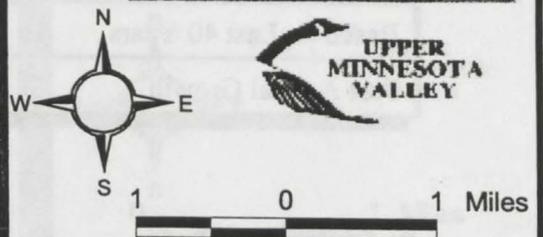
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Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Unclassified		Wetlands
	Urban and Industrial		Gravel Pits and Open Mines
			Bare Rock, Exposed Soil, Sandbars, and Sand Dunes

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



Ortonville Township

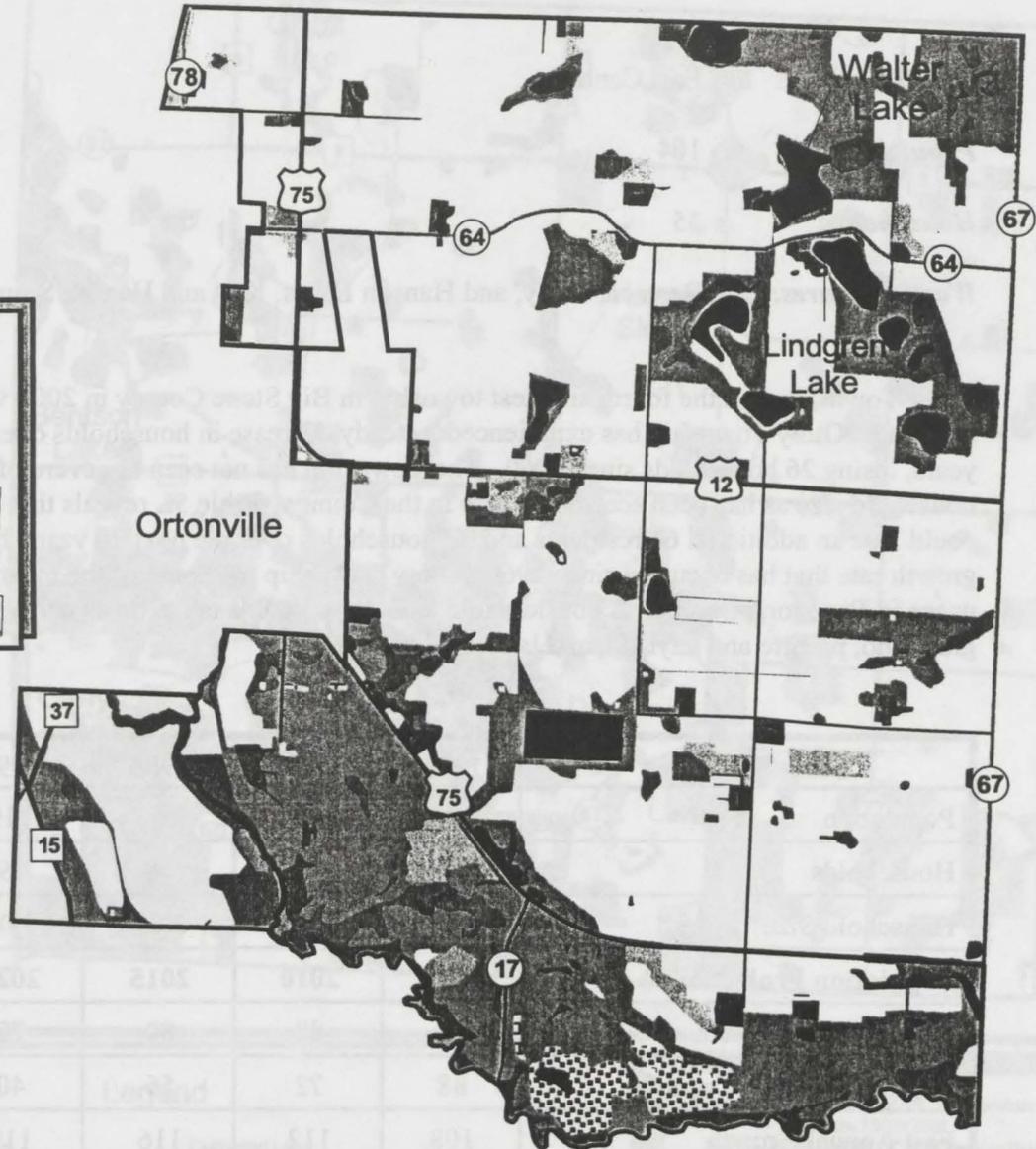
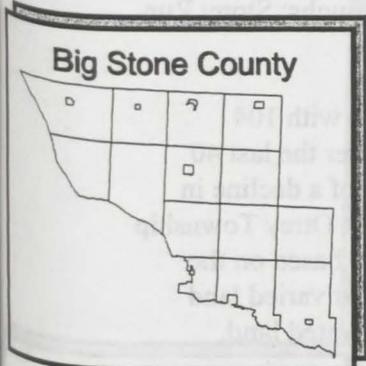
- Location:** South bordering Lac qui Parle County and South Dakota
- Population:** 2,287
- Households:** 977
- Major Roads:** U.S. Highways 75 and 12, and State Highway 7
- Water Features:** Big Stone, Walter, and Lindgren Lakes; Minnesota River
- Special Features:** City of Ortonville

The population of Ortonville Township has been dropping almost steadily since 1960 to its current level of 2,287 persons. The number of households, however, has increased from 912 in 1960 to 977 in the year 2000. This is an overall increase of 65 households. The projections listed in Table 5K indicate that the population could possibly continue to drop, as much as 12 percent in the next 20 years. Much of this will be affected by whether or not the average number of persons per household continues to decline. The Township is largely cultivated land, but also has a considerable amount of grassland especially along the southern edge of the Township.

Table 5K: Ortonville	1960	1970	1980	1990	2000
Population	2,836	2,841	2,745	2,326	2,287
Households	912	982	1,122	990	977
Household Size	3.11	2.89	2.45	2.35	2.34
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	2,254	2,221	2,188	2,155	-132
Based on Last 40 Years	2,220	2,153	2,086	2,019	-268
Fast Annual Growth	2,297	2,307	2,317	2,326	39
Households	2005	2010	2015	2020	Change
Slow Annual Growth	981	985	989	993	16
Based on Last 40 Years	985	993	1,001	1,009	32
Fast Annual Growth	989	1,001	1,013	1,025	48

Map 5K: Ortonville Township Land Use

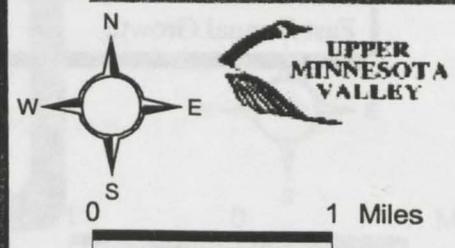
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Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	Rivers		Forest
	UGB (See City Map)		Water
	Lakes		Wetlands
	Landuse		Gravel Pits and Open Mines
	Unclassified		Bare Rock, Exposed Soil, Sandbars, and Sand Dunes
	Urban and Industrial		

Source: MNDOT BasMap '99, TIC Landuse 1989
 Date: 10/19/2001
 Produced By: UMRVDC GIS Service Bureau



Otrej Township

Location: East Central

Population: 104

Households: 35

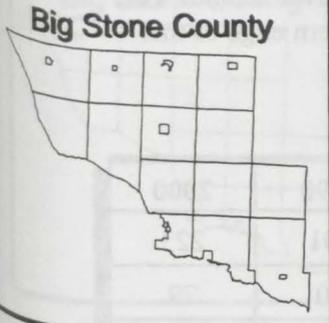
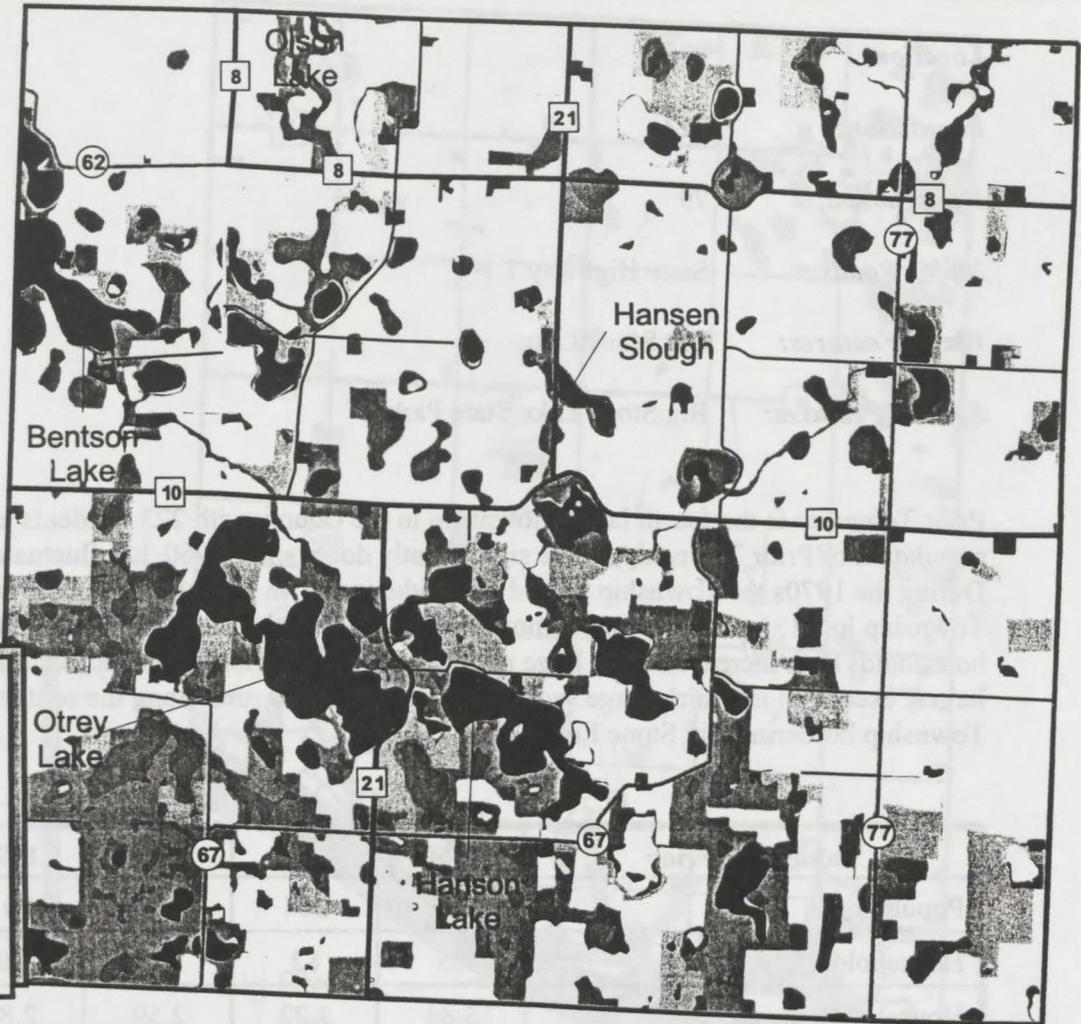
Water Features: Bentsen, Otrej, and Hanson Lakes; Karl and Hansen Sloughs; Stony Run

Otrej Township was the fourth smallest township in Big Stone County in 2000 with 104 residents. Otrej Township has experienced a steady decrease in households over the last 40 years, losing 26 households since 1960. The Township has not seen as severe of a decline in household size as has been seen elsewhere in the County. Table 5L reveals that Otrej Township could lose an additional 64 residents and 22 households over the next 20 years based on the growth rate that has occurred since 1960. Otrej Township has some of the most varied land usage in Big Stone County. A considerable amount of land is taken up as cultivated land, grassland, pasture and hayland, and lakes and wetlands.

Table 5L: Otrej	1960	1970	1980	1990	2000
Population	233	165	147	119	104
Households	61	43	48	39	35
Household Size	3.82	3.84	3.06	3.05	2.97
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	96	88	80	72	-32
Based on Last 40 Years	88	72	56	40	-64
Fast Annual Growth	108	112	116	119	15
Households	2005	2010	2015	2020	Change
Slow Annual Growth	34	32	31	29	-6
Based on Last 40 Years	32	29	26	23	-12
Fast Annual Growth	36	37	38	39	4

Map 5L: Otrey Township Land Use

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Legend	
	County State Aid Highways
	County Roads
	Township Roads
	UGB (See City Map)
	Lakes
Landuse	
	Unclassified
	Urban and Industrial
	Farmsteads and Rural Residences
	Cultivated Land
	Pasture and Hayland
	Grassland
	Forest
	Water
	Wetlands
	Gravel Pits and Open Mines
	Bare Rock, Exposed Soil, Sandbars, and Sand Dunes

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRDC GIS Service Bureau



Prior Township

Location: West

Population: 223

Households: 79

Major Roads: State Highway 7

Water Features: Big Stone Lake

Special Features: Big Stone Lake State Park

Prior Township is the fourth largest township in the County with 223 residents in 2000. The population of Prior Township, while significantly down since 1960, has fluctuated considerably. During the 1970s the Township gained 68 residents and 46 households. In the next decade the Township lost 131 residents and 58 households. In 2000 the population and number of households both increased. The large majority of land in Prior Township is cultivated land. The largest exception is a fairly large segment of grassland that runs along the southern edge of the Township bordering Big Stone Lake.

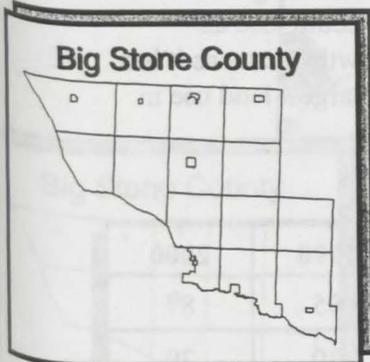
Table 5M: Prior	1960	1970	1980	1990	2000
Population	326	264	332	201	223
Households	85	82	128	70	79
Household Size	3.84	3.22	2.59	2.87	2.82
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	217	211	205	199	-24
Based on Last 40 Years	211	199	187	175	-48
Fast Annual Growth	228	234	239	245	22
Households	2005	2010	2015	2020	Change
Slow Annual Growth	79	78	78	77	-2
Based on Last 40 Years	78	77	76	75	-4
Fast Annual Growth	81	83	85	88	9

Map 5M: Prior Township Land Use

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in Region 6W.



Big Stone
Lake



Legend

- | | | | |
|--|---------------------------|--|---|
| | US and State Highways | | Farmsteads and Rural Residences |
| | County State Aid Highways | | Cultivated Land |
| | County Roads | | Pasture and Hayland |
| | Township Roads | | Grassland |
| | UGB (See City Map) | | Forest |
| | Lakes | | Water |
| | Unclassified | | Wetlands |
| | Urban and Industrial | | Gravel Pits and Open Mines |
| | | | Bare Rock, Exposed Soil, Sandbars, and Sand Dunes |

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMRVDC GIS Service Bureau



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Toqua Township

Location: North bordering Traverse County

Population: 87

Households: 29

Major Roads: State Highway 28

Water Features: Barry and Fogarty Lakes; Mustinka River

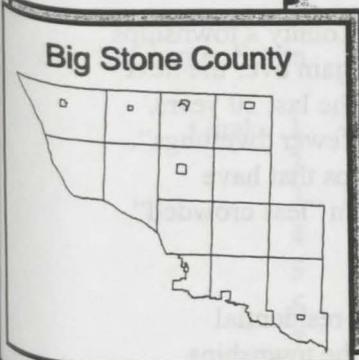
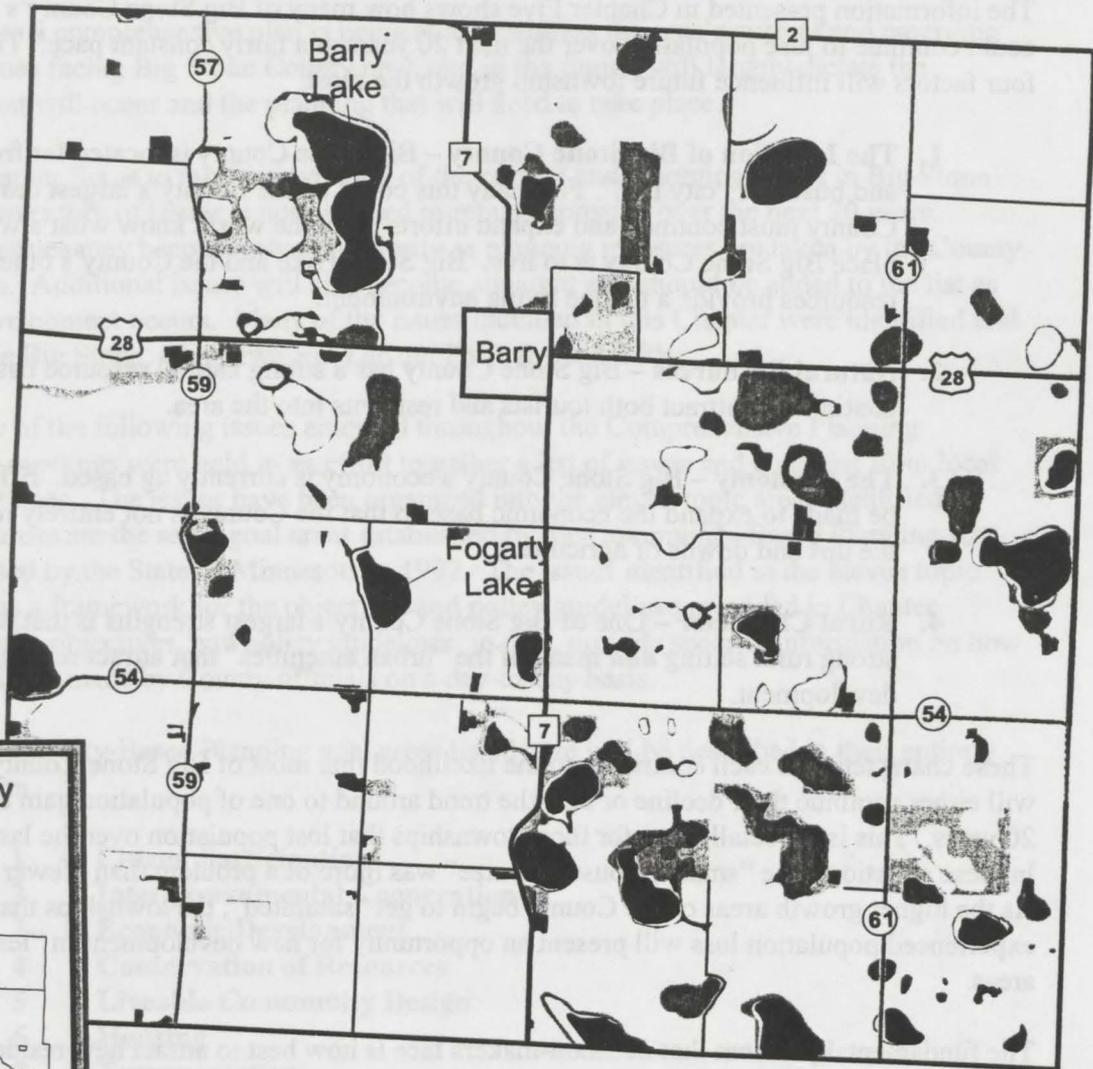
Special Features: City of Barry

Toqua Township was the second smallest township in Big Stone County in 2000 with a total of 87 residents. Toqua Township has seen a steady decrease in population and households since about 1970. During the 1960s the Township saw a dramatic loss of population losing 68 residents (32 %) and 7 households. Table 5N projects that Toqua Township could lose an additional 60 people and 20 households over the next 20 years, assuming growth occurs as it has since 1960. Toqua Township is almost entirely cultivated land. The second largest land use in the Township consists of lakes, wetlands and other surface water features.

Table 5N: Toqua	1960	1970	1980	1990	2000
Population	214	146	122	95	87
Households	43	36	33	30	29
Household Size	4.98	4.06	3.70	3.17	3.00
Population Projections	2005	2010	2015	2020	Change
Slow Annual Growth	80	73	66	59	-28
Based on Last 40 Years	72	57	42	27	-60
Fast Annual Growth	89	91	93	95	8
Households	2005	2010	2015	2020	Change
Slow Annual Growth	28	27	26	25	-4
Based on Last 40 Years	27	25	23	21	-8
Fast Annual Growth	29	29	30	30	1

Map 5N: Toqua Township Land Use

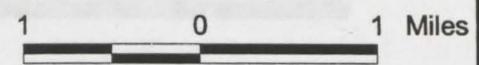
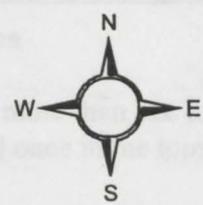
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Legend

	US and State Highways		Farmsteads and Rural Residences
	County State Aid Highways		Cultivated Land
	County Roads		Pasture and Hayland
	Township Roads		Grassland
	UGB (See City Map)		Forest
	Lakes		Water
	Landuse		Wetlands
	Unclassified		Gravel Pits and Open Mines
	Urban and Industrial		Bare Rock, Exposed Soil, Sandbars, and Sand Dunes

Source: MNDOT BasMap '99, TIC Landuse 1989
Date: 10/19/2001
Produced By: UMVRDC GIS Service Bureau



Summary of the Township Profiles

The information presented in Chapter Five shows how many of Big Stone County's townships could continue to lose population over the next 20 years at a fairly constant pace. The following four factors will influence future township growth the most:

1. **The Location of Big Stone County** – Big Stone County is located far from the hustle and bustle of “city life.” For many this could be the County's largest draw. The County must continue and expand efforts to let the world know what a wonderful place Big Stone County is to live. Big Stone Lake and the County's other natural resources provide a unique living environment.
2. **Natural Resources** – Big Stone County has a strong natural resource base that continues to attract both tourists and residents into the area.
3. **The Economy** – Big Stone County's economy is currently ag based. Efforts need to be made to expand the economic base so that the County is not entirely reliant upon the ups and downs of agriculture.
4. **Rural Character** – One of Big Stone County's largest strengths is that it offers a strong rural setting *and* many of the “urban amenities” that attract residential development.

These characteristics each contribute to the likelihood that most of Big Stone County's townships will either continue their decline or turn the trend around to one of population gain over the next 20 years. This is especially true for those townships that lost population over the last 20 years. In these situations, the “smaller household size” was more of a problem than “fewer dwellings”. As the higher growth areas of the County begin to get “saturated”, the townships that have experienced population loss will present an opportunity for new development in “less crowded” areas.

The fundamental problem that decision-makers face is how best to attract new residential development *and* preserve the rural character of why people choose to live in the townships. Fortunately, both can be accomplished if the tough questions are examined now, rather than in response to uncoordinated development.

Chapter Six: Current and Emerging Issues

A key element to a comprehensive plan is being able to address the area's current and emerging issues. The issues facing Big Stone County now, and in the future, will largely dictate the development that will occur and the planning that will need to take place.

The goal of Chapter Six is to take an inventory of the current and emerging issues in Big Stone County. This inventory of issues is not intended to remain constant over the next 20 years. Some of these issues may become lower in priority as planning measures are taken by the County to address them. Additional issues will also become apparent and should be added to the list as growth and development occurs. Many of the issues included in this Chapter were identified and addressed in the Big Stone, Chippewa and Lac qui Parle Regional Plan.

Although many of the following issues emerged throughout the Comprehensive Planning process, public meetings were held in an effort to gather a list of issues and concerns from local officials and citizens. The issues have been organized into the eleven topic areas identified below. These areas are the same goal areas established by the Community-Based Planning Act, which was passed by the State of Minnesota in 1997. The issues identified in the eleven topic areas are used as a framework for the objectives and policy guidelines provided in Chapter Seven. The goals, objectives, and policy guidelines, in turn, provide specific information on how decisions should be made by County officials on a day-to-day basis.

The eleven Community-Based Planning goal areas listed here will be described in their entirety in Chapter Seven.

- | | | |
|-------------|-----------|--------------------------------------|
| Goal | 1 | Citizen Participation |
| | 2 | Intergovernmental Cooperation |
| | 3 | Economic Development |
| | 4 | Conservation of Resources |
| | 5 | Liveable Community Design |
| | 6 | Housing |
| | 7 | Transportation |
| | 8 | Land Use Planning |
| | 9 | Public Investment |
| | 10 | Public Education |
| | 11 | Sustainable Development |

Identifying an Issue with a Topic Area

Several of the issues identified in this Chapter could be placed in more than one topic area. For the purposes of this Chapter, however, each issue is presented once in the topic area that the issue most directly addresses.

Citizen Participation

Involvement in local government. Involvement in local government is a big commitment and often there is a lack of people willing to run and serve in local government positions. Unfortunately, people are unwilling to commit the time, and others simply may not realize how vital actions taken by local government are to the day-to-day activities of its citizens.

Voices unheard. The people need to feel they are being heard. If they do not feel their local government is listening to their concerns, the public will be less likely to support the County's initiatives for improvement.

Silent voices. Public meetings held to gain input are frequently poorly attended. Local units of government cannot effectively put good public policies into place without knowing what the people need and how they would like to see issues addressed.

Intergovernmental Cooperation

Involve townships and cities in the planning process. The planning activities of the County directly impact townships and cities. The County should seek input from these local units of government prior to making important planning decisions.

City and township cooperation. Cooperation between neighboring cities and townships is needed to effectively address new development and potential annexations.

Establish a collective vision Countywide and in specific areas. A collective vision for the County and specific areas within the County (i.e., Ortonville, Big Stone Lake area) should be established through land use plans and implemented accordingly.

Use State and Federal agencies and local boards in planning activities. Coordinated planning activities between the County and the affected agencies and boards such as the DNR, MPCA, Mn/DOT, local watershed districts, etc., could help ensure efficient growth with minimal adverse impacts.

Promote more local control on State and Federal issues. Input from local residents and units of government on State and Federal projects can help keep activities in conformance with local land use plans and needs.

Conduct meetings with State agencies, city councils, township boards, planning commissions, etc. Meetings can be conducted between County officials and affected State agencies and local units of government to address specific issues.

Conduct meetings with stakeholders to discuss regional issues. Meetings affecting Big Stone County and neighboring counties can be effective in addressing regional issues. Regional issues within Big Stone County can be beneficial in bringing affected stakeholders together.

Resource sharing between local units of government. Resource sharing between local units of government can provide services more efficiently and lessen tax rate inequities between neighboring units of government.

Economic Development

Tourism. The County's many lakes, trails, parks, hunting and fishing resources provide a wide variety of tourism opportunities in Big Stone County. Tourism is an important part of the economy as it produces jobs and results in additional money being spent throughout the County.

Protect agricultural activities. Agricultural activities are an important part of Big Stone County's economy. The loss of small family farms and the increase in "corporate" farming activities have greatly impacted the landscape and economy.

Countywide business incentive and start-up program. A Countywide business incentive and start-up program would provide new businesses with resources such as a list of individuals and organizations that provide business assistance, market analysis information and the demographics of the area.

Commercial development along highway corridors. Commercial development along highway corridors, especially in areas that are currently established as commercial developments, can provide for orderly growth patterns and minimize the chance for incompatible land uses.

Location of industry. As with commercial development, industrial development should be directed toward currently developed industrial lands with measures taken to buffer the industrial use from non-compatible types of land use.

Focus business growth in municipalities. Municipalities often have areas identified for industrial and commercial growth and are often well suited to provide businesses with the infrastructure they need to operate effectively. These areas in municipalities should be used for commercial and industrial development prior to locating such land uses in rural areas.

Preferred businesses. When attempting to attract new businesses to the County, the size, type, wages, jobs and utility demand of the prospective companies should be taken into consideration. It is important that new businesses are compatible with current and future land use plans and that they create a positive impact on the economy.

Promote innovative marketing strategies. To strengthen the economy of the County, innovative marketing strategies need to be promoted that help add value to the products being produced and the labor resources the County has available.

Assist cities in developing infrastructure to attract industry. The costs of providing new infrastructure often limit communities in attracting new business. Economic development assistance from the County in helping cities plan for business development would help increase the tax base of the entire County.

Business retention vs. smoke stack chasing. Although attracting new business to the County is beneficial, it is important to retain the jobs and tax base created by existing businesses. For the County's economy to grow, both existing and new businesses must be financially healthy as new businesses start.

Promote agriculture as an industry. Agricultural activities make up an important part of the County's economy as it provides a significant number of jobs and accounts for a large portion of the tax base making land use decisions.

Maintain a sense of community. Big Stone County needs to remember to create a balance between economic development and social growth when reaching for its goals.

Technology. Some of the benefits of technology are not always available in rural areas. Wireless Internet services are available in and around the Ortonville/Big Stone City area, but these services are not available in other areas of Big Stone County. Greater availability to wireless services and T-1 lines throughout the County would improve the ability to start an Internet business in the Big Stone County area.

Shortage of jobs that provide a "liveable wage." Big Stone County has a need for upgraded technology and information in the hopes of attracting industry to the area. Expanded industry would provide Big Stone County residents with more job opportunities. Such opportunities would encourage residents to stay and help alleviate the youth flight problem.

Work force. The population of Big Stone County and the surrounding region may not be enough of a labor force for certain industries to draw from. A need to balance business with the labor force and special planning to attract the most suitable industries are important. As businesses come in more people would be attracted to the area allowing for further industrial growth.

Conservation of Resources

Protecting natural resources. Big Stone County has a diverse natural resource base that provides many economic, recreation and aesthetic benefits to residents. Policies need to be created that allow for both the preservation of the County's natural resources and future development.

Shoreline management/development. There are many miles of shoreline in Big Stone County. Development of these environmentally sensitive areas needs to be closely monitored and regulated to preserve their natural character. Countywide shoreland management and protection need to be a cooperative effort between the County and the DNR, townships, cities, watersheds, lake associations and other affected parties.

Chemical application. The application of agricultural and lawn chemicals poses a potential threat to groundwater and surface waters. Chemical application standards and promoting alternatives to chemical use would help reduce the occurrence of this pollution.

Protect wetlands. Wetlands provide numerous benefits including an improved water quality, flood water holding areas and wildlife habitat. Land use decisions need to account for the importance of wetlands and must follow the regulations that protect these areas. The DNR should be consulted on major land use decisions that affect wetlands.

Protect agricultural land. Agriculture is a vital part of almost every aspect of life in Big Stone County. While the County must work to protect wetlands and other habitats, this must be balanced with a need to protect prime agricultural lands. This protection comes from various zoning ordinances, through the use and maintenance of drainage ditches and other methods.

Value of open space and wooded corridors. Open spaces and wooded corridors provide recreational, ecological and aesthetic value to an area. Examples of these areas that should be preserved include parcels ranging in size from small open spaces in housing subdivisions to large undeveloped tracks of land.

Balance natural resources and economics. Economic development sometimes comes at the expense of valuable natural resources. Natural resources in Big Stone County should be preserved for their ecological, recreational and aesthetic value. In turn, land that is less environmentally sensitive should be sought for new development and increased tax base.

Managing gravel mining as a natural resource. Gravel mining provides a valuable mineral resource. A Countywide aggregate resource inventory would be beneficial in accessing the quantity and location of gravel resources. As the demand for gravel increases, measures should be taken to ensure those mining operations create only a minimal environmental impact and that pits are reclaimed back to a natural state in harmony with the rest of the landscape.

Buffer strips around lakes, streams and other natural areas. Buffer strips of land separating natural and environmentally sensitive areas from neighboring incompatible land uses would help to reduce the likelihood of negative impacts to these areas.

Septic system impact on water resources. In order to protect ground and surface water resources, strong septic system controls need to continue to be implemented and enforced.

Hunting and fishing management. Big Stone County offers good hunting and fishing opportunities for local residents and tourists. Maintaining or enhancing this quality of hunting and fishing will require cooperation between local residents, resort owners, lake associations, local sporting clubs, the DNR and other affected stakeholders.

New development's impact on parks and recreation. The encroachment of new development near existing parks, trails, lakes and other natural areas used for recreation can have an adverse impact on the aesthetics of the landscape and the quality of recreation provided. Existing parks and recreation areas could be buffered from new development to limit these negative impacts.

Coordination of conservation programs. The Countywide promotion of conservation programs would help ensure the preservation of environmentally sensitive lands.

Types and quantity of recreation to permit. Recreation comes in many forms (passive or active, motorized or non-motorized, etc.). Each type of recreation and the number of people recreating has a different impact on the environment which, in turn, affects the quality of recreation enjoyed by others. Measures to minimize the negative impacts will benefit the environment and all who enjoy recreating in Big Stone County.

Liveable Community Design

Aging population. An aging population requires additional services to be provided. Identifying the needs should be accomplished pro-actively.

Adequate recreational opportunities. It is important to provide recreational opportunities that meet the needs of people of all ages, incomes and abilities in order to maximize the recreational opportunities enjoyed by residents in the County.

Infrastructure. Maintenance and improvements on existing infrastructure helps improve Big Stone County's ability to draw both tourists and new residents.

Community values. Each community in Big Stone County is unique, with their own stories to tell and strong values that are treasured by all. Maintaining and improving family values, attracting quality people to the community, and retaining quality citizens and a quality way of life will only add to the allure of these communities.

Housing

Higher density housing. The use of innovative housing subdivision designs can create higher concentrations of housing in an effort to minimize land consumption and preserve open space for all to enjoy.

Future housing needs. The quantity and types of future housing needed in Big Stone County will depend on the number of people living in the County and their social and economic characteristics. Housing studies can be beneficial in determining the housing needs of an area.

Defining prime residential land. Defining prime residential land is a difficult process as each stakeholder tends to have different perspectives. The use of zoning criteria can help determine what land should be developed for housing.

Building code enforcement. The use and enforcement of a building code is a tool that can assist in providing safe and quality housing for residents in the County.

Flood zones. The building of housing in flood zones presents water problems for the homeowner. It also increases the chances for pollutants to enter rivers and streams. Floodplain regulations should be followed regarding all types of development.

Transportation

Communication with Mn/DOT on projects. The maintenance and upgrades to the State maintained highways are vital to the growth and development of Big Stone County. Mn/DOT's future plans for these highways should be consistent with the comprehensive plan.

Network with neighboring counties. The transportation systems of neighboring counties provide accessibility to and from Big Stone County. Projects involving State highways are often a regional issue that requires cooperation between counties and Mn/DOT.

Identify high traffic areas. High traffic areas present safety concerns and high maintenance costs for the County.

Future roads need to follow infrastructure. The future construction of County roads in and near municipalities should be consistent with the development plans of the cities.

Maintenance. The maintenance of roads is an expensive, but necessary, component of the County's transportation system. Road restrictions and preventive maintenance are two methods that help to prolong the life of roads.

Inventory of the current transportation system and analysis of future needs. An inventory and analysis of the current transportation system in the County would help to determine what kind of roads need to be built or reconstructed and where that should take place.

Construct roads to handle emergency service vehicles. The construction and reconstruction of roads in the County should be done in a way that makes them easily accessible for emergency service vehicles.

Access management. The number of access points onto roads can greatly impact the flow of traffic and cause safety concerns. Access management principles can be implemented to help reduce traffic congestion and reduce the potential for accidents.

Public transportation. The maintenance of existing public transportation and the development of additional public transit needs to be examined. Good public transportation is essential to keeping area youth and elderly in touch and active.

Land Use Planning

Rural residential lot size. A maximum lot size in each zoning district sufficient to accommodate the needs of residents, yet limit the negative impacts to the landscape should be established.

Land use coordination. Coordination between County, township and city zoning and subdivision regulations can help create orderly growth patterns for new development. For example, the County's zoning in municipal urban growth areas should be coordinated with the city's intended land use for that area.

Maintain rural/urban character. Development policies and land use controls should be implemented so rural and urban areas in the County can maintain their own identity and characteristics that are unique to each land use. Such policies and land use controls can preserve the amenities residents in those areas are seeking.

Establish/maintain buffer strips between land uses. Buffer strips located between land uses can provide separation and reduce conflicts between incompatible land uses.

Future land use planning. Implementation of the County's Comprehensive Plan and encouraging development to occur as it is identified in the County's Goals, Objectives, and Policy Guidelines can facilitate the process for promoting orderly growth.

Examine current zoning policies. After the adoption of this Plan, the County should consider revising its Zoning Ordinance to conform with the Goals, Objectives and Policy Guidelines in this document. Specifically, establishing adequate rural residential housing densities needed to accommodate future growth and implementing zoning techniques that minimize the consumption of land in the County should be considered.

Minimize urban sprawl. Growth in urban areas should be promoted as cities are best suited to provide the necessary services and infrastructure that new development demands. Urban growth, however, should be concentrated in a way that the maximum potential is achieved from land currently in corporate boundaries before extending growth into undeveloped areas.

Current land use patterns. Current land use patterns are important as they can indicate existing growth policies and can set the stage for what future development policies need to be implemented.

Encourage new municipal growth in urban growth boundaries. Establishing growth policies that encourage development in municipal urban growth boundaries can limit urban sprawl, reduce costs of providing infrastructure, lead to the consumption of less land, limit adverse impacts to the environment and promote orderly growth. Cooperation between cities and townships on identifying urban growth boundaries and determining the need for annexation agreements will be an important issue as the County experiences growth.

Cluster or conservation subdivision development. Cluster or conservation subdivision developments promote smaller lot sizes, shared or more cost effective infrastructure and the establishment of public open spaces. These developments offer an alternative to large lot subdivisions and the large consumption of land.

Feedlots and rural housing. Feedlots are a necessary and important component to the agriculture economy. However, the co-existence of feedlots and rural housing can produce problems. Feedlot ordinance regulations and rural housing development policies need to be implemented and enforced so as to minimize the conflict between these land uses.

Gravel mining as a land use activity. In addition to creating environmental impacts and altering the landscape, issues such as excessive dust, noise and truck hauling can create a nuisance when gravel mining occurs too close to rural housing. The use of aggregate mining regulations and residential setback standards from established mining operations can help reduce some of the conflict between these land uses.

Public Investments

New development on taxes. Prior to providing infrastructure to newly developed areas or to land that is anticipated to experience growth, the costs that will be incurred to provide water, sewer, roads and other services to these areas should be determined. In some cases, the costs to provide services and infrastructure to new development exceeds the taxes that development will generate. New development can also increase the property value of neighboring land, which results in these landowners paying higher taxes.

Location of public buildings. Public buildings are an important part of communities. Prior to relocating public buildings, the County and affected city should communicate on possible alternatives to select the best site.

Providing adequate services. A priority for Big Stone County is to maintain existing businesses, schools, and health care facilities to ensure that residents are provided with a minimum level of service. Big Stone County faces dual challenges with this endeavor. One, they must attract services (such as doctors, lawyers, and other professionals) and two, they must find funding to maintain many of the services they currently provide or need (such as schools and police protection). This challenge could be best faced by the combined forces of the County, cities and townships.

Taxes. The differences between the tax rates in Minnesota and South Dakota are of special concern to Big Stone County residents. People wanting to move to the area may decide to move to South Dakota as it is in the same general area and tax rates are considerably lower.

Youth flight. The trend of young people leaving the Big Stone Area for their education and never returning has become a serious problem. Finding incentives to stay can help alleviate a number of long-term problems.

Public Education

Improve telecommunications Countywide. Improved telecommunications can improve education, local business and enhance the quality of life for residents.

Educate the public on the costs, services and features associated with rural living. Several people who locate in rural areas are moving there from urban areas. In some cases, people moving from an urban area are not familiar with the level of services and features found in rural areas. Informational programs to educate people who are considering locating to a rural setting

may reduce some of the expectations and conflicts they have with the services and features found in the rural landscape.

Provide environmental education to the public. Educational programs on the importance of preserving and protecting natural resources should be provided to reduce the adverse impacts imposed on these lands and the amenities associated with them.

Public at large needs to be educated. Community education is an important aspect of any community, offering classes that appeal to all ages and interests can enhance the community greatly.

Technology. Today's technology is rapidly changing. Continuing education in technology training needs to be offered to keep Big Stone County up-to-date. Such classes can be offered by the County or through a combined effort with the cities or community education.

Curriculum. Community involvement in the development of curriculum can assist children in moving more effectively into the local workforce. Some issues include balancing life skills with technology, showing the value of all jobs and education levels, and remaining in touch with local business to better fulfill their needs.

Sustainable Development

Population change. Future population projections and changes in the social and economic characteristics of the County's population are important statistics to consider when addressing several planning issues.

Quality of rural and urban life. Planning activities should take into account the short and long term impacts they will create on the quality of life residents will experience in rural and urban areas as a result of those activities.

Balance between new development and preservation of natural resources. Planning activities need to establish a balance that allows new development while at the same time protecting natural resources.

Sustainability and continuity of programs. Programs developed to encourage and assist new business and industry in Big Stone County must have stability themselves. Entrepreneurs will look for communities with programs that can help them create and maintain their business. This requires a stable foundation to the program.

Chapter Seven: Big Stone County Goals, Objectives, and Policy Guidelines

This Chapter of the Comprehensive Plan establishes Big Stone County's Goals, Objectives and Policy Guidelines. They will be used to help make land use and planning decisions by everyone responsible for Big Stone County's future. The goals have been organized into eleven topic areas. These eleven areas are the same ones established by the Community-Based Planning Act, which was passed by the State of Minnesota in 1997. The eleven goals are used as a framework for the objectives and policy guidelines which, in turn, provide specific information on what values and guidelines clearly identify how decisions will be made by Big Stone County officials on a day-to-day basis.

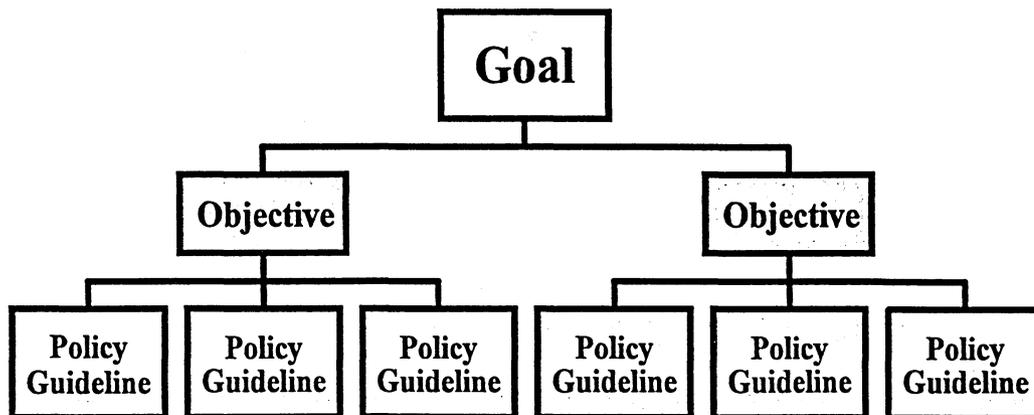
Throughout the Comprehensive Plan, Goals, Objectives and Policy Guidelines are defined in the following way (also see Figure 7A):

Goal: This is an idealistic statement intended to be attained at some undetermined future date. Goals are purposely general in nature.

Objective: Objectives are action-oriented and can be measurable if a date, dollar amount, etc., is included. Objective statements always begin with an action verb. There may be more than one objective for a goal.

Policy Guideline: These statements support the action of the objective. The statements are recommendations qualified by the word "should". Policy guidelines can also be converted into action work plans.

**Figure 7A:
Goal, Objectives
& Policy Guidelines Hierarchy**



Goal One: Citizen Participation

To develop a planning process with broad citizen participation in order to build local capacity to plan for sustainable development and to benefit from the insights, knowledge and support of local residents.

Objective A: Use a planning commission to advise the governing body on issues of growth and development.

Guideline 1: Planning commission members should have a wide variety of experiences and should represent a geographical balance of the County.

Guideline 2: Those planning commission members with poor attendance records should be replaced.

Objective B: Appoint special task forces to address specific problems, issues, and opportunities.

Guideline 1: Task force members should be selected based on expertise, credibility and their ability to be objective.

Guideline 2: Task forces should be given single tasks with set time lines for completion.

Objective C: Keep the public advised of important planning issues and events.

Guideline 1: The media should be sent copies of all agendas and be notified regarding any special meetings.

Guideline 2: The press should be explained the nature and consequences of important planning issues.

Goal Two: Intergovernmental Cooperation

To promote cooperation among townships, cities and neighboring counties to work toward the most efficient, planned and cost-effective delivery of government services by, among other means, facilitating cooperative agreements among adjacent counties and to coordinate planning to ensure compatibility among each local unit of government.

Objective A: Meet on a regular basis as needed with local units of government, including cities, townships and adjacent counties.

Guideline 1: A contact person should be identified for each relevant local unit of government for a number of planning issues.

Guideline 2: Meetings should be held as needed with each level of government to discuss important planning issues and to determine what opportunities exist to solve any conflict. These meetings should occur at least once every year.

Objective B: Reduce the overlap of administrative activities between the County, cities and townships.

Guideline 1: Government programs should be coordinated among units of government so they are efficiently provided to the public.

Guideline 2: Ordinances should be consistently applied between neighboring units of government.

Guideline 3: The County should clearly identify which residents must comply with a city's Extraterritorial Building Code Zone, when applicable.

Objective C: Meet periodically as appropriate with governmental agencies.

Guideline 1: The County should meet as needed with the various State agencies to discuss important planning issues and to determine what opportunities exist to share resources.

Guideline 2: A list of relevant issues and projects should be jointly developed with appropriate governmental agencies.

Goal Three: Economic Development

To create sustainable economic development strategies and provide economic opportunities throughout the County that will achieve a balanced distribution of growth Countywide.

Objective A: Encourage the expansion and continuation of existing businesses.

Guideline 1: An inventory of existing businesses should be made and should include both current and future needs.

Guideline 2: Businesses should be encouraged to implement sustainable business practices.

Guideline 3: Encourage ecological business expansions and developments that sustain the environment.

Guideline 4: Agricultural activities should be considered an existing industry, and plans should be implemented to promote agricultural related business.

Guideline 5: Industries and commercial businesses should be given planning assistance to expand or improve their operations.

Guideline 6: Financial tools should be available to expand or improve existing businesses.

Guideline 7: Assistance in retaining or expanding businesses should take priority over recruiting businesses with no historical ties to the County.

Guideline 8: Redevelopment of existing commercial and industrial developments should take priority over creating new developments.

Guideline 9: Marketing strategies should be encouraged that promote the use of goods and services produced or provided in the County.

Guideline 10: Business and industrial expansion should be encouraged in existing municipal areas in an effort to preserve agricultural land and natural resources.

Objective B: Develop a diversified inventory of businesses and industries to insulate the County's economy from changing markets and business cycles.

Guideline 1: A diversified tax base offering a large number and wide variety of employment opportunities at different education and skill levels should be promoted.

Guideline 2: Recruitment of new business and industry should take into consideration its size, type, wage, jobs, utility demand and compatibility with existing land uses and natural resources.

Guideline 3: Efforts should be made to attract new industrial and commercial businesses that pay a liveable wage.

Guideline 4: Recognize bio-fuels as a value added agricultural commodity.

Guideline 5: Value added commodities should be encouraged.

Objective C: Promote tourism as an existing and growing industry.

Guideline 1: A diversified range of recreational activities for every season should be encouraged.

Guideline 2: Wildlife Management Areas and Waterfowl Production Areas should be promoted as outdoor recreational areas and development near these lands should be discouraged.

Guideline 3: Promotion of tourism should include strict provisions for protecting the County's natural resources.

Objective D: Provide adequate infrastructure for business growth.

Guideline 1: The County should cooperate with all townships and cities that want to develop adequate infrastructure to attract industry.

Guideline 2: The condition and capacity of sanitary sewer, storm sewer, water supply, water treatment, telecommunication services and local roads and streets should be analyzed to determine adequacy.

Objective E: Help develop and improve the human and natural resources of the County.

Guideline 1: Efforts should be made to prevent youth flight out of the area.

Guideline 2: Planning should occur to protect agricultural lands as a natural and economic resource.

Guideline 3: The County and private enterprise should work together to achieve and retain a skilled and highly trained labor force.

Guideline 4: Recreational activities should not hamper future generations from enjoying the County's vast natural resources.

Objective F: Promote a favorable image of the County as a place to develop industry.

Guideline 1: Networking and partnerships should occur between County, regional and State economic development agencies.

Guideline 2: County and regional issues should be identified and worked on cooperatively.

Guideline 3: Financing tools (such as tax increment financing, tax abatement and revolving loan funds) should be offered to businesses.

Goal Four: Conservation of Resources

To protect, preserve and enhance the County's resources, including agricultural land, wooded areas, water (both surface and groundwater), native vegetation, recreational areas, scenic areas and significant historic and archaeological sites.

Objective A: Develop and enforce ordinances that set standards for environmental protection in agricultural and aggregate activities.

Guideline 1: Feedlot ordinances should be created that promote agricultural activities while monitoring their impact on natural resources and residential areas.

Guideline 2: Prime agricultural land should be protected.

Guideline 3: Land use plans and ordinances should regulate and preserve prime agricultural lands for agricultural purposes.

Guideline 4: All gravel pits should have closure requirements and reclamation plans that are closely monitored and enforced by the County.

Objective B: Develop and enforce standards to minimize soil erosion and promote programs that can help reach the desired results.

Guideline 1: Erosive areas should be protected with appropriate conservation measures.

Guideline 2: Educational programs that promote soil conservation should be offered.

Guideline 3: All developments should be held accountable for minimizing water runoff and soil erosion.

Guideline 4: Construction sites should be protected with temporary and permanent erosion control measures.

Guideline 5: The County, along with the cities and townships, should consider planting trees and shrubs that will provide protection from blowing and drifting snow.

Guideline 6: Developers and farmers should be given incentives to plant living windbreaks and buffer strips.

Objective C: Create and support reasonable regulations that adequately protect the quantity and quality of surface and groundwater.

Guideline 1: Shoreland regulations should be followed and enhanced that control urban growth and agricultural activities on or near lakes, rivers, wetlands and flood plains.

Guideline 2: Ordinances should be implemented and enforced that regulate land use near surface water.

Guideline 3: Septic system design, installation and maintenance should be closely monitored and regulated.

- Guideline 4: Groundwater quality and quantity should be closely monitored in urban areas and irrigated agricultural lands.
- Guideline 5: Water retarding and flood control structures and practices should be encouraged and implemented.
- Guideline 6: Care should be taken to minimize the disturbance of fragile eco-systems.
- Guideline 7: Managed/cooperative wastewater treatment systems should be encouraged in rural areas with high density housing.
- Guideline 8: Land use practices should be implemented that retard runoff.
- Guideline 9: Point and non-point pollution sources should be identified and abated.
- Guideline 10: Shoreland management standards that are stricter than the Statewide standards should be considered.
- Guideline 11: Wellhead protection plans should be implemented in an effort to protect surface and groundwater.
- Guideline 12: Manure management plans should also be implemented in an effort to protect surface and ground water.
- Guideline 13: Wetland restoration, buffer strips and agricultural set-a-side programs should be promoted near surface water and on marginal farm land.
- Guideline 14: The County should work closely with the individual lake associations and watershed districts in an effort to protect water resources.
- Guideline 15: Wellhead and surface water protection plans should be developed and implemented to ensure the protection of drinking water.

Objective D: Encourage the public and private sector to efficiently use renewable energy resources.

- Guideline 1: All renewable energy sources should be identified and explored.
- Guideline 2: The development of energy efficient settlement patterns in land use plans and related ordinances should be practiced.
- Guideline 3: Local zoning and subdivision ordinances should encourage innovative energy-efficient designs.

Guideline 4: Vegetation should be used to protect buildings from extreme climatic conditions.

Guideline 5: The disturbance or removal of natural resources, such as mining, should be performed in a manner that will minimize the impact on the environment and efforts should be made to return those disturbed areas back to an original or environmentally beneficial state.

Objective E: Encourage the wise use of existing energy conservation technology for existing and proposed buildings.

Guideline 1: Multi-family housing should be recognized as being more energy efficient than single-family detached houses.

Guideline 2: New building construction should be encouraged to meet or exceed the minimum standards set forth in modern building codes.

Objective F: Support providing open space and recreational opportunities.

Guideline 1: The location and condition of open spaces, recreational areas and natural resources should be evaluated periodically.

Guideline 2: New open space or recreational opportunities should be prioritized in those areas of the County not currently served by existing County resources.

Guideline 3: Open space and recreational facilities should be maintained and enhanced.

Objective G: Promote the use of mass transit and the use of non-motorized forms of transportation as well as the improvement and/or retention of existing transportation facilities.

Guideline 1: The County should cooperate to promote the maximum use of public transit.

Guideline 2: Bike and walking paths should be developed and/or enhanced.

Guideline 3: The use of non-motorized means of transportation should be encouraged.

Goal Five: Liveable Community Design

To strengthen the County by following the principles of liveable community design in development and redevelopment, including integration of all income and age groups, mixed land uses and compact development, affordable and life-cycle housing, green spaces, access to public transit, bicycle and pedestrian ways and enhanced aesthetics and beauty in public spaces.

Objective A: Support design concepts that are functional for all residents.

Guideline 1: Design concepts should accommodate the needs of all people.

Guideline 2: Design concepts should make provisions for both passive and active recreation.

Guideline 3: Design concepts should accommodate both pedestrian and vehicular needs.

Guideline 4: Design concepts should include provisions for modern technology.

Guideline 5: Design concepts should accommodate the needs of people in all income categories.

Goal Six: Housing

To provide and preserve an adequate supply of affordable and life-cycle housing throughout the County.

Objective A: Help assure an adequate and affordable housing supply that provides a convenient, safe and aesthetically appealing living environment for all residents of the County.

Guideline 1: An adequate supply of housing in a wide range of prices, types and locations should be encouraged.

Guideline 2: The County's Housing and Redevelopment Authority (HRA) should be consulted on important housing-related issues.

Guideline 3: The private sector should be given both the flexibility and the support necessary to provide a wide range of housing.

Guideline 4: Nuisances on all property should be abated.

Objective B: Encourage preservation and, where necessary, rehabilitation of existing housing stock, if economically feasible.

Guideline 1: The improvement and maintenance of existing housing should be encouraged.

Guideline 2: The County should be actively involved in rehabilitation and public investment programs in older housing.

Objective C: Establish greater cooperation between the public and private sector.

Guideline 1: Existing public and private institutions should be involved in housing efforts as much as possible.

Guideline 2: An adequate supply of suitable land appropriately zoned for residential development should be made available.

Guideline 3: Public facilities and services should be used to guide development.

Guideline 4: New approaches for development should be encouraged by incorporating them into subdivisions and other land use regulations.

Guideline 5: Prime residential land should be identified Countywide.

Guideline 6: Residential growth should occur in vacant areas that are or soon will be supplied with municipal services.

Guideline 7: Multiple family and cluster development should be encouraged.

Guideline 8: Rural residential developments should be closely monitored and regulated on lake shores, prime agricultural lands and in all environmentally sensitive areas.

Guideline 9: To preserve the rural character of the County, new housing developments should be located in those areas consistent with the County's Comprehensive Plan.

Objective D: Provide for greater coordination among local governments.

Guideline 1: Housing choices should be in proportion to the age group, family structure, income level and employment characteristics currently present or expected to be present.

Guideline 2: The County should share in the responsibility for meeting low and moderate income housing needs.

Guideline 3: Housing efforts should be coordinated among the townships, cities and neighboring units of government.

Goal Seven: Transportation

To maintain and improve the current road network and other transportation networks to ensure safe and efficient movement of people and goods.

Objective A: Support a public and private balanced transportation system that encompasses air, highway, rail, public transit and bike systems which economically move people and products.

Guideline 1: The planning for the transportation system should focus on helping meet the County's economic and social needs.

Guideline 2: Transportation projects should incorporate multiple modes.

Guideline 3: The number of opportunities for people to use public transportation should be increased.

Guideline 4: Consideration should be given to the aging and disabled populations when designing transportation programs.

Guideline 5: Encouragement should be given towards the development of pedestrian and bicycle friendly facilities to help provide balance to the transportation system.

Guideline 6: Long range planning should be given priority to ensure there is a minimum of transportation barriers (traffic congestion, access management, traffic safety, etc.) to ensure the economic vitality of the County.

Guideline 7: Safety improvements should be supported at railroad crossings where the improvements are warranted.

Objective B: Encourage the maintenance, reconstruction and construction of a highway system capable of providing for the safe, convenient and economical movement of persons and commodities.

Guideline 1: Programs or projects with the potential for reducing damage to highways caused by frequent heavy loads should be encouraged.

Guideline 2: Safety improvements, including appropriate signing where possible, should be made in anticipation of problems rather than in reaction to them.

Guideline 3: Programs or projects designed to improve highway safety should be supported in coordination with Mn/DOT.

Guideline 4: Legislation that will produce revenues for highway improvement purposes should be supported.

Guideline 5: Support should be given to legislation providing for the funding of bridge replacements.

Objective C: Support the construction of pipelines designed with consideration for the environment, adjacent land uses and the economic vitality of the area.

Guideline 1: Local ordinances with reasonable design standards should be developed.

Objective D: Encourage the improvement of air transportation services and facilities.

Guideline 1: Support improvements to airports within the County when the need has been demonstrated.

Guideline 2: The location of airports or extension of runways and other facilities should take growth and other development factors into consideration.

Objective E: Invest strategically in transportation infrastructure to enhance the vitality of the County.

Guideline 1: Priority should be given to the preservation and maintenance of the existing transportation system.

Guideline 2: Current and planned right-of-ways for transportation system improvements should be identified and preserved.

Guideline 3: The County should work with the townships, cities, neighboring counties and Mn/DOT to plan for an orderly transportation system.

Guideline 4: Transportation services should be developed that are consistent with local land use plans as well as with other development plans.

Guideline 5: A transportation system should be provided that encourages employment growth, economic productivity and fosters economic competitiveness.

Guideline 6: Creative public and private partnerships in transportation investments should be encouraged.

Guideline 7: Prairie grasses and other low maintenance, high ecological valued vegetation should be encouraged in right-of-way management plans.

Guideline 8: Recreational trails should be an important part of the overall transportation plan.

Objective F: Develop and implement access management guidelines to protect the integrity of the designed roadway system.

Guideline 1: Land use guidelines, zoning ordinances and subdivision ordinances should be amended to include access management standards for sight distance, spacing of curb cuts, geometric designs for entrance/driveways and the preservation of frontage road right-of-ways to minimize negative mobility impacts.

Guideline 2: All new developments should mitigate impacts directly related to new access.

Guideline 3: The integrity of the role of arterial highways should be protected by the development of access management measures.

Objective G: Develop a financially responsible plan that best allocates available resources.

Guideline 1: Create a roadway management system with a consistently updated comprehensive inventory of roadways and bridges to assist in the prioritization of projects.

Guideline 2: A multi-year road improvement program should be created as part of a capital improvement program to include maintenance, safety upgrading, paving and reconstruction work prioritized by year along with costs and methods of financing.

Guideline 3: Traffic generation characteristics of proposed land uses should be analyzed to ensure that the carrying capacity of nearby roads are not exceeded.

Guideline 4: Duplication of transportation services should be avoided.

Guideline 5: New major rural traffic generators and sites that will have heavy commercial traffic should be encouraged to locate on roadways which are currently or programmed to be designed to handle the planned activity or roads should be upgraded as part of the new development.

Guideline 6: The location of commercial and industrial development should be encouraged in areas that avoid through traffic in residential areas.

Guideline 7: Rural development should be encouraged to locate near appropriate transportation corridors.

Guideline 8: The County should work with its townships, cities and Mn/DOT to develop a long range transportation plan to address transportation issues in the County.

Guideline 9: Safety should always be a top priority in planning for new or expanded bike and pedestrian routes.

Goal Eight: Land Use Planning

To establish a community-based framework as a basis for all decisions and actions related to land use.

Objective A: Encourage a balanced and harmonious use of land consistent with natural features and socio-economic factors.

Guideline 1: Efficient and orderly municipal growth and development should be encouraged.

Guideline 2: Urban growth boundaries should be identified by all units of government and planning should occur to account for growth in those boundaries.

Guideline 3: Residential and commercial growth outside incorporated areas should be minimized.

Guideline 4: Local units of government, the Soil and Water Conservation District, Watershed District(s), the Minnesota Pollution Control Agency, the Department of Health and the Department of Natural Resources, should be consulted on important land use issues.

Guideline 5: Annexation should be done in conformance with current and future land use plans.

Guideline 6: Zoning regulations should be encouraged that protect prime agricultural land from urban growth and non-agricultural growth.

Guideline 7: Ordinances that regulate land use should be enforced.

Guideline 8: Regulations for nuisances and pollutants should be closely monitored and enforced in an effort to provide for a safe and healthy living environment for all residents.

Guideline 9: Residential growth should occur in vacant areas that are or soon will be supplied with municipal services.

Guideline 10: Commercial and industrial growth or expansion should occur near existing commercial and industrial areas and should occur where sewer, water and other municipal services are available or soon will be available.

Guideline 11: Strong consideration should be given to redeveloping and intensifying the use of already developed areas, especially as related to commercial and industrial growth.

Guideline 12: Subdivisions that tie into existing public services or which can develop closed or municipal-like sewer systems should be encouraged.

Guideline 13: Consider the impact of land uses upon sensitive areas when making land use and zoning decisions.

Objective B: Support the preservation of wetland areas for groundwater recharge, surface water conservation, recreation and wildlife.

Guideline 1: Wetland preservation should occur in response to a demonstrated need and as a part of a complete natural resource management effort which considers water conservation, recreation and preservation of wildlife habitat.

Guideline 2: Increased emphasis should be placed upon development and management of already acquired areas.

Guideline 3: Increased emphasis should be placed upon shoreland, floodplain and watershed plans and regulations in an effort to preserve these environmentally sensitive areas.

Objective C: Assist in providing recreational opportunities to fulfill the needs of all citizens of the County regardless of age, sex, disability or economic status.

Guideline 1: Both active and passive recreation areas should be developed.

Guideline 2: Improvements of existing outdoor recreational facilities should be encouraged where necessary and/or possible.

Guideline 3: Acquisition and development of outdoor recreational facilities in areas not presently or adequately served by existing facilities should be encouraged.

Guideline 4: Recreational facilities should be planned on the basis of anticipated future population and overall needs.

Objective D: Promote preservation of land and structures that possess important scenic, historic or archaeological features.

Guideline 1: The acquisition and development of sites which are important to the County's history or of high natural amenity should be encouraged.

Guideline 2: The Historical Society should be consulted on important planning issues to ensure that areas with historical significance are preserved.

Objective E: Create a comprehensive and accurate Geographic Information System (GIS) database for the County to assist in land use decisions.

Guideline 1: The County's floodplain should be identified and digitized into the GIS database.

Guideline 2: The County's soil survey should be updated regularly and digitized into the GIS database.

Guideline 3: The County's water features, including lakes, rivers, streams and ditches, should be identified and digitized into the GIS database.

Guideline 4: The County's existing and pre-settlement wetlands should be identified, classified and mapped into the GIS database.

Guideline 5: The County's current land use and zoning maps should be regularly updated in the GIS database.

Guideline 6: Each City's current land use and urban growth area should be kept on file in the GIS database.

Goal Nine: Public Investments

To account for the full environmental, social and economic costs of new development, including infrastructure costs such as transportation, sewers, wastewater treatment, potable water, ditching, telecommunications, waste management, schools, recreation and open space, and plan the funding mechanisms necessary to cover the costs of the infrastructure.

Objective A: Provide basic infrastructure and services to as many of the residents of the County as possible without creating any substantial economic or environmental problems.

Guideline 1: Technical assistance should be provided to smaller communities and townships in the County to develop infrastructure in an effort to promote economic development.

Guideline 2: Those areas of the County exhibiting the greatest potential for urban growth and economic development should be serviced with sewer and water.

Guideline 3: The orderly development of streets and roads should occur in anticipated urban growth areas.

Guideline 4: The County should assist in providing quality and efficient law enforcement, ambulance and fire protection to all residents.

Guideline 5: The County should continue current solid waste management programs and look at ways to enhance them in the future.

Guideline 6: The County should work with the DNR to provide more access to recreation and open spaces for use by all residents in the County.

Guideline 7: The County should support upgrading and extending telecommunication services throughout the County in order to enhance its competitive stance for social and economic development.

Guideline 8: The County should promote the need for high-speed Internet access.

Objective B: Promote rural sewer and water systems controls.

Guideline 1: The County should work with citizens in enforcing septic system controls.

Objective C: Support maintenance of a county-wide ditch system.

Guideline 1: Maintain a ditch system that will effectively control the movement of water recognizing flooding concerns, water pollution and wetland drainage.

Objective D: Support the enhancement of library facilities.

Guideline 1: The County should support a public library system in order to enhance its competitive stance for social and economic development.

Objective E: Conduct capital improvements programming and budgeting to achieve desired types and levels of public facilities and services.

Guideline 1: Plans for proposed new, upgraded or expanded services and facilities should be coordinated with applicable units of government and agencies.

Guideline 2: Public facilities and services should not be duplicated.

Guideline 3: A capital improvements plan analyzing short- and long-term needs should be updated regularly.

Guideline 4: The County's infrastructure should be analyzed in terms of maintenance versus replacement costs.

Goal Ten: Public Awareness

To support research and public education on the County's and State's finite capacity to accommodate growth, and the need for planning and resource management that will sustain growth.

Objective A: Develop and maintain a comprehensive educational program that meets the academic and vocational education desires and needs of the various age and socio-economic population categories and employer groups of the region.

Guideline 1: Community and economic development needs should interface with the conventional education programs and resources available in the region.

Guideline 2: Research and planning should occur on the ability to finance future educational facilities and needs.

Guideline 3: Education should be viewed as a life-long process.

Guideline 4: Educational resources should meet regional employers' needs.

Guideline 5: Educational resources should be made available to all age groups and cost effectively serve social, cultural, civic and recreational needs of the County.

Guideline 6: Greater educational emphasis should be given to environmental education.

Guideline 7: The County should help promote the use of phosphorus-free lawn chemicals.

Objective B: Support innovations in education that accommodate local needs and keeps the quality of education competitive.

Guideline 1: Telecommunications systems should be upgraded with state-of-the-art technology.

Guideline 2: Telecommunications systems available to education and government should be made available to businesses and private individuals in their residences.

Guideline 3: The County should play a lead role in developing computer familiarity and training programs for all citizens.

Guideline 4: Distance education programs should be developed between the County and the State's vast university system.

Goal Eleven: Sustainable Development

To provide a better quality of life for all residents while maintaining nature's ability to function over time by minimizing waste, preventing pollution, promoting efficiency, and developing local resources to revitalize the local economy.

Objective A: Promote orderly growth and provide for basic facilities and services useful in promoting or maintaining the economic viability necessary for population growth.

Guideline 1: The County should produce a bi-annual report showing updated demographic characteristics, statistical trends, and population/household projections.

Guideline 2: The County should periodically analyze the educational, economic, cultural, housing, social, recreation, retail, health, transportation, employment and similar needs and desires of the population of its service area in order to remain competitive and prevent population loss.

Guideline 3: Assistance should be provided to municipalities and townships in implementing community-based planning goals and sustainable development activities.

Objective B: Promote maintenance, conservation and recycling versus replacement.

Guideline 1: A regular analysis should be completed on current land uses and their impact on the environment in an effort to conserve the natural resources and aesthetics of the County.

Guideline 2: An annual inspection and maintenance schedule should be developed and implemented for all County property and facilities.

Guideline 3: Recycling programs should be encouraged and supported.

Guideline 4: Buildings should be rehabilitated whenever feasible.

Guideline 5: Redevelopment of currently developed land should occur whenever feasible.

Guideline 6: A water conservation plan should be developed for the County.

Guideline 7: Energy conservation programs should be made available to all residents in the County.

Chapter Eight: Implementation

The Comprehensive Plan is an official planning and policy document for the County. Its primary purpose is to help guide land use decisions over the “life” of the Plan. However, without proper implementation, the Goals, Objectives and Policy Guidelines will have little impact on growth and development in Big Stone County. Several implementation steps will need to be taken in order to successfully reach the “vision” outlined in this Plan. To assist the County in the identification of these activities, Chapter Eight provides the following information: a future land use summary, a list of tools for implementing the Plan and a section on how the Plan can be updated.

Big Stone County’s Future Land Use

Throughout the planning process, nearly every meeting addressed Big Stone County’s potential future land use development in some fashion. The predominant features of the maps found in Chapter Four are the current land use and urban growth area maps presented for the cities (most cities did not identify an urban growth area). The urban growth areas are estimates of where cities will most likely grow in the future, with an emphasis on a 20-year time period. Exactly when any future development will occur, however, is obviously impossible to predict. For this reason, the urban growth boundary is not a permanent future corporate boundary, but rather a speculation on where cities could logically grow over the next 20 years. All of the cities were encouraged to meet with their surrounding townships to help identify the appropriate urban growth boundary.

Using the Current and Future Land Use Maps (Chapters Four and Five)

The Urban Growth Areas identified in the city and township profiles do not guarantee that urban growth will exclusively occur in these areas over the next 20 years. In addition, the maps do not guarantee that Big Stone County and its cities and townships will only follow the prescribed type of land use for each area. The County Planning Commission will need to evaluate each future land use opportunity on a one-by-one basis, with assistance from the affected cities and townships. The primary reason for this is because opportunities and circumstances change from day-to-day, and what is considered to be the best decision for Big Stone County today may not be the same belief in the future. In short, the maps in Chapters Four and Five are meant to be a helpful tool in guiding future land use decisions, but are not intended to prevent opportunities that are perceived to be “good” for cities, townships and Big Stone County. The County can, however, use the Future Land Use Maps as a tool to protect against future development that is not seen as in harmony with the best interests of the area.

The primary purpose of the maps found in Chapters Four and Five is to establish a communication process between the cities, townships and Big Stone County to cooperatively make future land use decisions. This should especially apply to land identified as urban growth areas.

Implementation Steps

In addition to using the material found in the preceding chapters, there are a number of implementation steps the County should follow in order to properly implement this Comprehensive Plan. The following items are introduced in this Chapter: Zoning Ordinance; Subdivision Ordinance; Shoreland Ordinance; Feedlot Ordinance; Urban Growth Areas; and steps needed to formally review and update the Comprehensive Plan. **Collectively the implementation steps outlined below (numbered from 1 to 21) form a temporary "Work Plan" that can be used to implement the Comprehensive Plan until a formal Work Plan is adopted by the County.**

Step 1: Adopt an Official Implementation Plan – After the adoption of the Comprehensive Plan, Big Stone County should review its contents and develop an Official Implementation Plan (or Work Plan). The Work Plan should identify specific tasks that need to occur as a result of the Comprehensive Plan, including who should complete the work (i.e., County Staff, Planning Commission, etc.) and a time-line for when each task should be completed. For example, one task should be to review the County's Goals, Objectives and Policy Guidelines to determine which items prescribe "work" that needs to be completed.

Zoning Ordinance

Zoning can be used to preserve and protect the public health, safety and general welfare of the public by outlining a pattern for orderly development. Zoning ordinances can also be used to regulate the use of property, the height, width and size of buildings, lot sizes, set backs, density standards, vacant space and other land use characteristics. The regulations must be uniform within a district, but may vary among each district. In each use district, the County allows certain uses but can enforce a variety of conditions.

It has been acknowledged during the planning process that Big Stone County's Zoning Ordinance may need to be updated in order to better correspond with this Comprehensive Plan. A formal review of the current ordinances can be an extremely time-consuming activity, however, so the current Zoning Ordinance will ultimately need to be followed until it is revised.

Step 2: Review the Big Stone County Zoning Ordinance – It is common to make "minor" changes to zoning ordinances as problems arise. It is also common to thoroughly examine the entire document once every five years or after the adoption of a new Comprehensive Plan. The primary task is to determine if it adequately accomplishes the "vision" set forth in the Comprehensive Plan. If it does not, revisions will need to be made. A second important task is to check the Ordinance for consistency. It is often the case that when one part of an Ordinance is revised, some of the related provisions remained unchanged. This can lead to confusion on the part of citizens trying to interpret how to follow the Ordinance.

Step 3: Explore Adding Performance-Based Criteria to the Zoning Ordinance – Most Counties would not agree to completely throw out their “traditional” zoning methods for the newer “performance-based” approach. However, performance zoning can fix *some* of the problems that are frequently experienced in administering zoning ordinances. For example, variances, rezone and conditional use requests are often made without consistent guidelines to follow. This leads to decisions that are based on “politics” rather than on the unique characteristics of the proposal. The primary point is that not all land within a zoning district has the same characteristics, and some unique development may actually enhance the site *and* be considered to be compatible with the overall intent of the zoning district.

Step 4: Explore Revising the Rural Residential Building Requirements – Currently Big Stone County requires that one has a minimum of 5 acres in order to have a building eligibility. This policy could be examined to allow higher densities (i.e., 2½ acres) in non-prime agricultural areas. At the same time, the County can examine increasing the building eligibility from 5 acres to 40 acres in the prime agricultural areas of the County.

One of the last zoning-related implementation steps that is needed is to examine and update the County Zoning Map. A large percentage of this work was actually completed during the planning process. With assistance from the County Planning and Zoning Office, the Upper Minnesota Valley Regional Development Commission created current zoning maps for each of Big Stone County’s townships (see Chapter Five). The primary emphasis was to create zoning maps that represented the way each township *is currently zoned*, rather than to question how each area *should be zoned* in the future. The County may want to systematically revisit how some areas of the County are zoned, especially once the Zoning Ordinance is updated.

Step 5: Update the County Zoning Map as Needed – The County Zoning Map should be updated after every zoning change. This has traditionally been a very difficult task. However, since all the Township Zoning Maps have been placed into a computer database (GIS), making revisions takes a matter of minutes rather than hours. Another large benefit of having Township Zoning Maps is that they can be easily distributed to both residents and local officials who need to make important land use decisions.

Subdivision Ordinance

Subdivision ordinances give counties the authority to regulate the subdivision of land to protect the health, safety and general welfare of residents; promote orderly development; provide affordable housing; and allow for the provision of infrastructure and other public services. Subdivision ordinances can be used to regulate the size, location, grading and other land use issues when land under single ownership is divided into two or more lots.

Step 6: Review the Subdivision Ordinance – The Subdivision Ordinance should be updated as needed to be consistent with the County Comprehensive Plan and Zoning Ordinance.

Rural Development: *Sometimes it doesn't make Scents...*

The costs associated with providing public services to new developments are an important consideration when deciding the preferred location of rural residential housing. The Minnesota Department of Agriculture completed a "*Cost of Public Services Study*" in an effort to assist local units of government in making informed decisions on regulating land use, preserving agricultural land and financially planning for new residential development. The Study included both a Statewide statistical analysis of over 500 local government entities and case studies of the fiscal impacts of growth on local governments in five counties (Wright, Scott, Winona, Carlton, and Becker). The study examined historical and projected numbers over a 20-year period.

The Statewide analysis was used to identify factors affecting the fiscal impacts of development on local governments. The case studies were used to gain insight into how patterns of development within some Minnesota counties and cities have affected their fiscal capacities. Some of the key findings in the Statewide analysis are listed below:

- Agriculture is an important factor in the fiscal health of most rural counties, townships and school districts because it contributes more taxes than it requires in services.
- New residential development can have a negative fiscal impact on townships that lose a major part of their agricultural tax base and must also provide higher levels of service.
- Due to the structure of Minnesota's local governments, the fiscal impact of new residential development on counties is usually enhanced when it occurs within cities, because cities are able to provide the level of services typically demanded by new residents.
- County per capita road maintenance costs tend to decline as density, residential market value and percent of city residents increase.
- When townships reach a certain population level, their per capita road costs increase.
- New development within cities or adjacent areas often favorably affects the cost of water and wastewater services.

The results of the county case studies supported the above mentioned findings, concluding that the fiscal impact of new residential development is more favorable for all branches of local government when it occurs within or adjacent to cities. This was primarily because infrastructure and other public services were already available.

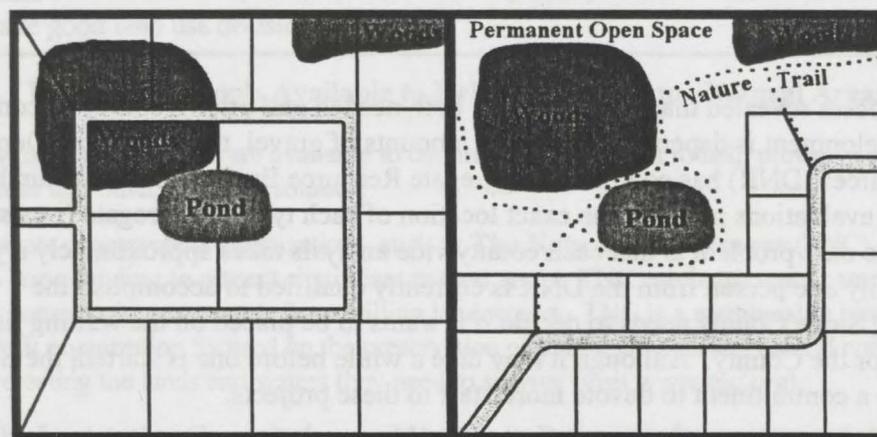
A second study, *Development in Wright County: The Revenue/Cost Relationship* (MN Dept. of Ag., 1989), revealed that in all cases the cost of providing services to low density residential developments located away from existing infrastructure was over four times higher than the net cost of services for development in a city and near existing infrastructure. The study provided evidence that higher density residential development has less of a negative effect on a community's fiscal budget than does low density sprawl.

Finally, a third study conducted by the American Farmland Trust in 1994, (*Farmland and the Tax Bill: The Cost of Community Services in Three Minnesota Cities*) analyzed the costs of serving residential, commercial, industrial and agricultural land uses. The findings of the study showed that on average, residential areas consumed \$1.04 in services for every \$1.00 of revenue generated. In comparison, commercial and industrial areas used only \$0.37 in services and farmland used only \$0.50 in services for every \$1.00 collected. The study also found that while residential areas produce more than 90 percent of the total revenues in the study, they accounted for more than 98 percent of the total expenditures. **The main point of these studies is not to discourage rural residential housing, but rather to highlight the need for it to be well planned for so that it can make Scents.**

As the demand for residential property in Big Stone County increases, subdivision planning will need to accommodate the increased demand for residential land through non-traditional design concepts. Conservation subdivision development is a concept that develops a piece of land by concentrating housing units together while protecting open space for a variety of uses. Generally, water (i.e., lakes or wetlands), wooded areas and walking trails are the primary features found in these types of developments. In addition, some conservation subdivisions have been designed to protect agricultural land, wildlife areas and scenic views. Adjacent conservation developments can also be linked together to create regional corridors for wildlife and recreational uses (such as bike, walking and ski trails). The overall point is to encourage new development that protects, rather than consumes, the natural features that are unique to each area.

With conservation subdivision development, entire housing clusters are thoroughly planned and reviewed; open space is planned and permanently deeded as open space; roads within housing clusters are privately owned and maintained; sanitary sewer and well locations are centrally planned; and open space and buffers are created to protect adjacent agricultural land and natural areas from the impacts of housing. Conservation subdivisions also tend to have smaller lot sizes. For example, the emphasis might be on one-half to one acre lots rather than on two to five acres per dwelling unit (see Figure 8A).

**Figure 8A:
Conservation Subdivision Example**



Left Side:
Traditional Subdivision
 40 Acre Parcel
 16 Lots (average .5 acres)
 No Contiguous Open Space
 4 Lots With Pond Access
 6 Lots With Woods Access

Right Side:
Conservation Subdivision
 40 Acre Parcel
 16 Lots (average .25 acres)
 16 Acres of Open Space
 All Lots have Pond Access
 All Lots have Woods Access

With smaller lot sizes and the planned preservation of open space and natural resources, the housing units are built on smaller tracts of land while agricultural and environmentally sensitive areas are preserved. Housing units grouped closer together can create an increased tax base for local units of government while reducing the costs of providing public services to these residential developments. Since there are public benefits, some incentives can be offered to developers to encourage good land use decisions. For example, additional housing units could be allowed in conservation subdivisions compared to what is normally allowed in "traditional" subdivisions.

Conservation developments often require modification in the design standards of traditional subdivision and zoning regulations. To accommodate these developments, strict compliance to minimum lot sizes, setback requirements and other regulations may be overlooked by the local unit of government. Conservation Subdivision Ordinances establish general guidelines that encourage these type of developments.

Step 7: *Explore Creating a Conservation Subdivision Ordinance* – More needs to be learned about how conservation subdivisions could benefit Big Stone County. This could be accomplished through the Planning Commission or through a special Task Force created to review their potential and to report on how an ordinance could be customized to fit the needs of the County and area residents.

Gravel Pits

The planning process revealed that gravel pits are both needed and often a source of conflict. Since future development is dependent upon vast amounts of gravel, the Minnesota Department of Natural Resources (DNR) has completed Aggregate Resource Evaluations for a number of counties. These evaluations pinpoint the exact location of each type of aggregate (i.e., sand, gravel, etc.). The only problem is that each countywide analysis takes approximately a year to complete, and only one person from the DNR is currently qualified to accomplish the evaluations. Big Stone County needs to decide if it wants to be placed on the waiting list to have one completed for the County. Although it may take a while before one is started, the State could eventually make a commitment to devote more staff to these projects.

Step 8: *Big Stone County Aggregate Resource Evaluation* – To get on the waiting list, the County Board needs to pass a resolution indicating they would like the DNR to conduct an Aggregate Resource Evaluation for Big Stone County. Once an evaluation is completed, the document should be fully incorporated into the planning process and should ultimately be used to guide all land use decisions.

Scenic Views, Wooded Corridors and other Unique Natural Areas

The planning process revealed that citizens value and wish to preserve a number of natural areas throughout Big Stone County. These areas include unique natural resources which deserve

throughout Big Stone County. These areas include unique natural resources which deserve special planning consideration (for example, the bluffs overlooking Big Stone Lake and Refuge, the Minnesota River Valley and Marsh Lake). Planning participants recognized the certainty of new development, but also expressed the value of keeping these natural areas functionally intact, for both wildlife and people. In the long-run, the advantage of doing so would provide many benefits to both landowners and local residents.

Step 9: Create a Resource Protection Task Force – The purpose of the Task Force would be to research what protection “tools” exist and then recommend which options might work in Big Stone County. This would include agreeing on a *process* to identify valued community resources. For example, the process might include a study with local input, a recommendation by the Planning Commission and full approval by the County Board.

There are proven methods by which counties can protect unique natural areas. This helps because “the wheel does not need to be reinvented”. One of the most popular methods used is to create an ordinance that allows Conservation Overlay Districts. These types of zoning ordinances not only spell out how unique natural areas can be identified or designated, but they also determine which specific tools can be used to help protect the valued resources (see the text box below).

Step 10: Examine Creating a Conservation Overlay Ordinance – The primary goal of a Conservation Overlay District is to give each landowner who is affected by the designation more (not less) development options. The key is to provide incentives to landowners to make good land use decisions.

Examples of Tools Available to Help Protect Unique Natural Areas

The following grant programs are available to communities that want to help protect scenic views, wooded areas and other natural resources:

- ✓ Private conservation organizations, such as **The Nature Conservancy (TNC)**, may be able to bring funding to protect significant natural areas. TNC can help create nature preserves or conservation easements from willing landowners. TNC is a membership based not-for-profit organization focused on the preservation of plants, animals and natural communities by protecting the lands and waters they need to survive (visit www.tnc.org).
- ✓ **The Legislative Commission on Minnesota Resources** has recommended funding to the Minnesota Waterfowl Association (MWA) of \$11 million to purchase corridors of wildlife habitat. MWA is acting as the lead organization in a coalition of conservation organizations, including the National Wild Turkey Federation and the Minnesota Deer Hunters Association (visit the Minnesota Waterfowl Association at www.upnorthoutdoors.com/mnwaterfowl).
- ✓ **The Natural and Scenic Grant Program** provides up to 50 percent of total eligible costs with a maximum grant of \$500,000 and a minimum grant of \$5,000 for acquisition of land that contains species (plants and animals) that are endangered, threatened, or of special concern; land that has high quality scenic views; and other similar land. This Program is administered through the DNR.

Shoreland Management

Big Stone County's Shoreland Management Ordinance has incorporated the shoreland standards established by the 1969 Minnesota Shoreland Management Act (revised in 1989). The standards classify lakes into one of three categories: General Development (least restrictive), Recreational Development and Natural Environment (most restrictive). The Act is intended to provide "minimum standards" and local units of government have the option of imposing more restrictive regulations if they wish to provide greater protection. This normally occurs as lakeshore development pressures increase.

Step 11: Review the County's Shoreland Management Guidelines – These standards should be periodically reviewed and updated as needed. Some counties have recently completed this process and decided to create a fourth lake classification (referred to as "Natural Sensitive") for the more "wetland-type" lakes in the County. This was done to separate the development standards between "wetlands" and "small lakes".

In addition to the Shoreland Management Ordinance, the Department of Natural Resources regulates shoreland development through its Protected Waters Inventory List. Landowners need to obtain a Protected Waters Permit before they can begin any project which affects the bed of a protected water or wetland. The reason for this law is that, although the shoreland is considered private property, the waters in the lakes and rivers are used by the public.

Step 12: Update the DNR Protected Waters Inventory List – The current inventory for Big Stone County was completed in 1984. The planning process revealed a few questionable listings, such as wetlands that haven't existed for a number of years. Updating the list would be an essential part of updating the zoning maps, since a shoreland management buffer is placed around each protected water. One benefit of the updated list would be that it could also pre-settlement wetlands.

Feedlots

Big Stone County completed a Level One Feedlot Inventory in 1997 and is currently looking at conducting a Level Two Inventory. Basically, the Level One Inventory simply identifies the location of the feedlots, while the Level Two Inventory determines how large the feedlot is and what type of manure storage exists. Counties can choose to administer setback requirements for new or expanding feedlots from existing residential properties, however, Minnesota recently passed a statute which states that...

"a local ordinance that contains a setback for new feedlots from existing residences must also provide for a new residence setback from existing feedlots in areas zoned agricultural at the same distances and conditions specified in the setback for new feedlots unless the new residence is built to replace an existing residence" (Statute 394.25, Subdivision 3C, Letter D).

Big Stone County currently administers a quarter-mile setback for new feedlots from existing residences and a half-mile setback for new residences from existing feedlots.

Step 13: Conduct a Level Two Feedlot Inventory – Regardless of how Big Stone County addresses feedlot-related setbacks in the future, the Level Two Inventory could be incorporated into the land use decision making process. For example, if someone is proposing to build a Planned Unit Development, it would be helpful to know if a feedlot exists nearby and, more importantly, what type and how large the feedlot is before making the land use decision. The primary goal is to improve the decision making process for *both* the feedlot operators and the non-farm residents.

Urban Growth Areas

The process for adding land into a city's corporate boundary is called annexation, which is often controversial if the process has not been well planned for by both the city and affected township(s). Minnesota State Statutes provide for different annexation procedures. Annexation by Ordinance is the simplest process but requires, among other things, the land to be owned by the city and the land must be completely surrounded by incorporated land. Orderly Annexation involves intergovernmental cooperation, since a joint resolution needs to be passed between the city and township(s) involved. Finally, the Petition and Hearing process involves a public hearing before an adjudicated law judge who grants or denies the annexation. This process should only be done if the first two procedures fail.

Annexation allows cities to grow in an orderly and planned manner. After a city determines the need for annexation, the procedure of Orderly Annexation should be used, including designating the land as an "Urban Growth Area". Orderly Annexation agreements provide assurances to both cities and townships as to the location, timing and future land use of the proposed annexation. More importantly, Orderly Annexation agreements help to prevent costly disputed annexation hearings. The County can serve a role in facilitating orderly growth around municipalities by encouraging Orderly Annexation.

Step 14: Encourage Orderly Annexation Agreements for Urban Growth Areas – The process for Orderly Annexation is found in Minnesota Statutes 414.0325. The County should actively help to facilitate orderly annexations by discussing the need for them with the affected townships and municipalities.

A second important planning issue pertains to how the County makes land use decisions in areas that are designated as Urban Growth Areas. One of the primary functions of the Urban Growth Areas is to identify land that needs "intergovernmental cooperation". For example, if the County needs to make a land use decision for a piece of property that falls within a city's Urban Growth Boundary, the County should ask the city if the proposed land use is compatible with the city's future land use plan for the area. In practice, the County does not want to make land use decisions that negatively affect either the township or city.

Step 15: Use Intergovernmental Cooperation in Urban Growth Areas – Land use decisions in Urban Growth Areas (or even for other land adjacent to a city's corporate boundary) should have intergovernmental input by the affected parties.

Long Range Transportation Planning

In order to prevent costly right-of-way acquisition, the County and other local governments should plan to develop roads where needed, especially where high levels of development are anticipated. The construction of roads and acquiring right-of-ways before it becomes too "problematic" is a cost effective tool for transportation and infrastructure planning. Properly planned collector streets can reduce congestion and save wear and tear on local streets that were not designed for heavy traffic volumes.

Step 16: Plan in cooperation with anticipated needs as seen in the Highway Department's five-year plan – This document is updated annually and should correspond with the principles outlined in the County's Goals, Objectives and Policy Guidelines.

Tourism Plan

In 1999, in an effort analyze the resources and economic potential of tourism in west central Minnesota, the Upper Minnesota Valley Regional Development Commission, with assistance from David L. Dahlquist Associates, Inc., prepared the Regional Tourism Center and Tourism Development Study. The Study encompasses six southwestern Minnesota counties, called the Prairie Waters area, which includes Big Stone, Chippewa, Lac qui Parle, Stevens, Swift and Yellow Medicine Counties.

The Study is broken down into four volumes. The first volume provides background and study materials pertinent to tourism and the Prairie Waters area, including information on past accomplishments, recreational benefits and competitive advantages and disadvantages.

Volume Two presents recommendations for tourism development and information delivery in the six-county area. Among the recommendations made in this section include: the construction of Visitor Information Centers in the communities of Granite Falls, Montevideo and Ortonville; the construction of seven unstaffed kiosks; and identification of a site for a Tourism Industry Service Center. Preliminary architectural concepts are included in Volume Three. Site and floor plans are given for each of the three proposed information centers, as well as the seven unstaffed kiosks. The preliminary cost estimate for the proposed information infrastructure, including the renovation of a site for the Tourism Industry Center, was \$3,754,872.

Finally, Volume Four details the strategies to implement the recommendations made in the Study. One of the main focal points of this section is achieving the necessary amount of intergovernmental cooperation to accomplish goals. It also spells out the establishment of the Minnesota River Tourism Initiative, which is to be housed and administered by the Upper Minnesota Valley Regional Development Commission from January 1, 2002, to December 31, 2016.

Step 17: Develop a Big Stone County Tourism Plan – Local business, recreation and living opportunities should be promoted in a well organized Tourism Plan. The Plan should also support the Regional Tourism Center and Tourism Development Study.

County Meetings

The County Board, Planning Commission and appropriate County staff should meet annually or as necessary to discuss issues, concerns and needed projects. A comprehensive list of tasks should be analyzed and formed into a work plan.

Step 18: Conduct a County Board, Planning Commission and County Staff Meeting – The primary purpose of these meetings is to enhance the communication process among the people responsible for the County's future. These meetings should be considered as short-term "strategic planning" for the County.

A related issue is that certain parts of the County or "region" may require special planning efforts as problems or opportunities arise. For example, Big Stone County has entered into the Minnesota River Headwaters Joint Powers Board to cooperatively address local water management issues. The main rationale for cooperating is because water management can be more effectively accomplished if addressed on a regional basis. This is true for many of the issues facing local units of government today.

Step 19: Emphasize Intergovernmental Cooperation – Many of the issues that will ultimately face Big Stone County in the future would be better addressed through collaborative means. The County should be committed to help identify and help resolve these issues by using strong intergovernmental cooperation and citizen input.

Updating the Comprehensive Plan

To successfully implement the contents of the Comprehensive Plan and to determine if the Plan is consistent with the growth and development activities of the County, a periodic review of the Plan is necessary. For example, Chapter Seven establishes the Goals, Objectives and Policy Guidelines that Big Stone County should follow when making land use decisions. These should be reviewed periodically and revised as necessary.

Step 20: Formally Review Big Stone County's Comprehensive Plan – The County should review the Plan at least once every two years (especially Chapter Seven) in order to ensure that Big Stone County's "vision" remains both accurate and constructive.

Any changes to the Chapter can be documented as an amendment to the Comprehensive Plan. The Plan can be amended by the recommendation of the Planning Commission to the County Board, or the County Board can propose an amendment to the Plan by resolution to the Planning Commission. A public hearing must then be held by the Planning Commission before adoption of the amendment can occur. Finally, the County Board of Commissioners is required to formally vote on any proposed amendment to the Comprehensive Plan.

Step 21: Formally Review Big Stone, Chippewa and Lac qui Parle Counties' Regional Plan – Big Stone County should be committed to meet annually to review and update the Regional Plan and to identify and address current and emerging issues.

Priority Statement:

This Comprehensive Plan shall not operate to unilaterally change, or render ineffective, any Big Stone County Ordinance enacted prior to the date of this Plan, including without limitation the Zoning and Subdivision Ordinances. This Land Use Plan may be used to interpret the intent and objectives of prior ordinances. In all cases, there will be a rebuttable presumption that the provisions of this Comprehensive Plan and prior ordinances are consistent. In the event of inconsistencies, however, the provisions of the ordinances that were enacted prior to this Plan shall apply. Any inconsistencies in turn may be addressed once a specific ordinance is updated.

Decisions on how and when to implement the provisions of this Comprehensive Plan shall remain exclusively with the Big Stone County Board of Commissioners.