COMPREHENSIVE PLAN

INTRODUCTION
INVENTORY & ANALYSIS
GOALS & POLICIES
LONG RANGE PLAN
IMPLEMENTATION

FRAMEWORK

The Long Range Plan provides a general framework for Clay County's growth and development over the next 20 years. The Plan provides the policies, standards and principles to guide the County's future physical form and function and serves as the basis for updating the Zoning Ordinance and other development controls that are enforceable under the County's police powers.

The Long Range Plan illustrates general recommendations, but should always be taken in concert with the written Goals and Policies. Recommendations that are specific enough to guide day-to-day decisions yet flexible enough to allow modification and continued refinement, are provided with regard to land use and growth within the County.

The Long Range Plan accomplishes several objectives: (a) it reflects existing development and generalized land use patterns, (b) it supports the continuation of rural land uses, (c) it recognizes the natural environment, and (d) it addresses the need to plan for the orderly expansion of urban development into the neighboring rural areas. The land use and growth recommendations contained in this Plan provide for a balance between these components and were derived from careful consideration by the planning Task Force on a range of alternative approaches.

Land use and growth alternatives are many and varied, but can be summarized into the following three general categories:

- Very Restrictive
- Completely Unrestrictive
- Balanced

Under a very ***restrictive*** growth and land use plan, tight urban growth boundaries would be established and all non-farm development would be required to occur within cities, prohibiting these uses within the rural areas of the County. This option provides the highest degree of protection for agricultural lands and prevention against incompatibilities between agricultural operations and rural, non-farm residences. It also provides for planned urban expansion in the most compact, orderly fashion, which lends itself to the greatest efficiencies in the delivery of water, sewer and other public services.

However, this approach also severely limits private property rights and doesn't provide communities, landowners, developers and others very many options. It may also hinder economic growth and opportunities for the County. In addition, restrictive growth policies are often cited for inflated land values, which may contribute, among other things, to affordable housing problems.

Conversely, under a completely ***unrestrictive*** plan, no growth areas would need to be identified because all types of development would be allowed to occur throughout the county without restriction. While this approach may offer communities, landowners and developers the greatest flexibility and provide for the greatest economic growth opportunities, it may result in long-term land use problems. This approach has the highest potential for land use conflicts--between farm and non-farm uses, between residential and commercial/industrial uses, etc. It may also result in development patterns outside of cities that may hinder their orderly growth and that are difficult or costly to provide with water, sewer and other services in the future.

A ***balanced*** plan would likely define modest, flexible growth areas outside of cities. It would allow non-farm residential, commercial and industrial development to occur within planned growth areas, so long as it follows planned development patterns compatible with the adjacent city's future land use plans. Some non-farm development outside of the planned growth areas would be permitted, but limits would be placed on non-farm residential densities and commercial and industrial growth would be directed to areas with adequate infrastructure and where the potential to cause land use conflicts are minimized. It may also identify environmentally sensitive areas to be protected or for which more careful consideration/review of development should be undertaken.

A balanced approach provides simultaneously for planned urban expansion, orderly and efficient growth and agricultural protection while providing communities, landowners and developers with flexibility in land use decisions. This approach also allows for broad economic growth opportunities, while directing it towards desired areas.

Generally, a more balanced approach is preferred when planning for the long range. This was the consensus of the comprehensive planning Task Force. This Plan outlines such an approach through the delineation of modest Planned Growth Areas, the establishment of areas for long term agriculture, provisions for a variety of land uses throughout the County, and the identification of environmentally sensitive overlay areas.

FUTURE LAND USE

The Land Use Plan describes the different land use designations for the County. The designations govern zoning and the County's future land use form. The existing land use pattern (described in greater detail in the existing land use section of the Inventory and Analysis chapter) clearly reflects the prevailing directions of growth in Clay County. The County has experienced the strongest growth around the Moorhead metropolitan area and along Highway 10 and Interstate 94; with modest growth occurring in rural areas of the County, predominantly in areas with lakes and woodlands.

Six unique land use categories have been identified to guide growth in the County. Below, each land use designation category is described in detail. The acres within each land use category are included in Table 4-1 and are illustrated on Figure 4-1, *Future Land Use Plan*.

Table 4-1
Future Land Use
Unincorporated Clay County

Land Use Category	Total Acres	Percent of Total	Acres that are:				
			Wetland	Open Water	Special Concern	Floodplain	Shoreland
General Rural	633,339	95	28,689	3,540	26,395	67,106	13,264
Planned Growth Areas	7,784	1%	104	24	0	864	0
Rural Service Areas	758	0.1%	14	3	0	9	3
Public/Semi Public	5,615	1%	1,040	125	2,180	729	7
Parks/Recreation	20,631	3%	7,390	943	19,220	2,878	1,675
Special Concern Overlay	48,113	7%	16,615	1,407	-	5,736	3,424
Floodplain Overlay	74,404	11%	10,013	4,169	5,736	-	4,393
Shoreland Overlay	15,891	2%	5,946	4,076	3,424	4,393	-
Total	668,126 *	100%	69,811	14,286	56,954	81,715	22,765

Source: Dahlgren, Shardlow & Uban, Inc.

* Excluding overlay categories.

The majority of the County, 95%, is planned for General Rural use. As described below, this area is intended to remain primarily in agricultural use with limited commercial, industrial and residential development. The next largest land use category planned for the future are Parks and Recreation. Approximately 7,784 acres are planned for urban growth and development.

PLANNED GROWTH AREAS

Planned Growth Areas are those areas that lie outside of existing urbanized areas and are in the direct path of urban growth. It is expected that these areas will be largely developed within the next 20 years and must be protected against development patterns that may hinder their ultimate transition to urban use. Future development in these districts should be at urban densities and occur in as orderly and contiguous a manner as possible.

Land uses within Planned Growth Areas are generally identified in the respective city comprehensive plans. Development and land uses within these areas should be carefully coordinated with respective adjoining cities to ensure it follows planned growth patterns and is provided with the appropriate urban services.

New residential development in advance of annexation in these areas should be at densities lower than 1 unit per 20 acres to protect these areas for future urbanization. New commercial and industrial development should be consistent with the land use plan of the adjacent city. Appropriate commercial and industrial development would include those businesses not

requiring urban services. Locating any commercial or industrial development should be coordinated with the adjacent city to ensure continuity of future urban service extensions.

Some of the land within the Planned Growth Areas is already within an established orderly annexation area. Where this is not the case, cities and townships should work cooperatively to manage and service, as appropriate, the development of these areas. Orderly annexation agreements should be considered for these areas. The timing and sequencing of public services such as sewer, water and roads should be coordinated prior to or in conjunction with the development of any orderly annexation agreements.

GENERAL RURAL AREAS

These areas are primarily intended to accommodate agricultural land uses and supporting services. Low-density rural, non-farm residential development will also be accommodated in the General Rural area at densities of 1 unit per 40 acres or less. Higher densities may be accommodated on poorer farmland soils.

Commercial and industrial development should be directed to areas along arterial roadways. Appropriate industrial development for these areas would include those businesses not requiring urban services and which benefit from an isolated or spacious rural location. Appropriate commercial development would include those businesses not requiring urban services and which primarily serve a local market.

RURAL SERVICE AREAS

The Rural Service areas include established, unincorporated rural centers (such as Rustad, Baker, etc.). These areas are appropriate for additional residential development on smaller lots as well as commercial establishments that serve the local market. However, these areas should remain relatively small and low-density so that they do not require sewer service or County Road improvements beyond normal maintenance.

ENVIRONMENTALLY SENSITIVE AREAS

There are three types of environmentally sensitive areas shown on the future land use map:

- Shorelands
- Floodplains
- Special Concern Areas

Shoreland and Floodplain Areas

These areas are currently regulated under the County's shoreland and floodplain districts and regulations. The future land use plan map identifies these areas for future management consistent with those districts and regulations.

Special Concern Areas

These include areas that may not currently have special regulations placed on them through the County's zoning ordinance, but which should be examined more carefully when development or a change in land use is proposed within them. The areas include natural communities identified by the County Biological Survey, including significant natural communities, woodlands, prairie, fens and other significant natural features. Also included are important aquifer recharge areas. It will be important for the County to ensure sound land use practices in these areas to minimize potential groundwater contamination.

PUBLIC/SEMI-PUBLIC AREAS

The future land use map shows areas for continued, future public/semi public use. This category includes only those areas that are currently used for this purpose. Depicting this land use category on the map provides support for existing public/semi-public properties to continue as that use into the future. If any of these uses cease to exist, the County will need to re-examine that parcel/area and determine the most appropriate alternative use consistent with the surrounding area. Conversely, depicting a category for public/semi-public uses on the future land use map is not intended to restrict these types of uses to just those areas shown as such on the map. Various types of public and semi-public uses may be appropriate within all of the County's land use categories consistent with the zoning for that area.

Potential New Public Facilities

The potential need to locate a new County landfill has been identified. The County has secured a site for a new landfill in Section 3 of Riverton Township and will be conducting the necessary environmental, hydrologic, and geologic studies to permit the site as the new County Landfill.

In evaluating the selected site, or any future sites, the County utilize the following criteria:

A facility should:

1. Not be located within any designated conservation area.
2. Not be located in soils that have sever limitations for the facility unless environmentally sound mitigative measures are able to be employed.
3. Not be located within a designated agricultural preserve.
4. Not be located where lands have a CER greater than 60.
5. Be located no closer than one-quarter mile from a residential area.
6. Be located no closer than 1,000 feet to a State or Federal Highway.
7. Have direct access to a nine (9) ton capacity roadway.
8. Not be located on a site having significant historical value.
9. Be generally located in the western half of the County to reflect the origin of the bulk of the solid waste stream.

10. Be located where it will not have the potential to adversely impair surface groundwater resources, woodlands, native vegetation or wetlands.

PARK/RECREATION AREAS

The future land use map shows areas for continued park/recreation use. Similar to the Public/Semi Public areas, the Park/Recreation category includes only those areas that are currently used for that purpose. Lands included in wildlife management areas, scientific and natural areas, state parks, conservation lands owned by the nature conservancy, and WPA parks are classified as "public" parks and recreation uses on the land use map.

Depicting this land use category on the map provides support for existing parks/recreation areas to continue as that use into the future. If any of these uses cease to exist, the County will need to re-examine that parcel/area and determine the most appropriate alternative use consistent with the surrounding area. Conversely, depicting a category for parks/recreation on the future land use map is not intended to restrict these types of uses to just those areas shown as such on the map. Various types of park and recreation uses may be appropriate within all of the land use categories consistent with the zoning for that area.

GROWTH MANAGEMENT

Concern about Minnesota's rapid, expansive growth was one of the driving forces behind the enactment of the Community-Based Planning Act. The state's population grew faster in the first half of the 1990's than it did in the previous two decades. In Clay County, continued urban growth emerging from the Fargo-Moorhead area and along roadway corridors poses many land use challenges. The strain between urbanization and the traditional agricultural character of the County is at the forefront of this struggle. As cities grow and urban land uses extend into the neighboring townships, development pressure is placed on the surrounding agricultural areas. Thus, agricultural preservation, environmental protection and annexation dynamics have become increasingly important for the County.

As a means of addressing these difficult issues, the Community-Based Planning Act requires the establishment of growth boundaries around each city within the County that anticipates growth outside of its municipal limits within the next 20 years. This Plan responds to that requirement through the establishment of Planned Growth Areas.

Planned Growth Areas are those areas that lie outside of existing urbanized areas and are in the direct path of urban growth. It is expected that these areas will be largely developed within the next 20 years and must be protected against development patterns that may hinder their ultimate transition to urban use. Development in these districts should be at urban densities and occur in as orderly and contiguous a manner as possible. Development should be carefully coordinated with the adjacent city to ensure it follows planned growth patterns and is provided with the appropriate urban services. Land outside of the Planned Growth Areas should be developed at rural densities and uses should be compatible with existing rural uses. Of course, each situation is unique and exceptions will need to be made to account for existing development, varying geographic features and other local conditions.

Planning for future growth is neither a linear nor a static process. Even the best growth projections are merely a prediction of the future, based on past trends and current conditions. Since changes in economic and social variables greatly affect projected outcomes, it is important for communities to periodically measure actual progress against targeted growth projections and, if necessary, redirect their growth strategies. Therefore, the Planned Growth Areas illustrated in this Plan are not intended to be rigid or inflexible. They are intended to serve as a planning tool to guide future growth and minimize haphazard, leapfrog development. Each jurisdiction will be able to grow as market conditions allow, provided that it occurs in an orderly, contiguous fashion at urban densities when public infrastructure is available to the extent possible. It will be important for cities, townships and counties to continue to collaborate when modifying these boundaries in the future.

The Planned Growth Areas are based on the premises that urban growth should occur within cities; areas around cities should be identified for future growth and be protected against development patterns that may hinder this growth; and that measures should be put in place to limit density outside of cities and their planed growth areas.

Development within the Planned Growth Areas should be closely coordinated between cities, townships and the County. Orderly annexation agreements and joint powers agreements are two vehicles with which to accomplish these negotiations.

PROCESS

The Community-Based Planning Act stresses coordination and cooperation between cities and their surrounding townships when looking at growth issues. The process established for developing growth areas for this Plan drew heavily on existing planning efforts and allowed for communities, working cooperatively, to define their boundaries. It was based on the premise that cities and townships should identify those areas around cities that are going to be needed for urban development and work cooperatively to address all of the issues that arise as a result of that growth.

The goal of this process was to build capacity at the local level to enable communities to take a purposeful and planned approach to examining their growth issues. On April 4th, 2000 an informational meeting was conducted with Clay County cities and townships to:

- Give an orientation to the comprehensive planning project;
- Explain the growth boundary requirements under the Community-Based Planning Act; and
- Provide communities with a methodology for analyzing their growth potential in order to develop meaningful growth areas.

METHODOLOGY

A community should consider three essential questions when thinking about future growth:

- *How much* are we going to grow?
- *Where*, or in what direction, should we direct growth?
- How are we going to provide *services* to the growth areas?

Information and a suggested step-by-step methodology, discussed below, were provided to cities and townships at the informational meeting to address these issues. These meetings provided communities with the tools to begin the process of establishing Planned Growth Areas. Following are the steps suggested to communities in doing this.

1. Estimate Future Growth

Two primary factors, demographic growth and density, affect a community's estimation of *how much* land it will need for future urban development. Population and household growth projections prepared by the Consultant Team were provided to cities and townships at the informational meeting.

Combined with the knowledge of their own local conditions and needs, these projections could serve as a basis for communities to estimate the future demand for different types of land uses. Communities could then assess the impact of various density scenarios on the amount of land that they would need to meet this demand.

2. Identify Growth Areas

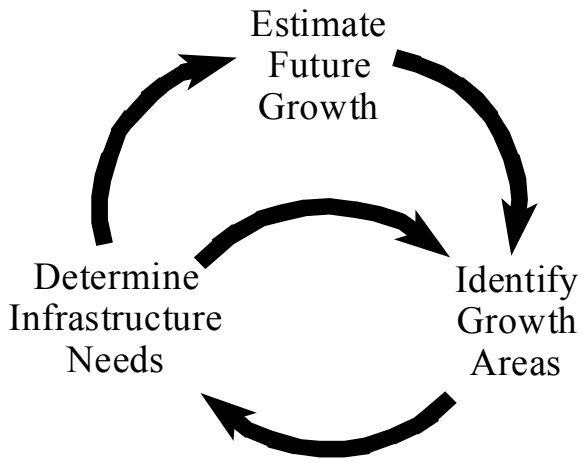
Both development constraints and land use compatibility should be considered when deciding *where* to direct growth. As a result, communities need to posses a clear sense of the land uses in and around existing urbanized areas.

To assist communities in this analysis, land use maps were distributed to each city and township. The land use data utilized in producing the maps was supplied by the County and was based on 1989 LMIC information. Due to the age and source of the data, communities were provided with a methodology to inventory and classify their current land uses. Cities and townships could use the updated information to evaluate alternative growth directions. Combined with the demographic and density analysis described above, communities could then delineate their growth areas.

3. Determine Infrastructure Needs

When exploring alternative growth directions, it is important for a city to examine whether it has the community facilities and infrastructure in place to support that growth. One such example is a city's wastewater treatment system capacity. Communities were provided with a step-by-step methodology to conduct this type of analysis, allowing cities and townships to collaboratively establish a process for allocating service to the designated growth areas.

Figure 4-2: Growth Planning Process



As Figure 4-2 illustrates, planning for future growth is a dynamic process. *Where* a city chooses to direct its growth will impact its future infrastructure needs, but a city's infrastructure capacity also impacts where it chooses to direct its growth. Over time, changes in population projections or public attitudes toward any of the essential components of demographic growth, land use and infrastructure capacity will require a community to reexamine its growth strategy.

GROWTH AREAS

Growth within Clay County stems primarily from the Fargo-Moorhead metropolitan area as well as along major transportation corridors, particularly Highway 10 and Interstate 94. Some eastern portions of the County are also experiencing an increase in non-farm residential development due largely to the presence of several lakes and woodlands in the area. Many parts of this area also have poorer agricultural soils, which make it less attractive for crop production than other areas of the County.

In addition to the generalized growth generators identified above, there are several issues in Clay County that will impact future land use and growth patterns. One of the most significant is the planned expansion of Highway 336. (This is shown on Figure 2-19, *Planned Roadway Improvements*, in the transportation section of the Inventory and Analysis chapter.) This roadway, which connects I-94 and Highway 10 about 2 ½ miles east of Moorhead and just east of Dilworth, is planned to be upgraded to a four-lane roadway. This upgrade will likely make the area attractive for commercial and/or industrial development. A special study will be completed for this corridor later in 2001 to examine issues such as access management, development and environmental protection in the corridor. This area is located above the Buffalo Aquifer and is susceptible to groundwater contamination. Thus, development in this area will need to be carefully planned so as to mitigate potential groundwater pollution.

CITIES NOT ANTICIPATING GROWTH BEYOND EXISTING LIMITS

Seven of the cities in Clay County determined that they did not expect growth beyond their existing municipal boundaries over the next 20 years: Comstock, Felton, Georgetown, Glyndon, Hitterdal, Sabin and Ulen.

There are several factors influencing the growth of these cities. First is their distance from the primary growth areas within the County, namely the Fargo-Moorhead metropolitan area, Highway 10 corridor and at some locations along Interstate 94. The further away a community is from these centers, the less likely it is to experience the growth associated with them. The second is historic population trends and projections. Population projections for this Plan were prepared using several forecasting methods. Although it is not possible to project future population with 100% accuracy using any method, past trends may provide good clues about a community's future. Finally, land use patterns and growth in a township surrounding a city may reveal a growing area, even if a city itself may not be growing.

Following is a description of the cities that do not expect growth beyond their existing boundaries in the next 20 years along with a discussion of the key growth factors influencing this expectation.

COMSTOCK

Comstock is situated in the southwestern portion of the County. It is served by Highway 75, which runs just west of the city. Land uses surrounding the city within Holy Cross Township are predominantly agricultural.

Factors Influencing Growth

The projected population estimates for the city along with the land uses surrounding the city and its distance from the primary growth areas within the County, indicate little growth within the city in the coming decades. The city had a population of 123 in 2000 and it is expected to gain just 26 persons by 2020 under even the highest growth projection prepared for this Plan and is expected to lose 8 residents under the lowest projection. This is shown in Table 4-2.

Given the average number of persons per household in Clay County in 2000 of 2.53, Comstock is only expected to gain 10 households by 2020 under the highest growth projection. In addition, the city has not gained population since the 1980's. The growth trends and projections for the city will likely not warrant the need for urban expansion within the next 20 years.

An examination of growth trends within surrounding Holy Cross Township reveal a similar conclusion. The Township steadily lost population between 1950 and 2000.

Table 4-2
Population Trends & Projections
City of Comstock
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	139	n/a	n/a
1960	138	-1	-1%
1970	135	-3	-2%
1980	163	28	21%
1990	123	-40	-25%
2000	123	0	0%
2020 Straight Line Projection	115	-8	-7%
2020 Exponential Projection	116	-7	-6%
2020 Top-Down Projection	149	26	21%
2020 Demographer's Rate Projection	130	7	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

FELTON

Felton is located within Felton Township in the north-central portion of the County. The city is surrounded by almost exclusively agriculture and uses associated with the Felton prairie area. Felton is served by State Trunk Highway 9. In 2000, the city had an estimated 216 persons.

Factors Influencing Growth

According to the population projections prepared for this Plan, the city of Felton is only expected to gain 31 persons between 2000 and 2020 under even the highest growth projection as shown in Table 4-3. Given the average number of persons per household of 2.53 in the County in 2000, this translates into just 12 new households. The city does not consider this to be a significant enough increase to warrant future expansion of the city's municipal boundary. In addition, the city only gained 5 persons in the 1990's and lost population in the 1980's.

The city's distance from the primary growth areas within the County and surrounding land use patterns also indicate that the city is not likely to experience significant growth in the next 20 years. There has not been significant growth in the surrounding township either, only 2 persons since 1990. This small amount of growth is not indicative of the need for urban expansion around Felton.

Table 4-3
Population Trends & Projections
City of Felton
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	258	n/a	n/a
1960	201	-57	-22%
1970	232	31	15%
1980	241	9	4%
1990	211	-30	-12%
2000	216	5	2%
2020 Straight Line Projection	205	-11	-5%
2020 Exponential Projection	206	-10	-5%
2020 Top-Down Projection	247	31	14%
2020 Demographer's Rate Projection	228	12	6%

Source: 1950 - 2000 US Census *For 2020 projections, this represents the change over two decades

GEORGETOWN

Georgetown is located in the northwest corner of the County and had a 2000 population of 125. It is served by Highway 75, which leads south into Moorhead. Georgetown is located within Georgetown Township and is surrounded predominantly by agricultural land uses.

Factors Influencing Growth

According to the population projections prepared for this Plan, Georgetown is only expected to gain 8 persons between 1990 and 2020 under the highest growth projection as shown in Table 4-4. This translates into 3 new households using the average number of persons per household in the County in 2000 of 2.53. This increase is not significant enough to warrant future expansion of the city's municipal boundary. In addition, the city only gained 18 people in the 1990's and steadily lost population since the 1950's prior to 1990. These projections along with the city's distance from the major growth areas within the County and surrounding land use patterns suggest that the city is not likely to experience significant growth in the coming decades.

There has not been significant growth in the surrounding township either, only 9 persons since 1990. This small amount of growth is not indicative of the need for urban expansion around Georgetown.

Table 4-4
Population Trends & Projections
City of Georgetown
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	192	n/a	n/a
1960	178	-14	-7%
1970	141	-37	-21%
1980	111	-30	-21%
1990	107	-4	-4%
2000	125	18	17%
2020 Straight Line Projection	114	-11	-9%
2020 Exponential Projection	115	-10	-8%
2020 Top-Down Projection	133	8	6%
2020 Demographer's Rate Projection	132	7	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

GLYNDON

Glyndon is located about 4 miles east of Dilworth along Highway 10. The city had a2000 population of 1,049.

Factors Influencing Growth

According to population projections prepared for this Plan, the city is expected to lose 105 persons between 2000 and 2020 under the lowest growth scenario, but gain 360 persons under the highest scenario as shown in Table 4-5. During the 1980's the city lost population, which accounts for the City's projected population loss under the lowest growth scenario. However, this trend reversed between 1990 and 2000, and it is likely that the city will continue to grow due to its location along Highway 10 and proximity to the Fargo-Moorhead/Dilworth area.

Table 4-5
Population Trends & Projections
City of Glyndon
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	411	n/a	n/a
1960	489	78	19%
1970	674	185	38%
1980	875	201	30%
1990	862	-13	-1%
2000	1,049	187	22%
2020 Straight Line Projection	1,299	250	24%
2020 Exponential Projection	1,409	360	34%
2020 Top-Down Projection	944	-105	-10%
2020 Demographer's Rate Projection	1,108	59	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

To accommodate this growth, the city annexed 80 acres of land in 1998, which is expected to accommodate 168 new residential housing units. Using the average number of persons per household in the County in 2000, the city can expect to gain between 23 and 142 households between 2000 and 2020 under the population projections predicting growth through to 2020.

Although the population declined by 33 people during the 1990's, there is an increasing emergence of development around the city in surrounding Glyndon Township. There exists an approximate 80-acre subdivision just south of the city's border and there are several businesses and residences outside the city along Highway 10.

Depending on future growth trends, the city should have enough land to accommodate its growth over the next 20 years. However, the city should closely monitor its growth and identify planned growth areas if needed. The city may also need to consider planning additional areas for future commercial development, particularly as development pressure increases along Highway 10.

HITTERDAL

Hitterdal is located in the northeast to east-central area of the County within Goose Prairie and Highland Grove Townships. It is served by Highway 32, which intersects with Highway 10 to the south. The city is surrounded largely by agricultural land uses with several scattered park/open space areas and small lakes.

Factors Influencing Growth

The city is only expected to gain 50 persons between 1990 and 2020 according to the highest population projection prepared for this Plan as shown in Table 4-56. This corresponds to approximately 19 new households using the 2000 number of persons per household in Clay County. The city does not consider this to be a significant enough increase to warrant future expansion of the city's municipal boundary. In addition, the city has been steadily losing population since the 1980's. If this trend continues, the city may not even gain the projected 19 households. Goose Prairie Township, north of the city, has also experienced slightly declining population since 1950. Although Highland Grove Township on the south also saw declining population from 1950 to 1990, population has increased slightly (by 4 persons) since 1990. Much of this growth, however, may be more associated with Hawley which is just southwest of the Township rather than Hitterdal. The city's historic population trends, surrounding land use patterns and distance from the major growth areas in the County, suggest that the city is not likely to experience significant growth within the next 20 years.

Table 4-6
Population Trends & Projections
City of Hitterdal
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	262	n/a	n/a
1960	235	-27	-10%
1970	201	-34	-14%
1980	273	72	36%
1990	242	-31	-11%
2000	201	-41	-17%
2020 Straight Line Projection	201	0	0%
2020 Exponential Projection	201	0	0%
2020 Top-Down Projection	251	50	25%
2020 Demographer's Rate Projection	212	11	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

SABIN

Sabin lies approximately 7 miles southeast of the city of Moorhead along CSAH 52. The city is located in the northwest corner of Elmwood Township and had a 2000 population of 421 as shown in Table 4-7 below.

Table 4-7
Population Trends & Projections
City of Sabin
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	211	n/a	n/a
1960	251	40	19%
1970	333	82	33%
1980	447	114	34%
1990	495	48	11%
2000	421	-74	-15%
2020 Straight Line Projection	480	59	14%
2020 Exponential Projection	492	71	17%
2020 Top-Down Projection	463	42	10%
2020 Demographer's Rate Projection	445	24	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

Factors Influencing Growth

According to the population projections prepared for this Plan, Sabin is expected to gain 71 residents under the highest growth scenario between 2000 and 2020. Although the city gained population every decade from 1950 to 1990, it began doing so at a decreasing rate since 1980 and has actually lost population since 1990. Based on this data alone, it is likely that the city will continue to see only modest increases in population or it may even lose population.

However, we could begin to see a reversal of this trend as the influence of growth emerging from the Moorhead area continues outward. The possible rerouting of Highway 75 and associated upgrades to the roadway could also facilitate growth in Sabin. In addition, the city may become an increasingly attractive location for those desiring to live in a rural setting close to jobs in the Fargo-Moorhead/Dilworth area.

This is consistent with statewide trends that show increased movement toward rural areas and "satellite" communities located near larger cities. Residents increasingly seek the perceived higher quality of life available in smaller communities while still enjoying the benefits of being near employment and shopping centers.

Based on the population trends of the past two decades, the city does not expect to experience significant growth in the coming decades. However, the city should carefully their future growth trends in light of the factors identified above, and plan growth areas in the future if needed.

ULEN

Ulen is located in the northeast corner of the County and had a 2000 population of 532. It is served by Highway 32, which connects to Highway 10 to the south. Ulen is located within Ulen Township and is surrounded predominantly by agricultural land uses.

Factors Influencing Growth

According to the population projections prepared for this Plan, Ulen is only expected to gain 56 persons between 2000 and 2020 under the highest growth projection as shown in Table 4-8. This translates into 22 new households using the average number of persons per household in the County in 2000 of 2.53. This increase is not significant enough to warrant future expansion of the city's municipal boundary. In addition, the city has been losing population since the 1980's. If this trend continues, the city may not even gain the projected 56 persons and may actually lose population. Surrounding Ulen Township has lost population every decade since 1970. These projections along with the city's distance from the major growth areas within the County and surrounding land use patterns suggest that the city is not likely to experience significant growth in the coming decades.

Table 4-8
Population Trends & Projections
City of Ulen
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	525	n/a	n/a
1960	481	-44	-8%
1970	486	5	1%
1980	583	97	20%
1990	547	-36	-6%
2000	532	-15	-3%
2020 Straight Line Projection	563	31	6%
2020 Exponential Projection	565	33	6%
2020 Top-Down Projection	588	56	11%
2020 Demographer's Rate Projection	562	30	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

CITIES ANTICIPATING GROWTH

Four of the cities in Clay County do anticipate growth beyond their existing municipal boundaries over the next 20 years: Barnesville, Dilworth, Hawley and Moorhead.

There are several factors influencing the growth of these cities. In some cases it is their inclusion within or proximity to the Fargo-Moorhead metropolitan area. This is true for Moorhead, Dilworth and to some extent Hawley. Another important factor is the city's location along the I-94 and Highway 10 corridors. All four cities lie along these routes. Historic population trends and projections also indicate growth in these communities.

Following is a description of the cities that do anticipate growth beyond their existing boundaries in the next 20 years along with a discussion of the key growth factors influencing this expectation.

BARNESVILLE

The city of Barnesville is located at the crossroads of Highways 9 and 34 just off of Interstate 94 near the southern edge of the County. It had a2000 population of 2,173. It is located in both Barnesville and Humboldt Townships and is surrounded by agricultural uses with some scattered commercial and residential developments along the highways outside of town.

Factors Influencing Growth

The city's location at the crossroads of two state highways and proximity to Interstate 94 have and will likely continue to facilitate growth. The city is expected to gain population from 2000 to 2020 under all of the growth projections prepared for this Plan, ranging from just 54 persons to 307 as shown in Table 4-9 below. This translates into between 21 and 121 new households using the 2000 countywide average number of persons per household of 2.53. Although the city lost population from 1980 to 1990, since 1990 it has begun to regain population. In addition to household growth, the city has seen growth in commercial land uses over the past decade during which time it has annexed approximately 25 acres for commercial development.

Table 4-9
Population Trends & Projections
City of Barnesville
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	1,593	n/a	n/a
1960	1,632	39	2%
1970	1,782	150	9%
1980	2,123	341	19%
1990	2,066	-57	-3%
2000	2,173	107	5%
2020 Straight Line Projection	2,434	261	12%
2020 Exponential Projection	2,480	307	14%
2020 Top-Down Projection	2,227	54	3%
2020 Demographer's Rate Projection	2,296	123	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

Planned Growth Area

The city currently works cooperatively with both of its surrounding townships to jointly plan for growth areas around the city. The city along with Humboldt and Barnesville Townships have entered into a joint powers agreement for the planning and management of growth areas around the city which extend from the current city limits to I-94 with some areas west and east of the city as well. This joint planning area serves as they city's Planned Growth Area and is shown on Figure 4-3, *Planned Growth Areas Surrounding Barnesville*. A variety of land uses are planned for this area including residential, industrial, commercial and agriculture, which are also shown on Figure 4-3 and in Table 4-10 below.

Table 4-10
Future Land Use
Planned Growth Area Surrounding Barnesville

Land Use Category	Total Acres	Percent of Total
Residential	120	7.8%
Commercial	573	37.1%
Industrial	275	17.8%
Conservation	81	5.2%
Agricultural Preservation	496	32.1%
Total	1,544	100.0%
Total acres with natural constraints:	43.16	3%

Source: Dahlgren, Shardlow & Uban, Inc.

DILWORTH

Dilworth is located just west of Moorhead along Highway 10. It is also just off of Highway 336. It had a2000 population of 3,001. The city is adjacent to both Moorhead and Glyndon Townships and is surrounded by urban land uses on the Moorhead side of the city but is still surrounded largely by agricultural uses on its other sides with some scattered residences.

Factors Influencing Growth

Although Dilworth lost population slightly between 1980 and 1990 as shown in Table 4-11. This trend has since reversed with the city gaining 439 persons between 1990 and 2000. Its location (adjacent to Moorhead, along Highway 10 and near Highway 336) serves as an impetus for growth. The city is expected to gain population from 1990 to 2020 under all of the growth projections, except the Top-Down method, prepared for this Plan, ranging from 169 to 561 persons. This translates into 67 to 222 new households using the 2000 countywide average number of persons per household of 2.53.

Table 4-11
Population Trends & Projections
City of Dilworth
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	1,429	n/a	n/a
1960	2,102	673	47%
1970	1,782	-320	-15%
1980	2,575	793	45%
1990	2,562	-13	-1%
2000	3,001	439	17%
2020 Straight Line Projection	3,454	453	15%
2020 Exponential Projection	3,562	561	19%
2020 Top-Down Projection	2,860	-141	-5%
2020 Demographer's Rate Projection	3,170	169	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

Planned Growth Area

Due to the growth influences mentioned above, the city has identified the need for additional growth areas outside it current limits. The areas anticipated for growth are shown on Figure 4-4, *Planned Growth Areas Surrounding Dilworth*. The majority of this area is shown in the city's 1998 Comprehensive Plan with some additional areas along and north of Highway 10. A variety of land uses are planned for this area including residential, industrial, commercial, parks, public uses and agriculture, which are also shown on Figure 4-4 and in Table 4-12 below.

Table 4-12
Future Land Use
Planned Growth Area Surrounding Dilworth

Land Use Category	Total Acres	Percent of Total
Residential	339	45.2%
Commercial	27	3.6%
Parks and Open Space	89	11.9%
Transportation	37	4.9%
Unclassified	258	34.4%
Total	750	100%
Total acres with natural constraints:	0	0%

Source: Dahlgren, Shardlow & Uban, Inc.

HAWLEY

Hawley is located within Hawley Township but is also adjacent to Eglon, Cromwell and Highland Grove Townships. It is located along Highway 10 approximately 19 miles west of Moorhead. The city had a2000 population of 1,882. Currently, the city is surrounded largely by agricultural and scattered residential uses.

Factors Influencing Growth

Hawley has gained population every decade since 1950 as shown in Table 4-13 and is expected to continue to grow according to each of the population projections, except the Top-Down method, prepared for this Plan. The city's location along Highway 10 has likely contributed to its growth. Hawley is expected to add between 106 and 443 residents between 2000 and 2020. Considering that population has already risen 227 people between 1990 and 2000, the higher growth projections are probably more accurate. Based on the higher projections and the 2000 countywide average number of persons per household (2.53), the city may gain between 135 and 175 households between 2000 and 2000. The projections prepared for the city's comprehensive plan yield a similar result, indicating a need for an additional 110 dwelling units over the next 25 years.

Table 4-13
Population Trends & Projections
City of Hawley
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	1,196	n/a	n/a
1960	1,270	74	6%
1970	1,371	101	8%
1980	1,406	35	3%
1990	1,655	249	18%
2000	1,882	227	14%
2020 Straight Line Projection	2,223	341	18%
2020 Exponential Projection	2,325	443	24%
2020 Top-Down Projection	1,724	-158	-8%
2020 Demographer's Rate Projection	1,988	106	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

Planned Growth Area

In April of 2000, Hawley adopted a Community-Based Comprehensive Plan. That plan identifies growth areas for the city, which are shown in Figure 4-5, *Planned Growth Areas Surrounding Hawley*. A portion of the city's growth area is already in an orderly annexation agreement. A variety of land uses are planned for the city's growth area including residential, commercial, industrial, parks, public uses and agriculture. These are shown on Figure 4-5 as well as in Table 4-14 below.

Table 4-14
Future Land Use
Planned Growth Area Surrounding Hawley

Land Use Category	Total Acres	Percent of Total
Residential	85	14.7%
Commercial	118	20.2%
Industrial	106	18.2%
Parks and Open Space	112	19.3%
Public/Semi-Public	0	0.0%
Agricultural	113	19.5%
Transportation	47	8.1%
Total	582	100%
Total acres with natural constraints:	11	2.0%

Source: Dahlgren, Shardlow & Uban, Inc.

MOORHEAD

Moorhead is the largest city in Clay County with an estimated 2000 population of 32,177. It is located on the eastern border of the County across the Red River from Fargo, North Dakota. Interstate 94, Highway 10 and Highway 75 all transect the city. It is bordered by Oakport and Moorhead Townships as well as the city of Dilworth.

Factors Influencing Growth

Until the 1990's, Moorhead gained population every decade since 1950 as shown in Table 4-15 below. The city's position as the center of commerce and government and its location along three major highway corridors have helped facilitate this growth. Moorhead is projected to continue growing through 2020 according to the population projections prepared for this Plan. These projections forecast an increase of 1,660 to 2,002 households between 2000 and 2020.

Table 4-15
Population Trends & Projections
City of Moorhead
1950 - 2020

Date	Population	Decade Change *	
		Number	Percent
1950	14,870	n/a	n/a
1960	22,934	8064	54%
1970	29,687	6753	29%
1980	30,641	954	3%
1990	32,295	1654	5%
2000	32,177	-118	0%
2020 Straight Line Projection	33,837	1,660	5%
2020 Exponential Projection	33,952	1,775	6%
2020 Top-Down Projection	34,179	2,002	6%
2020 Demographer's Rate Projection	33,993	1,816	6%

Source: 1950 - 2000 US Census
* For 2020 projections, this represents the change over two decades

Planned Growth Areas

Moorhead adopted a comprehensive plan in 1997 that identifies future growth areas for the city. These are shown in Figure 4-6, *Planned Growth Areas Surrounding Moorhead*. The Planned Growth Area shown in this Plan mirrors that shown in the city's 1997 Plan with the addition of a small area on the SE corner of the city adjacent to land that has recently been annexed. A variety of land uses are identified for the city's Planned Growth Area including residential, commercial, industrial, parks, public uses and agriculture as shown in Table 4-16 below and depicted on Figure 4-6.

Table 4-16
Future Land Use
Planned Growth Area Surrounding Moorhead

Land Use Category	Total Acres	Percent of Total
Residential	2,929	68.0%
Commercial	201	4.7%
Industrial	211	4.9%
Parks and Open Space	64	1.5%
Public/Institutional	57	1.3%
Agricultural	846	19.6%
Total	4,308	100%
Total acres with natural constraints:	874.47	18%

Source: Dahlgren, Shardlow & Uban, Inc.

In some parts of the growth areas, the land use designation reflects existing township or other rural development. The northern reach of the growth area contains existing denser, single-family residential development served by a central sewer and water system. This area has had frequent flooding problems. The area is under an orderly annexation agreement to become part of Moorhead. Flooding issues are being addressed through a city/county/township effort to design and install a dike system to remove the areas from the 100-year floodplain.

In addition to the areas currently contained in the city's Planned Growth Area, the city is considering annexing a large portion of land between the existing city limits and the Moorhead airport. If the annexation occurs, the city should work cooperatively Moorhead Township and the County to plan future land uses for that area.