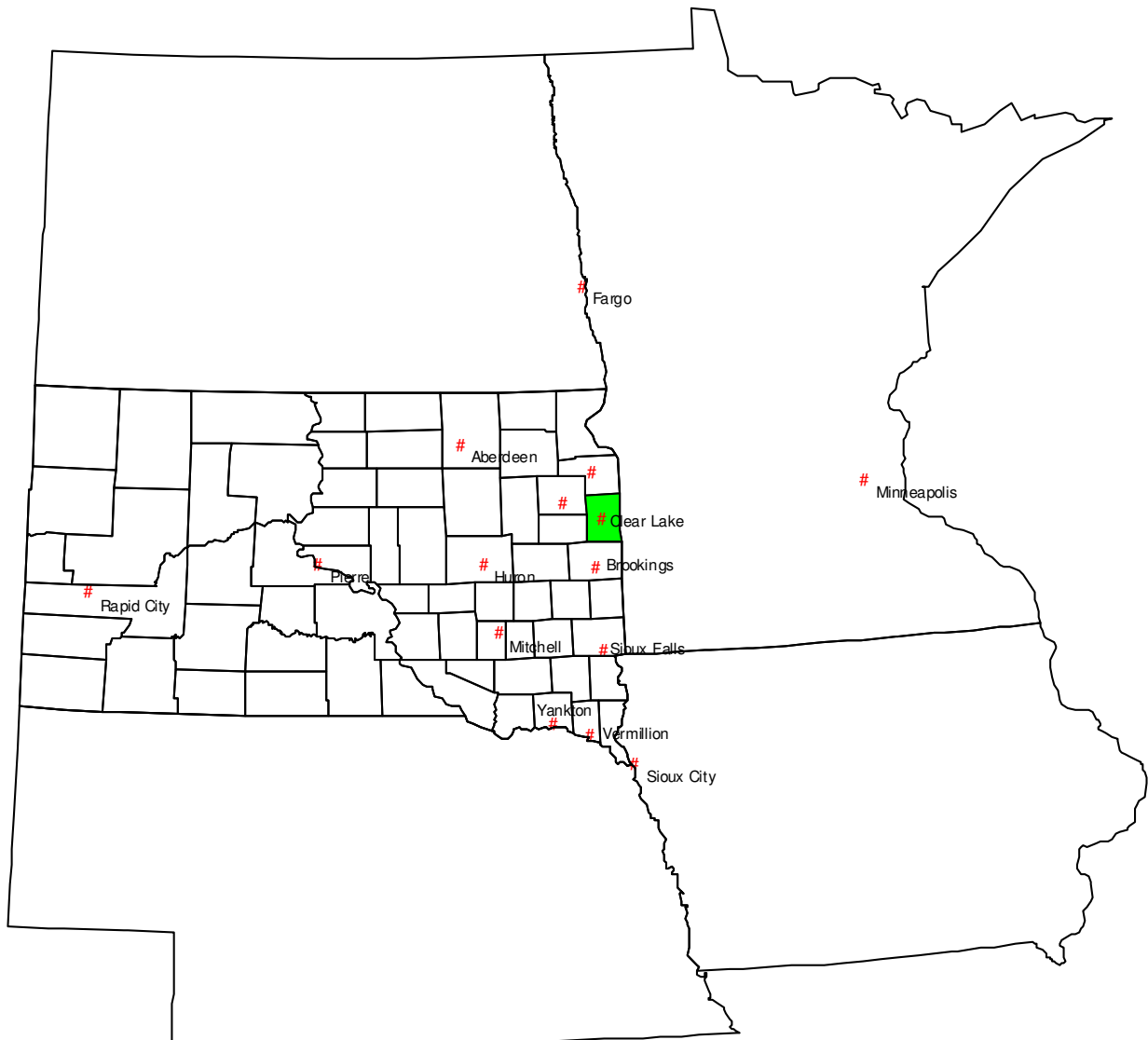


BACKGROUND

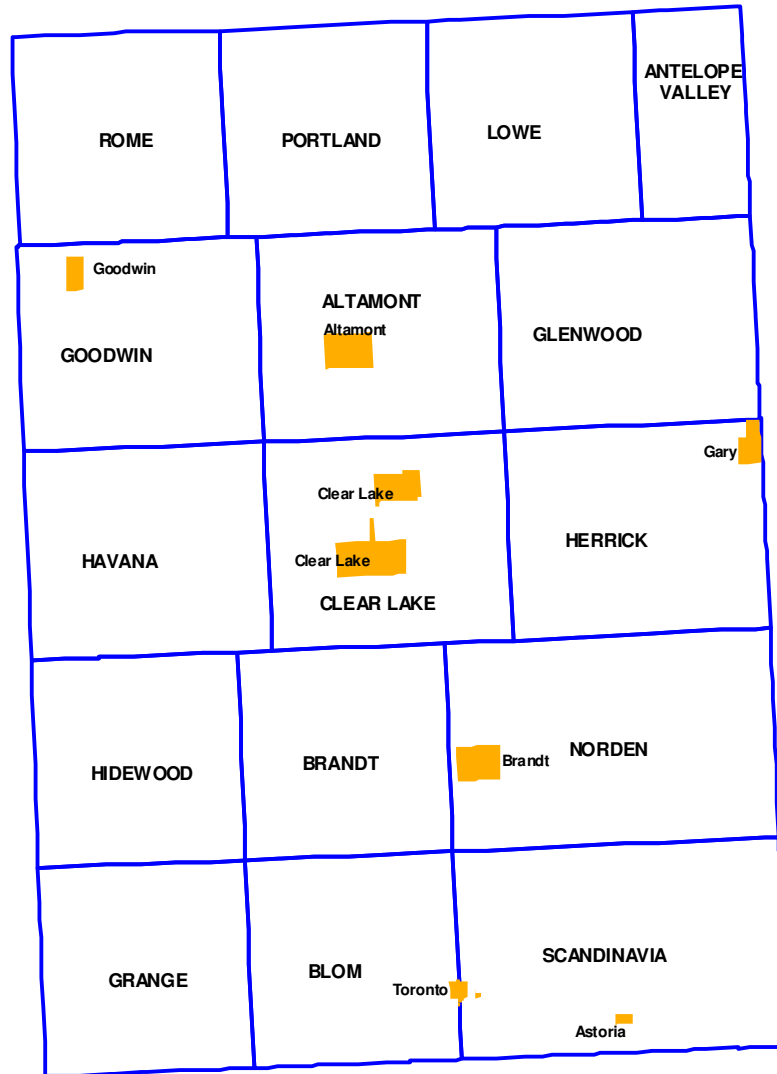
REGIONAL LOCATION

Deuel County is located in northeastern South Dakota, bounded on the north by Grant County, on the east by the State of Minnesota, on the west by Codington and Hamlin counties, and on the south by Brookings County. The county is comprised of seven (7) incorporated communities (Altamont, Astoria, Brandt, Clear Lake, Gary, Goodwin and Toronto), one (1) unincorporated community (Bemis) and sixteen (16) townships. The City of Clear Lake is the county seat.

**MAP 1
REGIONAL LOCATION MAP**



**MAP 2
INCORPORATED MUNICIPALITIES AND TOWNSHIPS MAP**



INTRODUCTION

Change is a constant that will affect individuals throughout their life. Individuals need to make plans, which will accommodate the changes they will encounter in the future. A plan can provide valuable insight into the possible solutions to the problems, which typically accompany change. Planning for change is not limited to individuals. It also applies to communities and counties. Although the Deuel County Planning Commission and County Commission have excelled in the historical application of land use management controls to the unincorporated areas of Deuel County, future development has the potential of applying new and varied pressures on local decision makers. Those pressures may be in the form of residents demanding new or additional services of township or county governments, and/or the potential conflicts that occur in the siting of various uses – concentrated animal feeding operations, wellfields, wastewater treatment facilities, landfills, aggregate mining, and non-farm residences to name a few.

The continued development of a quality county will not occur haphazardly or without insight to a plan for these future growth patterns. For without a well-prescribed plan for future expansion, municipal, township and county leaders will be left unguided to make decisions, which could impact the county's ability to progressively develop.

This comprehensive land use plan is comprised of common characteristics. The first characteristic is that it is long-term in nature. The intent of this plan is to assist in the shaping of Deuel County's future by providing the means necessary to attain a prescribed future. Second, this plan is comprehensive in that it will be directed toward all of the unincorporated areas of the county, and serve as a guide to the physical development of those areas. Finally, this plan is a statement of policy that will guide the decisions made by the Planning Commission, County Commission and various other governmental officials. This document offers a prescription that will assist in answering potential questions regarding future land use, and zoning and subdivision regulations. These policies form a common thread throughout the plan, stressing the critical importance of compact and contiguous growth of municipalities and established growth areas. Finally, the plan emphasizes the importance of long-term agricultural use by seeking to minimize interference with farming activities and discourage premature development, which leads to costly and inefficient public expenditures.

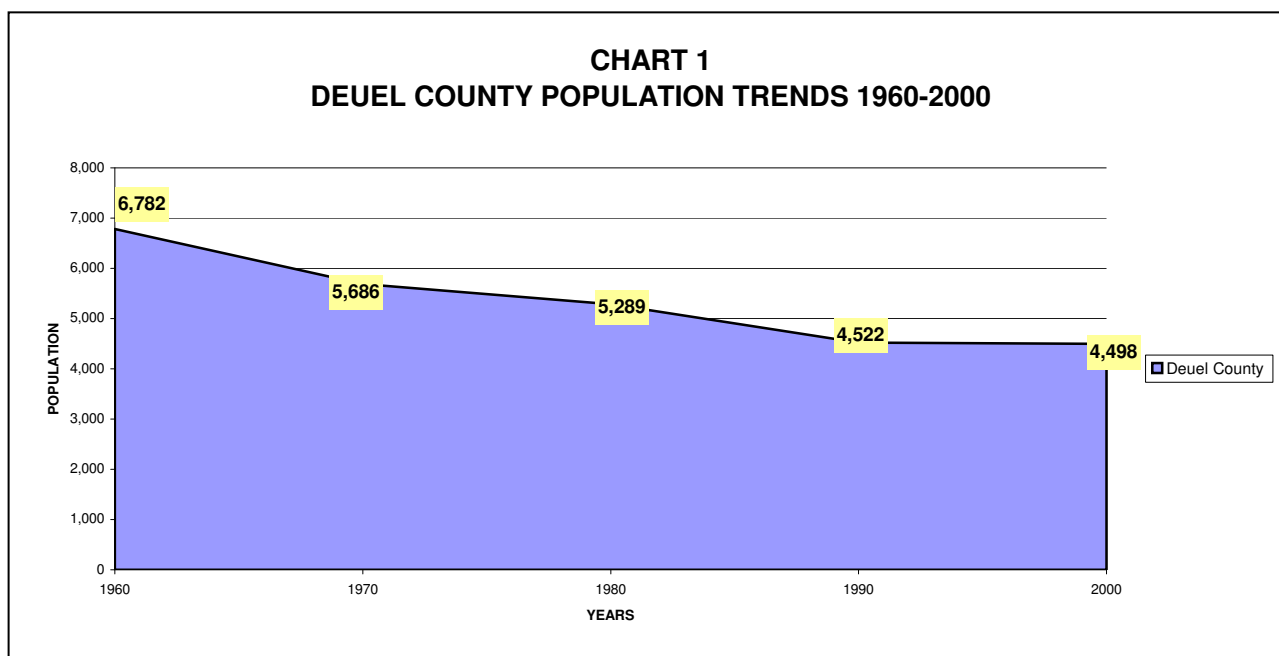
PLANNING HISTORY

Counties and municipalities are allowed by South Dakota Codified Laws to prepare and adopt comprehensive land use plans, and zoning and subdivision regulations. Deuel County began land use planning efforts in July of 1969 when the Brady Engineering Company presented the Deuel County Comprehensive Plan to the Deuel County Planning Commission. In 1973, the First Planning and Development District assisted Deuel County in the development of a Comprehensive Water and Sewer Plan. The Deuel County Commissioners adopted this plan, which was used as a supplement to the 1969 Plan. A subsequent zoning ordinance was adopted in 1976. Since the inception of zoning, the county has amended the ordinance as needed with the most comprehensive updates occurring in 1997 and 2004. Presently the communities of Clear Lake and Toronto utilize zoning as a land use management tool.

Over a nine-month period, the First District Association of Local Governments worked with the Planning Commission, County Staff and other civic leaders in gathering information needed for the completion of this document. Thus, after many hours of meetings and the compilation and analysis of data, the Planning Commission has completed this comprehensive land use plan.

POPULATION AND HOUSING

The study of a county's population is an essential component in the development of a Comprehensive Land Use Plan. By understanding the makeup of its population, a county is then better prepared to plan for the future needs of its citizenry. The first section examines the population of Deuel County with respect to such factors as population growth, migration trends and age structure.



Sources For Chart 1: US Bureau of Census of the Population 1960, 1970, 1980, 1990, and 2000.

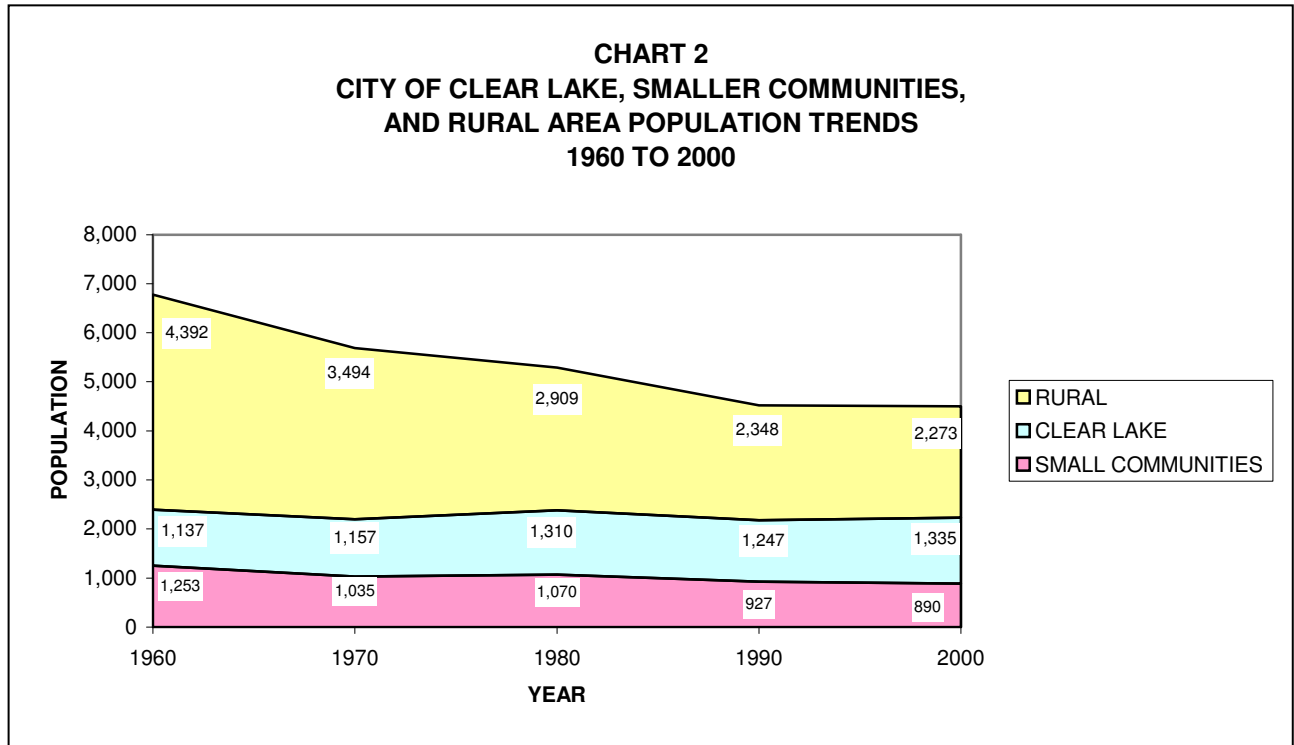
The population of the county is 4,498 (2000 Census). Chart 1 displays information on the population trends for Deuel County from 1960 to 2000. Deuel County has lost over thirty-three (33) percent of its population since 1960 (2,284 persons). It should be noted that nearly two-thirds of the population loss occurred between 1960 and 1980 (1,493 persons). Since 1980 Deuel County experienced a loss of 791 persons. However between 1990 and 2,000, Deuel County generally maintained its population with only a loss of twenty-four (24) persons.

**TABLE 1
DEUEL COUNTY
POPULATION HISTORY 1960-2000**

CENSUS YEAR	CLEAR LAKE	RURAL	SMALLER COMMUNITIES	TOTAL COUNTY
1960	1,137	4,392	1,253	6,782
1970	1,157	3,404	1,035	5,686
1980	1,310	2,909	1,070	5,289
1990	1,247	2,397	878	4,522
2000	1,335	2,273	890	4,498

The smaller communities population for 1960-2000 included Altamont, Astoria, Brandt, Gary, Goodwin, and Toronto.

Table 1 and Chart 2 detail Deuel County population trends by dividing the county into three data subsets. They include the City of Clear Lake, smaller communities, and the rural area. The smaller communities subset is defined to include Altamont, Astoria, Brandt, Gary, Goodwin, and Toronto.



Sources For Table 1 And Chart 2 – US Bureau of Census of the Population 1960, 1970, 1980, 1990, and 2000.

The City of Clear Lake has steadily increased its overall proportion of the county’s population. In 1960, the City of Clear Lake represented approximately seventeen (17) percent of the county’s population. Between 1990 and 2000, Clear Lake increased its proportion of the county’s population from 27.6% to 29.7% (Table 2). If Clear Lake had not experienced an increase of seven (7) percent between 1990 and 2000, Deuel County’s population would have experienced an additional loss of eighty-eight (88) persons. Based on population trends, it is possible that Clear Lake could possess nearly one-third of the county’s entire population by the 2010. The City of Clear Lake’s ability to generally maintain its population base may be attributed to its characteristics such as physical location, job center, education center, and county seat. The previous and following data continues to support the historical migration patterns which shift the rural/urban mix of this county.

The population of the rural areas within Deuel County has steadily been declining since 1960 (-48.2%). Although Deuel County has continued to experience population losses in the rural areas of the county, the percentage decreases have slowed over the past ten (10) years to an annual loss of approximately 0.3 percent. It is quite probable that the rural area of Deuel County will continue to experience population decreases due to factors such as farm consolidation, and out-migration trends to larger communities.

Between 1960 and 2000 the population of the smaller communities in Deuel County decreased cumulatively by twenty-nine (29) percent. Since 1990, the smaller communities experienced a decrease of thirty-seven (37) individuals. This is not to say that all of the small communities experienced a population decrease between 1990 and 2000. Altamont, Astoria, Brandt, and Gary's combined loss of seventy-two (72) individuals was out paced by the population increases in Andover (42%), Goodwin (27%), and Toronto (0.5%). Table 2 shows that communities and the rural area either maintained or experienced slight increases or decreases in their respective proportion of the County's population base. It should be noted these communities, like other small towns in South Dakota, are suspect to forces which may influence future population decreases such as - lack of resident employers, loss of service sector industries, aging population, and out-migration of young adults.

TABLE 2
DEUEL COUNTY POPULATION ANALYSIS 1990 – 2000
CLEAR LAKE, OTHER COMMUNITIES AND RURAL AREA PROPORTIONS

	POP 1990	PROPORTION OF DEUEL COUNTY 1990	POP 2000	PROPORTION OF DEUEL COUNTY 2000	CHANGE IN PROPORTION 1990-2000
ALTAMONT	48	1.1%	34	0.8%	-0.3
ASTORIA	155	3.4%	150	3.3%	-0.1
BRANDT	123	2.7%	113	2.5%	-0.2
CLEAR LAKE	1,247	27.6%	1,335	29.7%	+2.1
GARY	274	6.1%	231	5.1%	-1.0
GOODWIN	126	2.8%	160	3.6%	+0.8
TORONTO	201	4.4%	202	4.5%	+0.1
RURAL	2,348	51.9%	2,273	50.5%	-1.4
TOTAL	4,522		4,498		

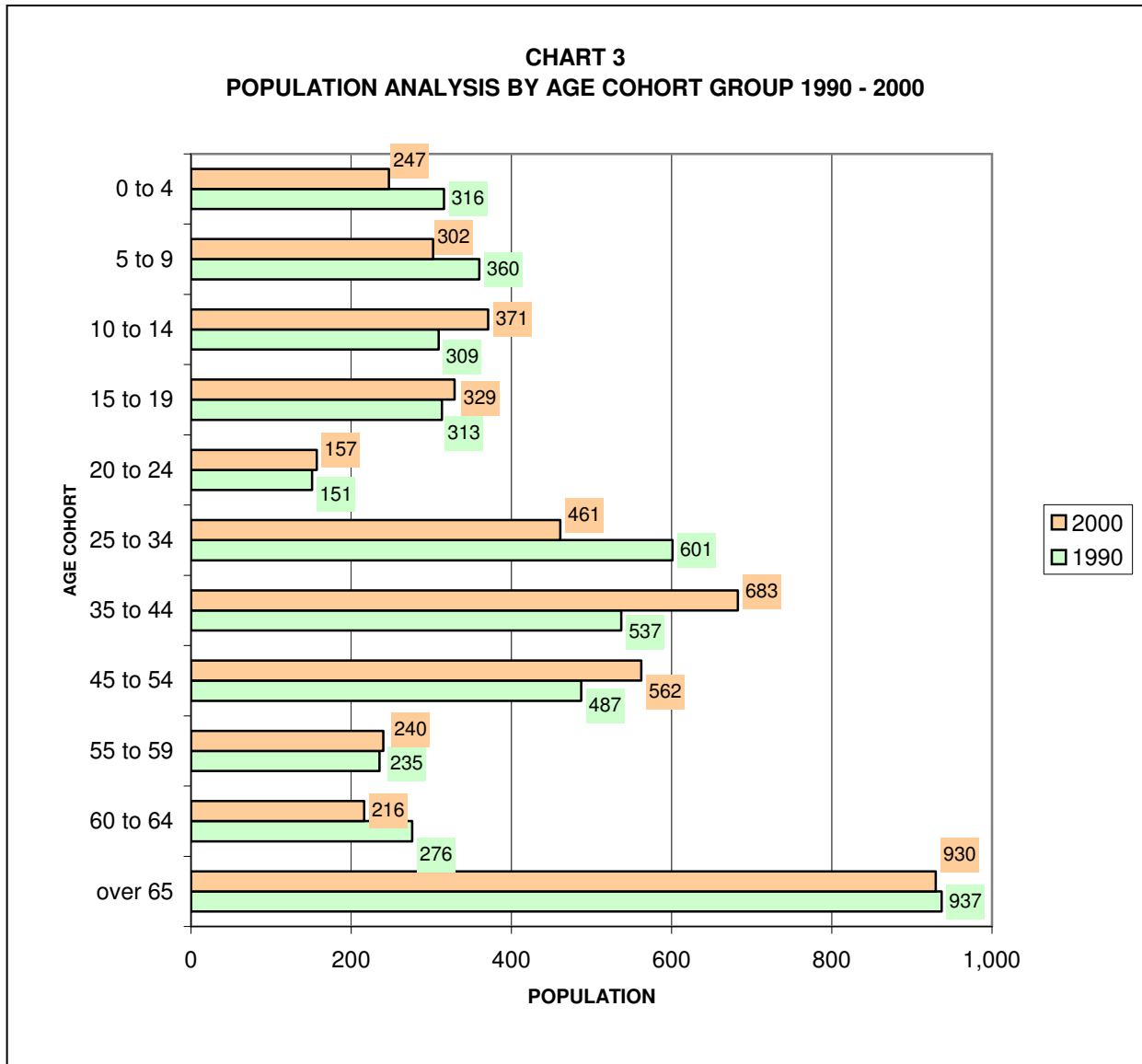
Sources: US Bureau of the Census, Census of Population 1990, 2000.

Chart 3 shows the age distribution of Deuel County residents in 1990 and 2000. Several conclusions about the county's age distribution trends become apparent after reviewing the 1990 and 2000 Census age statistics. The most notable trends observed were the increase in the number of individuals in the 10 to 14, 15 to 19, 20 to 24, 35 to 44 and 45 to 54 age cohort groups and the decreases in all other cohort groups.

Between 1990 and 2000, the number of Deuel County's children age 0 to 9 decreased by 18.9 percent (127 individuals). During this period, the State experienced a decrease 6.8 percent in these cohort groups. The 0 to 4-year-old cohort group decrease of nearly twenty-two (22) percent (69 persons) may be attributed to the fertility ratio. Upon examination of the fertility ratio, (the number of children under the age of five compared to the number of women in their childbearing years, ages 15 to 44) one can see a decrease in Deuel County's potential birthrate. The fertility ratio in 2000 decreased by a twenty-six (26) percent, 4.2 births per 10 women ages 15 to 44 in 1990 compared to 3.1 births per 10 women in their childbearing years in 2000). The data shows that there

were more women in their childbearing years in 2000 as opposed to 1990, and those women in 2000 were having fewer children than their counterparts in 1990. Between 1990 and 2000 Deuel County experienced a positive natural increase. This is to say that there were forty-five (45) more births than instances of death over the decennial period,

The second trend is that of the nearly eleven (11) percent increase in the number of individuals who comprise the 10 to 24 year age cohort groups (84 persons). This positive statistic provides hope for the future if community, county, school and business leadership within the county could provide incentives for these individuals to stay within the county or return after receiving an education.



Source: US Bureau of the Census, Census of the Population 1990, 2000

The third observable trend is that of the twenty-three (23) percent decrease (140 persons) in the number of individuals who comprise 25 to 34 year age group. Generally, there is a decrease in these cohort groups because of several factors. The first is being that of the “baby boom/baby bust eras”. The individuals who comprise the 25 to 34 age cohort group in 1990 were the final children born into the baby boom era. Meanwhile, individuals 25 to 34 years old in 2000 were the first children of the baby bust era. Also this age cohort group consistently across the state has historically experienced a very high migration rate. Between 1990 and 2000 the State experienced a loss of 16.8% in the same cohort group. It should further be noted that Deuel County experienced a negative out-migration rate of 1.3 percent (61 persons) between 1990 and 2000.

The fourth observable trend is the increase in the number of individuals in the 35 to 54 year old age groups. Between 1990 and 2000, this group experienced an increase of nearly twenty-two (22) percent (an increase of 221 people). These individuals were born at the height of the “baby boom”. During the same time frame the State experienced an increase of over thirty-four (34) percent in this age cohort group.

Finally, the number of individuals over the age of 60 experienced a near-zero change (loss of 7 persons). Between 1990 and 2000 the State’s population of individuals 65 years of age and older increased by 5.7 %. Even though Deuel County experienced a minor decrease in this age cohort group, it should be noted that with extended life spans, migration of elderly individuals from rural areas and the increased number of the baby boomers getting older, the “Graying of Deuel County” will continue at a higher pace over the next fifteen to twenty years.

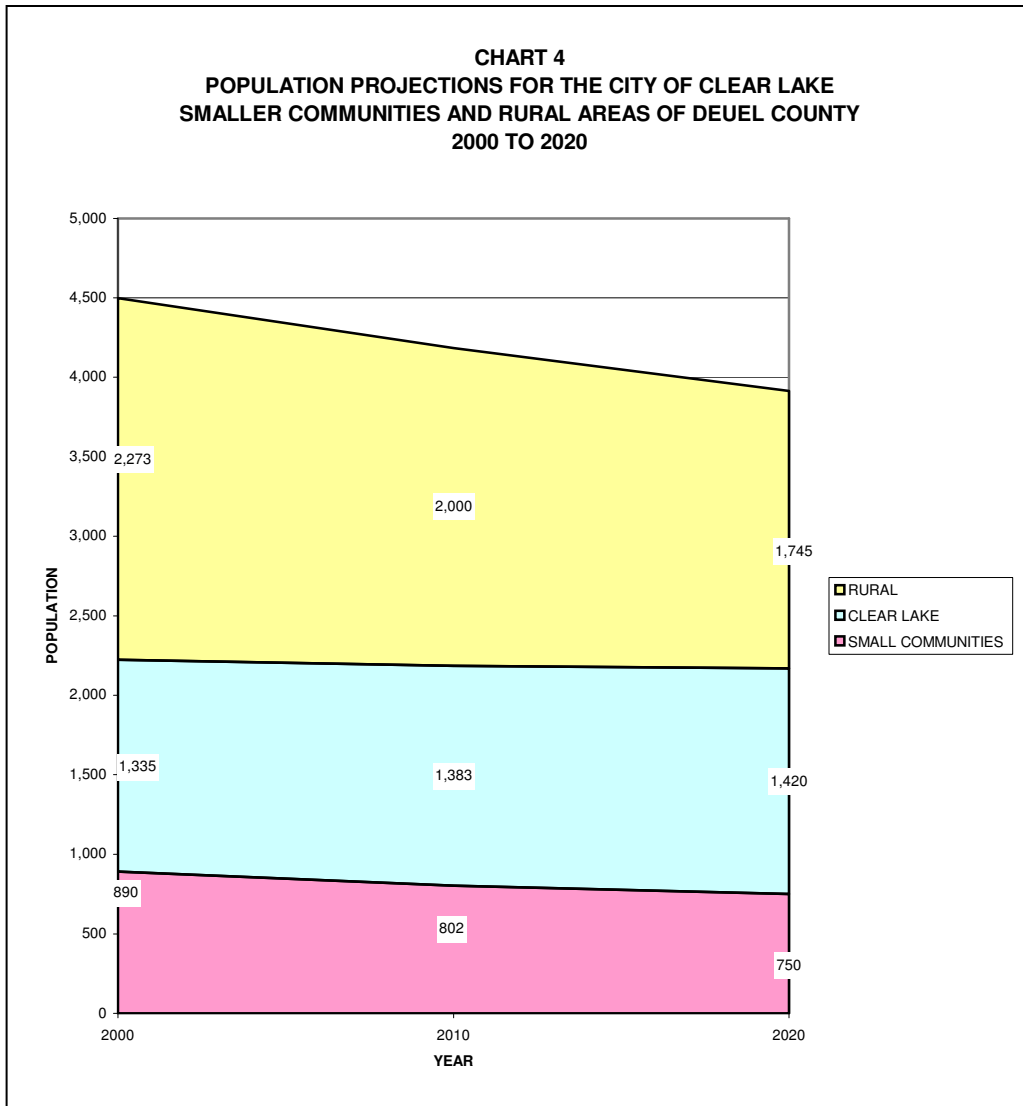
In 2003, the South Dakota State Data Center estimated that by the year 2025 Deuel County would have a population of three thousand four hundred eighty six (3,486 - a decrease of 22.5 % from the year 2000). The trends of growth in the number of the elderly, individuals having fewer children, out-migration of individuals 20 to 34 years old, and farm consolidation will continue to have an impact on Deuel County’s potential for future growth.

The City of Clear Lake has the most potential to contribute to the county’s future population base. Although there may be potential for growth in Gary, Goodwin, and Toronto, it is probable that those incorporated communities will struggle to maintain their population, and will more likely, similar to Altamont, Astoria, Brandt and the rural unincorporated areas, continue to lose population throughout the planning period. Table 3 and Chart 4 exhibit population projections for Deuel County. The population projections were based on regression analysis utilizing U.S. Census Data and some local building permit information.

**TABLE 3
DEUEL COUNTY POPULATION PROJECTIONS
MUNICIPALITIES AND RURAL AREA 2000 – 2020**

	2000	2010	2020
ALTAMONT	34	27	20
ANDOVER	150	143	130
BRANDT	113	105	90
CLEAR LAKE	1,335	1,383	1,420
GARY	231	175	150
GOODWIN	160	162	170
TORONTO	202	190	185
RURAL	2,273	2,000	1,745
TOTAL	4,498	4,185	3,915

**CHART 4
POPULATION PROJECTIONS FOR THE CITY OF CLEAR LAKE
SMALLER COMMUNITIES AND RURAL AREAS OF DEUEL COUNTY
2000 TO 2020**



HOUSING

The number of housing units in the unincorporated areas of Deuel County totaled 1,087 in 2000. Between 2000 and 2003* there were ninety-eight (98) residences either constructed or moved-in into the rural area of the county (Tables 4 and 5). The rural housing stock is comprised almost entirely of single-family residences.

**TABLE 4
RESIDENTIAL BUILDING PERMITS BY TYPE
RURAL DEUEL COUNTY 2000-2003**

	Units Constructed 2000 to 2003
Stick built - On-site or Moved in	67
Manufactured	31
Total	98

**TABLE 5
RESIDENTIAL CONSTRUCTION 2000 – 2003**

Townships	# of Housing Units (2000 Census)	Units Added 2000 to 2003	Total
Altamont	44	6	50
Antelope Valley	20	1	21
Blom	52	0	52
Brandt	48	5	53
Clear Lake	89	9	98
Glenwood	39	3	42
Goodwin	76	5	81
Grange	52	0	52
Havana	75	7	82
Herrick	54	9	63
Hidewood	46	9	55
Lowe	50	7	57
Norden	270	30	300
Portland	31	4	35
Rome	46	1	47
Scandnavia	95	2	97
Total	1,087	98	1,185

*2003 Building permits through December 31, 2003.

Approximately sixty-eight (68) percent of the new residential construction within the county over the last four (4) years has been stick-built, with most of which being on-site constructed. Manufactured homes represent approximately thirty-two (32) percent of new residential housing.

Map 3 shows that approximately thirty-one (31) percent of the homes constructed between 2000 and 2003 were located within Norden Township (Lake Cochrane). Excluding Antelope Valley, Blom, Rome, Glenwood, Grange, and Scandinavia Townships, the remaining townships in Deuel County averaged at least one (1) building permit per year since 2000.

**MAP 3
RESIDENTIAL CONSTRUCTION IN RURAL AREAS OF DEUEL COUNTY
2000 to 2003**

ROME 1	PORTLAND 4	LOWE 7	ANTELOPE VALLEY 1
GOODWIN 5	ALTAMONT 6	GLENWOOD 3	
HAVANA 7	CLEAR LAKE 9	HERRICK 9	
HIDEWOOD 9	BRANDT 5	NORDEN 30	
GRANGE 0	BLOM 0	SCANDINAVIA 2	

Rural farm and non-farm residential construction (excluding lake development) is expected to continue at a pace consistent with past trends (approximately fifteen (15) units per year). Residential development is often related to regional economic conditions, mortgage interest rates, zoning requirements and/or lack of supply of developable lots. Based upon the future land use policies within this plan, county residents will still continue to have the choice of either an urban, small town, or rural lifestyle.

EXISTING LAND USE

Where and how a county will develop is influenced by the usage of the county's existing land resources. In order for a future plan to properly develop, an understanding of the existing types of land use within the county is necessary. Existing land development was categorized into one of three general classifications.

The first land use category consists of incorporated municipalities. Within Deuel County there are seven (7) incorporated communities. They include Altamont, Astoria, Brandt, Clear Lake, Gary, Goodwin and Toronto. For the purpose of this Comprehensive Land Use Plan, individual land uses and available infrastructure within these communities will not be reviewed.

The second land use category includes the unincorporated communities and developed lakes. Bemis is the lone unincorporated community. Lake Cochrane is the only lake with a significant amount of development. The development is primarily residential. However, there are instances of commercial, public/quasi-public uses, conservation, and recreation areas.

The third land use category includes the unincorporated areas of the county. By area, this is the largest land use category within the county. Agricultural activities are the primary uses in this category. Also within this category there are individual farm and non-farm residences, public/quasi-public uses, conservation/recreation areas, commercial and industrial uses, and aggregate mining.

The primary focus of this report will deal with the management of development within the second and third land use categories.

In order for a future land use plan to properly develop, an understanding of the existing types of land use is necessary. Staff from the First District Association of Local Governments utilized information from the South Dakota Department of Transportation regarding existing land use within the rural area, unincorporated communities and developed lakes of the county.

UNINCORPORATED COMMUNITIES/DEVELOPED LAKES EXISTING LAND USE

Bemis

Existing Land Use

Bemis is located on 176th Street, three (3) miles south of Goodwin, South Dakota. There are approximately twenty-three (23) residences and two (2) businesses located within the community.

Lake Cochrane

Existing Land Use

Lake Cochrane is located ten (10) miles east and two (2) miles south of Clear Lake. More than seventy-five (75) percent of the lake front property is developed with the principle land use being residential. Uses other than residential include a business located on the southeast corner of the lake and the State Park situated on the north side of the lake.

Finally there is a vacant/open space area adjacent to the lake along the northwest side of the lake.

UNINCORPORATED RURAL AREA LAND USE

Rural Land Use Patterns

Agricultural Land Use

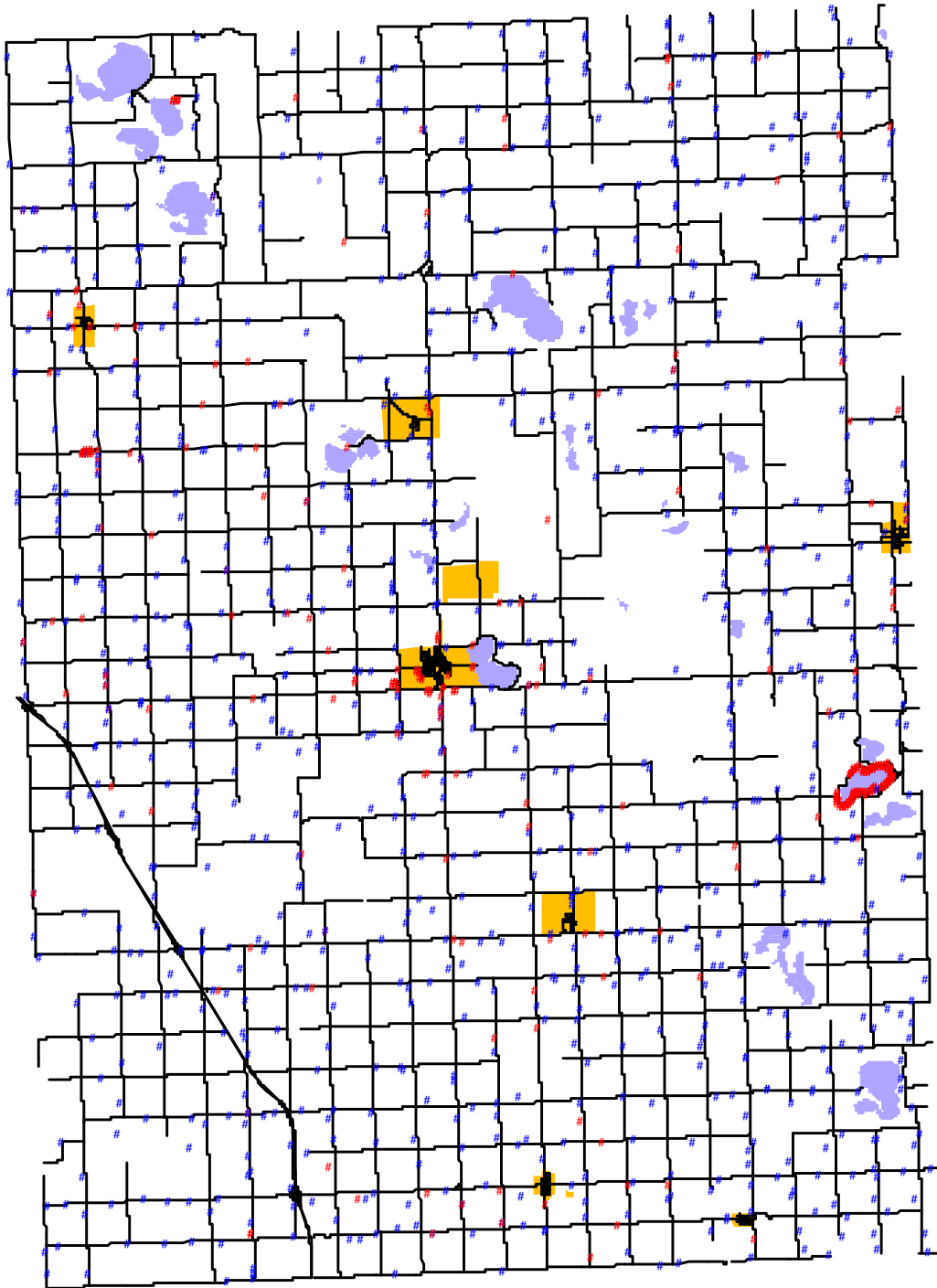
Agriculture is the major land use in the approximately six hundred forty (640) square miles of Deuel County. This basic land use has been altered very little through urbanization or the development of communities. Although there have been population losses in the rural areas of the county, there has been an increase of non-farm residential development pressures and those pressures are expected to grow in the future.

It is important for the Deuel County Planning Commission, County Commission and local township governments to have farmers continue to operate their farms and remain on the land. Any growth in the non-farm population will continue to make it more difficult for farmers to improve efficiency and effectiveness of agricultural operations.

Residential Land Use

While most residential construction occurred within municipal service areas, ninety-eight (98) residential housing units were built in the unincorporated rural area between 2000 and December of 2003. This increase brought the total number of housing units in rural Deuel County to one thousand one hundred eighty five (1,185). It should be stated that most townships within Deuel County are rural in nature – nine (10) of the sixteen (16) townships have less than sixty (60) occupied residential units within the rural area of their respective township.

MAP 4 HOUSING DISTRIBUTION



Non-Farm Residences ●

Farm Residences ●

Commercial/Industrial Land Use

There is very little commercial/industrial activity at the county level of a specific business district nature; rather there are occasional commercial/industrial establishments (approximately thirty-three) scattered along major highways.

More than sixty (60) percent of the commercial/industrial uses are located within close proximity of Clear Lake and adjacent to Highway 212. The largest concentration of commercial/industrial land uses exists near the City of Clear Lake.

Map 5 denotes the locations of commercial/industrial sites.

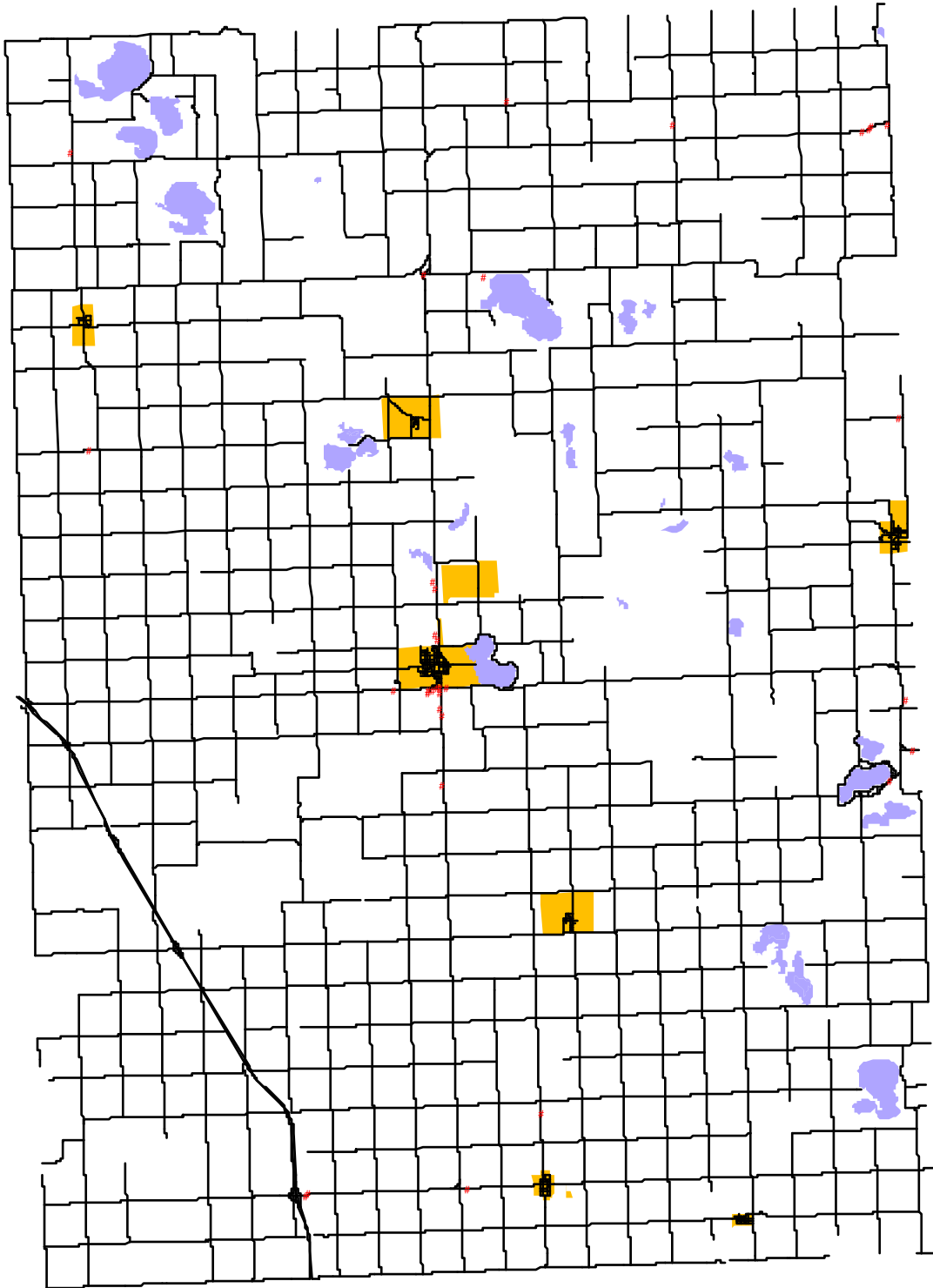
Although the rural area may experience pressure to provide locations for both commercial and industrial development, it is the intent of Deuel County to encourage commercial and industrial development to occur within municipalities and the confines of unincorporated villages and developed lakes, thereby preserving agricultural lands for agriculture production.

Construction Aggregate Land Use

There are approximately seventy-one (71) South Dakota Department of Environment and Natural Resources (SDDENR) permitted rock, sand, and gravel extraction sites scattered across the county. These extraction sites have the potential to impact adjacent land uses. The many negative impacts associated with aggregate mining include – dust, noise, trucking of material, road damage, environmental concerns, and appearance.

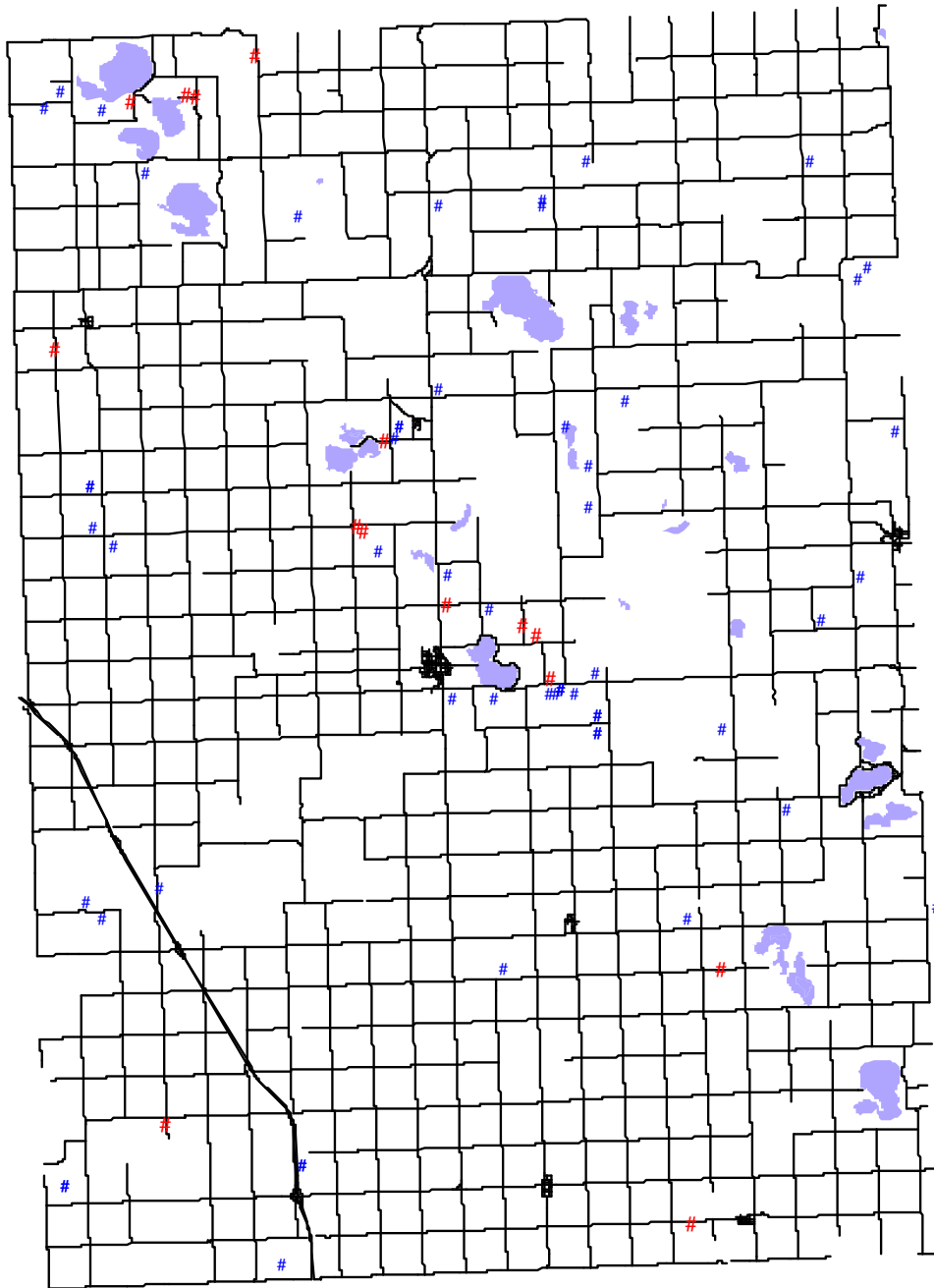
Map 6 denotes the locations of existing and future construction aggregate mining sites with a State of South Dakota Mining Permit.

**MAP 5
COMMERCIAL AND INDUSTRIAL SITES**



Commercial/Industrial sites ●

**MAP 6
CONSTRUCTION AGGREGATE MINING SITES**



Active Mining Operations ●

State Permitted Non Active Mining Sites ●

TRANSPORTATION

A well-conceived transportation system is one of the most important features of a Comprehensive Land Use Plan. The transportation plan attempts to program road and street use to prevent congested and unsafe street design. Through long-term planning of designated street types, new developments can be coordinated and potential problems minimized.

COUNTY TRANSPORTATION SYSTEM

Deuel County's transportation system is generally laid in a one-mile rectilinear grid system with a majority of the roads having sixty-six (66) foot right-of-ways. The public right-of-ways for County, State and Federal Highways with a bituminous or concrete surface generally exceed sixty-six (66) feet in right-of-way. The township highway system represents the largest road system within the county.

STREET CLASSIFICATION

Roads within the county support diverse volumes of traffic. Thus, before a transportation plan can be implemented, the determination and development of the County's existing road system according to classification must be undertaken. The development of these classifications will be specifically related to the function that the road is expected to perform. Developmental expectations are dependent upon the varying amount and type of traffic.

The following generally recognized hierarchy of road classifications would be used to assist in the development of intermediate and long range transportation needs.

Arterials - serve as primary circulation routes. These roads generally carry the majority of traffic volume within the county. Their basic function is to facilitate movement of medium and long distance, high-speed traffic between regions and communities with a minimum of impediments. Since arterials serve for traffic movement between regions and subareas, all direct access to abutting property should be restricted. Further, parallel service roads should be added, where appropriate, to maintain traffic carrying capabilities of the thoroughfare. South Dakota Highways 15, 22, 28, 101, US Highway 212, and Interstate 29 are considered arterials.

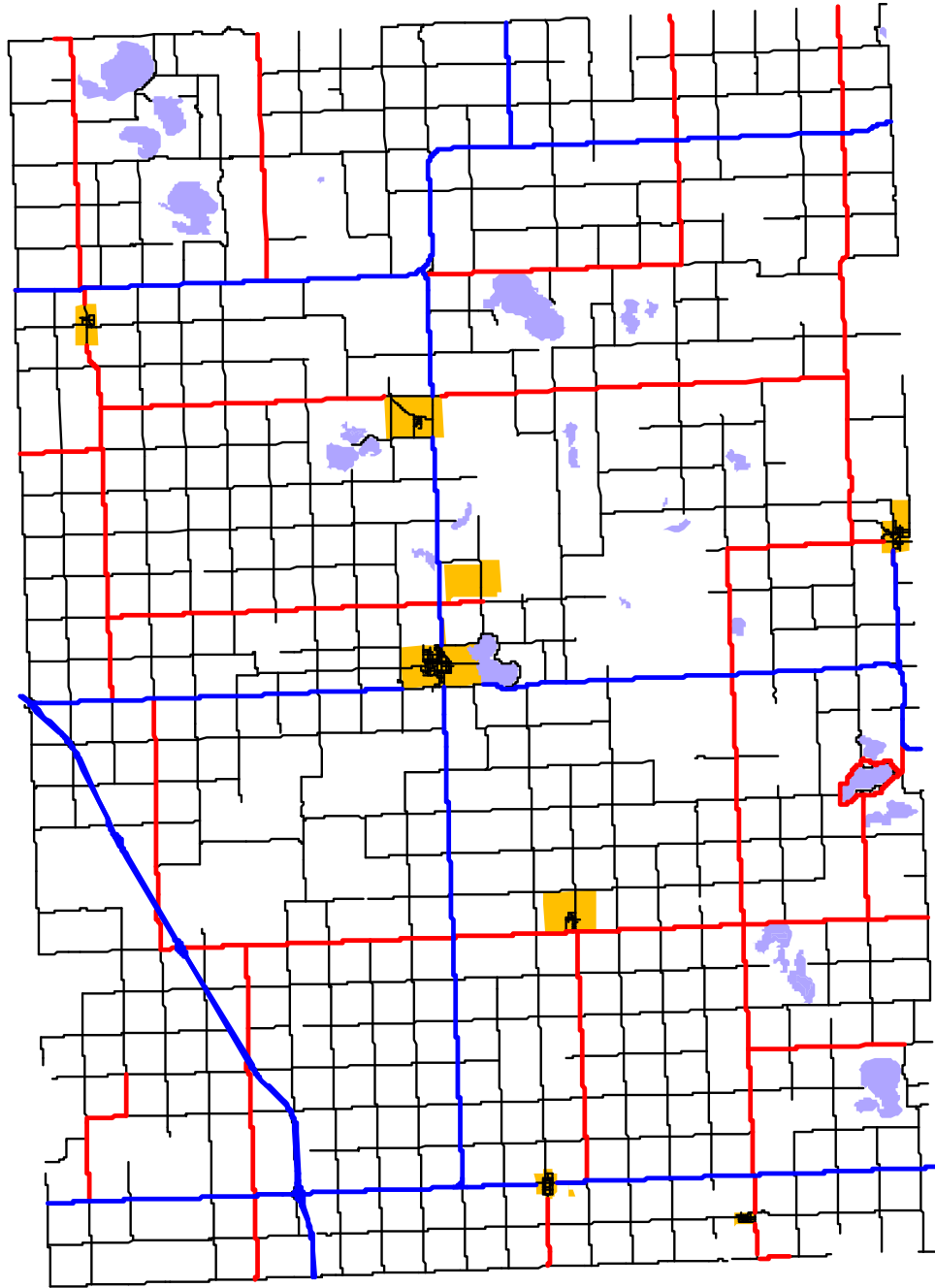
Collectors - form an intermediate category between arterial and local roads. Collectors serve as a link between arterial and local roads by "collecting" traffic from local roads and transferring it to arterial roads. Collectors may further be classified into major and minor collector categories. Presently, the Deuel County Paved Highway System serves as collectors.

Local Streets - primarily provide access to abutting properties. They are not designed to carry large amounts of through traffic and are primarily characterized by short trip length and low traffic flow. County gravel and township gravel highway systems act as local streets.

MAJOR STREET PLAN

The Major Street Plan shown on Map 7 classifies roads as arterial, collector, or local. The plan is designed to effectively move traffic through the county and between major attraction points.

**MAP 7
MAJOR STREET PLAN MAP**



- ARTERIAL 
- COLLECTOR 
- COUNTY & TOWNSHIP GRAVEL ROADS 

Transportation Goal

To provide a safe and effective transportation system that promotes the efficient movement of people, goods, and services within and through the county.

Policies

- Plan and provide an integrated street and highway system that is planned, designed, developed, and maintained consistently with the County's existing and anticipated future land use patterns and activities.
- Limit access (driveway/curbcut) and utilize frontage roads on arterial and major/minor collector streets.
- Secure and preserve sufficient rights-of-way for future arterial and major collector traffic routes.
- Require developers to have sufficient parking to meet existing and future demands.
- Classify major streets and highways according to function and establish design standards for various street classifications.
- Coordinate plans with communities in the development of a network of arterial and collector roads that promote efficient traffic movement and supports growth in projected development areas.
- Identify maintenance responsibilities as part of the platting of new subdivision roads.
- Require new development to finance road improvements needed to support increased traffic.
- Discourage strip type development along major thoroughfares to maintain the carrying capacity of highways and to avoid conflict with other land uses.

PHYSICAL ENVIRONMENT

Streams, Lakes and Wetlands

Branch Lac qui Parle River, Bullhead Run, Caine Creek, Cobb Creek, Crow Creek, Crow Timber Creek, Hidewood Creek, Lazarus Creek, Lost Creek, Monighan Creek, Mud Creek, North Branch, North Deer Creek, Peg Munky Run, Six Mile Creek, South Fork Yellow Bank River, and Stray Horse Creek form the major surface drainage features in Deuel County.

Wetlands are prevalent throughout the entire county. Wetlands perform a variety of functions, serving as natural water purifiers by filtering out pollutants, thereby enhancing surface and groundwater quality, increasing wildlife and fish habitat and providing

recreational opportunities. Wetlands also reduce siltation and control flooding by slowing runoff during rapid snow melt and heavy rainfall, releasing water gradually so erosion and downstream flooding are minimized.

There are twenty-three (23) prairie lakes located in Deuel County. They include, Briggs Lake, Bullhead Lake, Clear Lake, East Coteau Lake, Fish Lake, Fox Lake, Ketcum Lake, Lake Alice, Lake Cochrane, Lake Francis, Lake Oliver, Lake Suttan, Lone Tree Lake, Midway Lake, Mud Lake, North Coteau Lake, Round Lake, Rush Lake, Salt Lake, School Lake, South Coteau Lake, South Slough, and Wigdale Lake.

Soils

There are ten (10) soil associations, or types of soil patterns in Deuel County. A soil association is landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils.

The Natural Resources Conservation Service recently completed a major update of the Deuel County Soil Survey. Soil boundaries were provided in digital format for entry into a Geographic Information System (GIS) along with attribute information associated with the various soil types. GIS affords the opportunity to analyze these attributes as part of the site development evaluation process.

A map showing soil associations is useful to people who want a general idea of soils in the county. The soil attributes provide information on agricultural productivity, erosion factors, and limitations for the use of wastewater absorption fields, lagoons, buildings, roads, and other engineering applications. The County should consider soil associations and their limitations when making decisions on future development projects.

Flood Plains

Floodplains are lowlands adjacent to the channels of rivers, streams, and other watercourses where inundation periodically occurs due to extreme natural events.

The Flood plain has two constituents – a floodway and a flood fringe. Together they comprise the flood hazard area generally referred to as the 100-year flood plain identified by the Federal Emergency Management Agency (FEMA), where the chance of experiencing a flood of such magnitude is one (1) percent every year.

Deuel County maintains eligibility in the National Flood Insurance program. Presently, there are no special flood areas (100-year flood plains) identified within the rural areas of the county. This is not to say that there are no locations where localized flooding occurs. Because of the FEMA “All Zone C” classification, the county does not enforce a Flood Damage Prevention Ordinance. A Flood Damage Prevention Ordinance establishes restrictions on construction in the flood plain and floodway. In the event a detailed study was conducted and 100-year flood plains were identified, the County

would then adopt a Flood Damage Prevention Ordinance. The benefits of detailed flood plain study would include the enabling of county residents to purchase special insurance at subsidized rates. Further, the ordinance would require residential structures be flood-proofed. This is done by requiring the lowest floor of residential structures to be constructed to a standard of one (1) foot above the base flood elevation. Residential structures would also be prohibited from being constructed in flood ways while encroachments, including fill and new construction, would be prohibited unless engineering certification demonstrates that the activity will not result in an increase in flood levels. Although a Flood Damage Prevention Ordinance does not exist for Deuel County, the above concepts of flood proofing should be incorporated in proper site design and review.

Aquifer and Water Source Protection

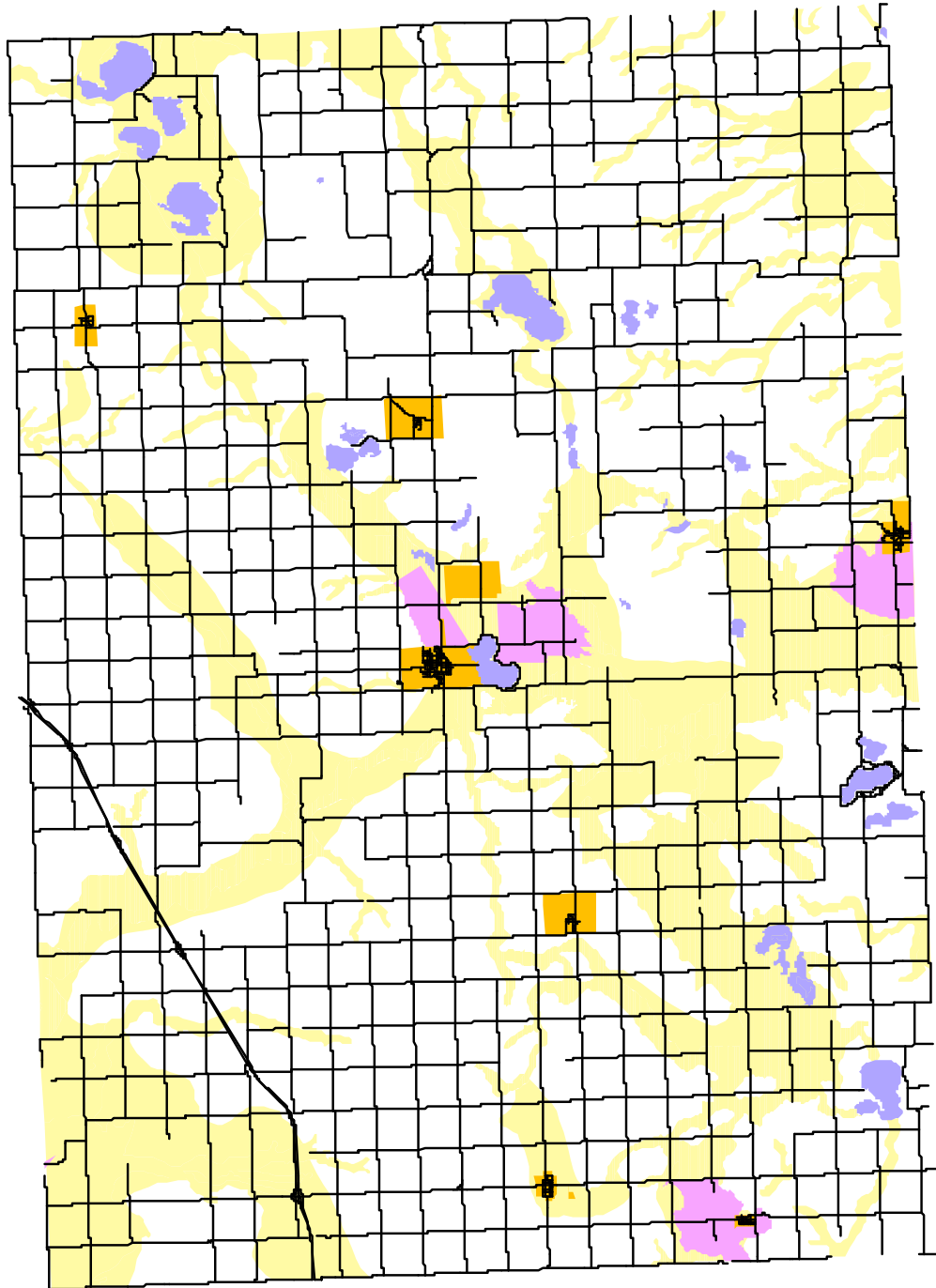
The County's water resources consist of surface water found in streams and lakes, and groundwater. The groundwater resources originate in two main aquifers. The first are the glacial drift formations and deposits of outwash in the form of sand and gravel. The major surficial outwash deposits in Deuel County are located in the central and eastern portions of the County. The second main aquifer is the Dakota Formation. The first occurrence of this formation is generally greater than 100 feet from the surface.

The water resources are at risk of contamination by a variety of sources – inadequate wastewater treatment and disposal attributed to both on-site and municipal sources, mismanagement of waste from livestock facilities, overuse of fertilizers and pesticides, solid waste disposal sites, and sites for the storage and manufacture of regulated substances. The county enforces measures to protect these vulnerable areas through the water source protection overlay district provisions of the zoning ordinance. The overlay district prohibits uses, which pose a high risk of contamination to surface and groundwater resources, and regulates other potential damaging uses so that adverse environmental impacts are minimized.

Map 8 provides information regarding the location of shallow (less than fifty feet from the surface) surficial aquifers.

Regarding the provision of water, the Brookings-Deuel Rural Water System provides water to all rural and municipal users, excluding those with private wells.

**MAP 8
AQUIFER MAP**



Shallow Aquifer



Wellhead Protection Area



FUTURE LAND USE

UNINCORPORATED COMMUNITY AND DEVELOPED LAKES FUTURE LAND USE

To accommodate growth, the future land use plan will address both the fringe and established developed areas of the unincorporated communities and developed lakes. Established developed lakes include those lakes that fall within the boundaries of an established sanitary sewer district. It should be noted however that only the Lake Cochrane Sanitary Sewer District currently operates a centralized sanitary sewer system.

It is unlikely that much of the established developed areas of Bemis and Lake Cochrane will experience major changes during the planning period. However, redevelopment efforts that improve upon the existing land uses in the older, established areas of the community/lake are encouraged. These efforts may come in the form of rehabilitating existing structures through modernization or from the demolition, removal, and replacement of obsolete structures. It should be stressed that all redevelopment efforts within established areas of the community/lakes comply with existing adjacent land uses and/or recommendations of the Planning Commission.

In selecting potential sites for future development, goals and objectives relating to general land use, residential land use, transportation and public utilities were considered. Locational factors used in determining these sites considered issues of compatible adjacent land uses, existing infrastructure such as transportation (location of paved roads, traffic access and safety), public utilities topics (availability of water and sanitary sewer, topography and drainage), and cost efficiency.

Future Residential

Similar to existing residential areas, the main goal when developing areas for future residential use is to create an area, which provides a strong, cohesive environment that does not intrude upon or mix with intensive agricultural, industrial or commercial uses. To maintain the lowest public expenditures necessary for developing future residential areas, it is prudent to incorporate relevant street, park, and general utility development plans.

As previously stated, the category of multiple-family exists within the Residential Land Use classification. The multiple-family use classification provides areas within the community/developed lake for medium to high-density neighborhood development. Housing types in the multiple-family use classification would include duplexes, townhouses, condominiums and apartments. Type I manufactured homes on permanent foundations, duplexes and similar multiple units may be placed in most neighborhoods with single family residences since the overall appearance and density of the neighborhood is neither effected nor exceeded. Type II manufactured homes and manufactured home parks will be handled on a case-by-case basis.

Future Commercial/Industrial

Locational factors to consider when planning for commercial and industrial land use development include compatible adjacent land uses, existing infrastructure, topography/drainage, traffic (congestion, access, parking, safety), and in addition - type of commercial/industrial activity (whether or not the proposed activity is agriculturally versus non-agriculturally related).

Future Open Space

Open space is a desired amenity of the urban environment. Circumstances and conditions under which open space areas should be set aside relate largely to a community's commitment for improving the visual appearance of the area. As a minimum, aquifers, wetlands, flood plains and floodway, and land areas with twenty (20) percent grade or greater should be protected from extensive urban development, if possible. In addition, there are other areas within and around the area that have a scenic value that enhances the quality of life. These areas should be identified and protected whenever possible. Further, roadway and utility improvements, as well as buildings and signage should be controlled so that they are sensitive to adjacent scenic areas. With appropriate planning and coordination of adjacent development projects, a system of interconnected belts of permanent open space can be created to provide a haven for wildlife, enhance community views and vistas or simply provide a pleasant contrast to the urban scene.

Future Agricultural

Land areas not expected to be developed within the 15-year planning period have been designated as agricultural in the future land use plan. No attempt has been made to project which, if any, of these areas should be permanently maintained for agricultural purposes. The implementation of this plan through zoning and subdivision regulations will help minimize the disturbance of agricultural land and promote a smooth transition to other uses.

Bemis

Future Land Use

Presently, there is little indication that Bemis will experience much development pressure. However the following recommendations should assist in the planning for development.

Recommendations:

Those portions of Bemis which are presently developed or have the immediate potential to develop are considered Areas of Development Transition. Development should be encouraged in these areas prior to entering periphery areas of the community for development.

It should be noted that future development areas within Bemis might need to acquire right-of-way for the necessary construction of streets, water, and sanitary sewer services prior to future development.

Presently, there is little indication for the need of additional designated lands for utility and public/quasi-public uses.

Lake Cochrane

Future Land Use

Recommendations:

It is expected that additional residential development will occur around Lake Cochrane in areas that can be adequately served by sanitary sewer.

Those portions of Lake Cochrane which are presently developed or have the immediate potential to develop are considered Areas of Development Advantage. This area is further defined by the boundaries of the Lake Cochrane Sanitary Sewer District. Future Development of the Lake will be limited by the availability of a centralized sanitary sewer system or improved individual septic systems. Development transition areas have been identified adjacent to the Area of Development Advantage.

In order to preserve the water quality of the lake, it is recommended that keen oversight be utilized in future urban and rural development decisions. The goals and policies regarding Areas of Development Advantage and Transition should be utilized when addressing development issues in the above areas.

LAND USE PLANNING POLICIES

The purpose of this Comprehensive Land Use Plan is to outline what is to be produced or accomplished in the County relative to the physical environment. Deuel County's Comprehensive Land Use Plan shall consist of land use planning policies and a future land use map. The land use planning policies contain numerous goals and policies. These policies and maps should all be used collectively as they set a comprehensive framework for a review and evaluation process upon which plans, developments, and programs can be formulated and instituted.

The primary objective of this study is to identify where and how this growth can best take place. This required the documentation of existing land uses and the identification of opportunities and constraints that will affect future land development.

The development of land use planning policies was required to establish the basis on which future development would take place. By integrating the county's vision and growth objectives with the available resources, a preferred direction and pattern for future development was determined, and thus, became the basis for the recommendations and future land use plan as presented in this report.

Generally, a comprehensive land use plan will utilize written policies to paint a picture of how a county should look in 10 to 15 years. An initial step in the development of a comprehensive plan is that of establishing land use planning policies. The following are the major goals, objectives and policies, which have an application to the development of the comprehensive plan for Deuel County.

DEFINITIONS

This section contains the development "vision" for Deuel County. It is expressed through goals and policies. A definition for each term is presented below.

Goal - A general statement that reflects ideals, ambitions or hopes.

Policy - A statement concerning a specific, measurable target or purpose or an action or position that will be taken to achieve the goal.

The Goals and Policies spell out various roles and responsibilities for Deuel County. To better understand the county's role for each Goal and Policy, a number of the key terms are defined below.

Create - Bring about the desired goal, usually with county staff and Planning Commission involved in all levels from planning to implementation.

Continue - Follow past and present procedures to maintain desired goal, usually from county staff and Planning Commission involved in all levels from planning to implementation.

Encourage - Foster the desired goal through county policies.

Endorse - Subscribe to the desired goal by supportive county policies.

Enhance - Improve current goal to a desired state through the use of policies and county staff and Planning Commission at all levels of planning.

Identify - Catalog and confirm resource or desired item(s) through the use of county staff and actions.

Maintain - Keep in good condition the desired state of affairs through the use of county policies, staff and Planning Commission.

- Recognize** - Acknowledge the identified state of affairs and take actions or implement policies to preserve or change them.
- Prevent** - Stop described event through the use of appropriate county policies, staff or Planning Commission action.
- Promote** - Advance the desired state through the use of county policies and staff/Planning Commission activity at all levels of planning.
- Protect** - Guard against a deterioration of the desired state through the use of County policies, staff and Planning Commission.
- Provide** - Take the lead role in supplying the needed financial and staff support to achieve the desired goal.
- Strengthen** - Improve and reinforce the desired goal through the use of county policies, staff and financial assistance, if needed.
- Support** - Supply the needed staff support, policies, etc. at all levels to achieve the desired goal.
- Sustain** - Uphold the desired state through county policies and staff/Planning Commission action to achieve desired goal.
- Work** - Cooperate and act in a manner through the use of county staff/Planning Commission actions, policies, etc. to create the desired goal.

The goals and policies spell out various roles and responsibilities for Deuel County. The following statements will direct the implementation of the Comprehensive Land Use Plan. They are being presented under the following nine (9) headings:

- Fundamental Goals
- Areas of Development Stability
- Areas of Development Advantage
- Areas of Development Transition
- Areas of Development Limitations
- Environmental Policies
- Residential Development
- Commercial and Industrial Development
- Management and Coordination

FUNDAMENTAL GOALS

- To provide for orderly, efficient land development within the unincorporated areas of Deuel County.

- To manage growth within the framework of the Deuel County Comprehensive Land Use Plan and other municipal comprehensive plans.
- To maintain a distinction between rural areas and municipalities.
- To provide a transportation system that promotes the safe and efficient movement of people, goods, and services.
- To achieve the maximum efficiency in the provision of public services and facilities.
- To preserve and enhance environmental, historical, and cultural resources.
- To promote compatible development in the rural area.
- To support and encourage the growth of the county's economic base and promote the expansion of job opportunities.
- To maintain a viable agricultural economy and preserve the rural quality of life.
- To protect and enhance property values and tax base of Deuel County.
- Promote only responsible residential, commercial and industrial development based upon sound siting criteria.

AREAS OF DEVELOPMENT STABILITY

This category represents the bulk of agricultural land (cropland, rangeland, and pasture) and sites that are not expected to experience any anticipated change during the planning period. This land use category should be regulated to prevent the encroachment by urban uses until such time development meets the established land use planning policies. There may be an occasional residence, or an agricultural-oriented commercial/industrial venture constructed, but the primary use or focus should remain agricultural. Major, land intensive projects such as a landfill, sewer lagoon, aggregate mining operation, or concentrated animal feeding operation may dramatically alter the area and or adjacent areas. However, these particular uses would involve mandatory public input, a comprehensive site plan review, and environmental assessment procedures.

Areas identified for development stability or agricultural uses shall be managed in such a way as to promote these uses and prevent premature intensification of other land uses. Land in this area shall be regulated so as to limit non-farm residential and urban density development through the use of minimum lot sizes, setbacks, and other regulations.

It should be noted that if agricultural lands are not protected through land use controls their optimum utilization will diminish in disproportion to the amount of area reverting to urban use. Thus, much of the remaining economic potential of the land, in terms of agricultural production, is lost.

Agricultural Preservation Policies

- The premature development of agricultural land should be discouraged.
- Discourage development patterns that require public improvements financed in part by the farming community but which are not necessary to support agriculture.
- Best management land practices must be employed to protect valuable agricultural land, soils, water supplies, as well as other amenities.
- Preserve agricultural lands and protect the rural area from uses which interfere with and are not compatible with general farming practices.
- Recognize and improve upon regulations which have a negative impact on farming operations.
- Promote development patterns which will avoid producing inflated agricultural land values.
- When considering future land use decisions, the preservation of agricultural land should be of significance.

Miscellaneous Policies

- Areas designated appropriate for development stability will not experience public water and sewer extensions.
- Limit rural developments to densities that do not exceed current service levels.
- Discourage the random and haphazard siting of commercial and industrial uses within the rural area where such uses do not support the agricultural industry.
- Protect construction aggregate resources by restricting adjacent land uses to those that are compatible with extraction operations. Require operators to meet developmental and operational standards (such as road haul agreements).
- Regulate concentrated animal feeding, processing and related operations to protect environmental quality and minimize conflicts with existing and future development areas.

- In order to protect the aquifer, lakes and wetlands, establish and maintain an inspection program to ensure proper installation and maintenance of on-site wastewater disposal systems.
- Only future development (residential, commercial, industrial, etc.) which cannot be accommodated in a community (incorporated or unincorporated) or in a Lake Park District, or sanitary sewer district should be encouraged in the unincorporated areas of the county that have appropriate infrastructure – roads, water sewer.
- Deuel County encourages the identification and retention of historic and cultural resources – i.e. historic farms, cemeteries, etc.

AREAS OF DEVELOPMENT ADVANTAGE

These areas have qualities that encourage development in the near future. These areas are located within and immediately adjacent to municipalities and lakes with adequate infrastructure in place. There is often access to transportation routes and the property is served or could be economically served with public services – water, and sewer.

Policies

- Concentrate future non-farm growth in or contiguous to municipalities where public infrastructure can be economically provided. Maximize the utilization and efficiency of existing public facilities.
- Discourage premature development in municipal/developed lake fringe areas. Premature development is defined as development that could limit future land use options and opportunities to locate and finance public infrastructure facilities.
- Seek input of municipal officials in the review of development proposals which could potentially impact future municipal expansion and public infrastructure projects.
- Encourage annexation of potential development sites within municipal fringe areas before development plans are approved.
- Recognize municipal growth plans when considering future development proposals.
- Preserve the identity of existing communities by discouraging sprawl and leapfrog development.
- Only the subdivision of land, adjacent to areas of development advantage which would enhance future municipal/established developed lake development is encouraged.

AREAS OF DEVELOPMENT TRANSITION

These areas are located near incorporated and unincorporated communities and/or developed lakes. They have been experiencing requests for residential or commercial/industrial development. The current land use is generally agriculture or open space. These areas could be potential conflict zones in terms of availability of public infrastructure, incompatible uses, and municipal/county interests.

Policies

- Uses and activities, when compatible, shall be concentrated and clustered into functionality related areas or centers.
- Development will not be permitted in areas, without available infrastructure – i.e. paved roads, public water, and sewer services and such development shall include connection to said municipal/sanitary sewer district/road district infrastructure.
- In areas of development transition, leapfrog development on land which cannot be economically provided with public services and facilities is discouraged.
- Cooperation and coordination in land use planning should be promoted between municipal areas, sanitary sewer districts and the County in the development of land and utilities in the extraterritorial jurisdictional area outside of a community's corporate limits.
- In areas of development transition, annexation of the land adjacent to the municipal corporate limits and sanitary sewer districts is encouraged prior to development.
- In areas of development transition, only the subdivision of land, adjacent to the city limits, which would enhance future city development, is encouraged.
- Require county-approved developments within the areas of development transition to require utilities compatible with municipal or sanitary sewer district requirements.
- Promote optimum land use relationships and minimize land use conflicts.
- Promote cooperative efforts with the municipalities in dealing with development issues in municipal/developed lake fringe areas.
- Encourage new residential construction to locate on previously platted lots and other parcels which already qualify as building sites.
- Limit rural densities adjacent to communities and sanitary sewer districts so that current service levels are not exceeded, thereby avoiding the creation of new special purpose districts (i.e. sanitary, water and road districts).

- Contain urban expansion to areas which are adjacent to incorporated communities and sanitary sewer districts.
- Future community growth should occur in areas contiguous to existing development to allow economical expansion of municipal facilities and services.
- Rural land will be converted to urban development in accordance with the Comprehensive Plan and in such a way as to promote economic and orderly extension of the urban services.
- In many cases, because of the scattered locations of land developments, extension of municipal and sanitary sewer district utilities may not be a practical matter. It is therefore, important that the various governing jurisdictions encourage development of land parcels contiguous to existing developments in order to prevent the creation of large areas of passed land.
- Regarding the development of property adjacent to lakes located within the County, the Planning Commission realize that these lands are also areas of development transition and will require extensive review prior to the approval of new developments and/or the expansion of existing developments. Policies or issues to consider in the development of lake property include:
 - In areas of development transition adjacent to lakes, the subdivision and development of land will not be permitted without approved water and sanitary sewer services.
 - The development and maintenance of interior streets shall be the responsibility of the developer or homeowners association.
 - The Planning Commission shall consider the impact upon county and township roads servicing the proposed lake developments.
 - A piecemeal approach to the development of lake property is not encouraged. A comprehensive design and site review shall be required.
 - The Planning Commission encourages the development of public and/or private parks/access areas adjacent to lakes after a comprehensive site review.

AREAS OF DEVELOPMENT LIMITATION

These areas have characteristics that would either prevent them from being developed or would result in excessive construction costs. Regular flooding, depth to the aquifer, steep slopes, fragile soils, proximity to certain facilities (gravel pits, lagoons, landfills, concentrated animal feeding operations, etc.) would all be limiting factors. Limited access to transportation routes and public facilities further limit the areas potential for development.

Development Constraints in the Unincorporated Areas of the County

The following types of development constraints have been identified and will be accommodated in the future land use plan.

Floodplain - This development constraint category has been designated from flood plain studies on land experiencing flooding, standing water, or extremely high water table conditions. The land areas vary in the intensity of problem water conditions, but special consideration should be given to preventing development to occur unless coordinated precautionary measures are instituted.

Shallow aquifer - This development constraint category has been designated from groundwater shallow aquifer studies. Special consideration should be given to preventing types of development, which have the potential to pollute the aquifer (concentration of residences, chemical storage, concentrated animal feeding operations, certain commercial and industrial uses, etc.) unless coordinated precautionary measures are instituted.

Soils - This development constraint category has been designated from Natural Resource Conservation Service soil studies. These studies provide information on the suitability of the general soil associations to support certain types of land use activities, such as septic tank absorption fields, sewage lagoons, shallow excavations, dwellings with basements, sanitary landfill, roads and streets. The Zoning Officer and Planning Commission will utilize the information from these studies in making decisions relating to the development of specific sites. Special consideration should be given to preventing development to occur in areas where soil types are not conducive to associated development requests.

Natural Resources - This development constraint category has been designated from Natural Resource Conservation Service and Corps of Engineer's wetland inventory studies. The land areas vary from bodies of water to game propagation areas. Special consideration should be given to preventing development to occur unless coordinated precautionary measures are instituted.

Policies

- Development of this area shall be compatible with features of the natural environment and accommodated without destroying environmental features and natural amenities. At a minimum, the following areas shall be considered Areas of Development Limitation:
 - Shallow Aquifer - Zone A and B
 - Soils that cannot support certain land use activities –these are defined within the NRCS Deuel County Soil Survey
 - Identified Flood Plains
 - Identified Wetlands

- The following physical features may be preserved in a natural state and properly maintained: Low-wet areas, lakes and streams, drainageways, wildlife areas, and tree-cover.
- Zoning and subdivision regulations shall require protection of drainage ways, wetlands, water courses, water bodies, soils, and aquifer; and shall require easements for such and make them integral parts of land development site plans.

ENVIRONMENTAL POLICIES

It is the goal of Deuel County to avoid development in areas that:

- 1. Are environmentally fragile or unique;**
- 2. Present health and safety hazards, as defined in County, State, and Federal statutes, to county residents.**

Policy 1. Soil characteristics, depth to aquifer, topography and other construction limitations should be carefully considered in project site planning.

Policy 1 - Supporting Policies

- County officials shall be provided assurances of environmental protection measures, prior to the approval of any required permit or legal document, in areas having obvious or documented development limitations.
- The development of stream corridors, the aquifer, natural floodplains and drainageways and other significant natural areas that are unsuitable for construction shall be precluded.
- County Officials shall strive to protect surface water and groundwater, especially in those areas that are designated wellhead and shallow aquifer protection areas.
- Soil erosion and downstream sedimentation shall be minimized through appropriate design.
- Prior to development in unsewered areas, soils shall be tested and analyzed for absorption capability and no building permits allowed unless tests determine site meets established sanitary standards.
- Those areas identified as floodplain, groundwater aquifer, natural resource shall be managed in such a way as to prevent premature development of other land uses.
- Natural drainage courses should be protected in their capacities to carry runoff water.

Policy 2. Development shall be limited within areas that are known to experience regular and/or severe flooding.

Policy 2 - Supporting Policies

- Citizens seeking county permission for development within a known flood hazard area shall provide documentation that their project will not present a risk to public health and safety.
- Proposed developments in flood hazard areas shall comply with the National Flood Insurance Program and associated regulatory agencies.

Policy 3. Drainage, air quality, noise, and other environmental factors will be considered for impacts on neighboring property.

Policy 3 - Supporting Policies

- The preservation of agricultural production practices should be a priority consideration in land use decisions.
- In situations where permission is needed and the situation warrants an evaluation, the county will rely upon both technical sources and public input in making decisions.

RESIDENTIAL DEVELOPMENT

Residential Development Goal

In order to maintain an agriculturally based community where conflicts with agricultural practices are reduced and in order to maintain the quality of the lakes within the county so they are viable, it is the goal of Deuel County to encourage the expansion of residential development only in existing incorporated communities, unincorporated villages, sanitary sewer districts and in those rural areas in which the residential development is supportive of agricultural operations.

Policies

- Non-farm residential development should take place at locations that minimize public infrastructure costs and potential agricultural/residential conflicts, and promote safety.
- Restrict the density of residential uses and direct higher development densities to the municipalities (incorporated and unincorporated) and sanitary sewer districts.
- Preserve and protect the agricultural productivity of rural land by restricting the development of non-farm residential sites.

- Scattered non-farm residential developments shall be discouraged.
- Pedestrian and traffic safety, infrastructure capacities, environmental impacts, and adjacent land uses should be considered in evaluating residential development proposals.
- Public services and facilities shall be provided at a level sufficient to meet the needs of a low-density agricultural population only.
- Within the framework of zoning when small lot developments are proposed, every effort should be made to cluster residential uses and limit driveway approaches onto arterial and collector roads.

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

It is the goal of Deuel County to encourage the continuation of agricultural production, while promoting cost effective, value added agricultural processing efforts.

Policies

- Promotion or encouragement should be given to agricultural production and processing activities that benefit the agriculture industry.
- County regulations should protect the property rights and promote the economic opportunities of farm operators.
- Commercial and industrial development should take advantage of existing utility networks and transportation systems.
- The locations, capacities and relationships of public infrastructure systems should be reviewed as part of development proposals requiring county permission.
- The Deuel County Planning Commission should encourage the redevelopment and reuse of existing business locations.
- Commercial and industrial development, such as value added Ag industries should be compatible with adjacent land uses.
- Commercial and Industrial development projects should take place in designated industrial parks or already developed highway locations.
- Commercial and Industrial development projects which potentially pose a threat to the environment shall be precluded from siting in Areas of Development Limitation

- Commercial and industrial developments which can be accommodated in an incorporated or unincorporated municipality shall be discouraged in the unincorporated areas of the county.
- Municipal commercial districts should be protected and should not be diluted by a scattered pattern of commercial uses developed at random throughout the unincorporated areas of the county.
- Developers should be encouraged to reserve "buffer" areas between different land uses to minimize the potential for conflict.
- Discourage commercial and industrial development in the rural area unless the uses are directly supportive of agricultural operations.
- Discourage strip development along transportation arteries, particularly those which serve as gateways to the municipalities.
- Prior to construction, each commercial/industrial development project should be subject to a specific site design, review and approval process. The arrangement of the on-site buildings should provide for efficient and viable long-term usage. Further, appropriately locating and designing the development's service areas should discourage disruption to on-site circulation or adjacent land use. Vehicular access to highway commercial and industrial areas should be sufficiently set back from intersecting streets with appropriate sight distance maintained at all entry points. Also, to enhance vehicular traffic flow strict controls affecting the number and location of accesses to commercial/ industrial areas should be established.

MANAGEMENT AND COORDINATION

It is the goal of Deuel County to efficiently and effectively manage and coordinate land use plans and implementation tools.

- Coordination should take place between local, state and regional entities on development issues.
- Employ an area-wide approach in planning utility and drainage systems.
- Citizen participation should be a major component of the development process.
- Ample opportunity will be provided for direct public comment, in every appropriate situation.
- Planning and other development documents will be written using plain language, with an absence of jargon or specialized terminology.

- Flexibility within the planning and zoning process will be retained so as to readily cope with changing social and economic conditions.
- All extensive land development proposals should be guided by a plan for site development. Such plans would determine the optimum intensity of the use for land and identify corresponding densities of land occupancy so that proper precautions could be taken to assure adequate utilities and environmental concerns.
- It is the intent of Deuel County to maintain a consistent high level of inspection performance.

LAND USE LOCATION AND DESIGN CRITERIA

The following are specific location and design criteria that should be considered when siting an associated development request in the rural area of the county.

RESIDENTIAL

- In Areas of Development Stability – Rural residential density of one eligible building site with a minimum lot size of three (3) acres.
- Discourage non-farm residential development which access township/county gravel roads; and
- Discourage land splits which erode the integrity of agricultural use areas.

COMMERCIAL/INDUSTRIAL

- Adjacent to county and state highways
- Rail access for industrial uses
- Controlled access onto major highways
- Adequate buffering from neighboring uses
- Hard surfaced driveways and parking areas

SPECIAL USES

Intensive Agricultural Uses-Includes feedlots/concentrated animal feeding operations

- Environmental impacts – aquifer protection, runoff, land application of animal waste
- Adequate separation from residences, churches, institutional uses, parks
- Discourage the construction of Class A and B concentrated animal feeding operations in the floodplain, or over shallow aquifers
- Compliance with requirements for land application of animal wastes and for odor minimization
- Construction and land application to prevent runoff of animal wastes

MINING

- Developmental criteria based on type of extraction, intensity and duration of use
- Appropriate separation from existing residences
- Adjacent to hard surfaced roads or upgrade existing roads used for hauling
- Visual considerations – Berms and Natural Screening
- Environmental impacts – noise, dust, hydrology
- Reclamation as an ongoing process

IMPLEMENTATION

The comprehensive land use plan for Deuel County has been designed to provide guidance for future growth for approximately fifteen (15) years. With any plan of this nature, it needs to be reviewed periodically to ensure conditions and circumstances affecting development are occurring as originally anticipated. The Deuel County Planning Commission recommends that this document is reviewed on an annual basis and that a comprehensive update to this plan occur in ten (10) years or as deemed necessary by the Deuel County Planning Commission.

It should be noted that the completion of a comprehensive land use plan is only the first step in the implementation of a planning program. The plan itself is merely a guide for achieving an orderly and attractive county. The County will need to take a number of steps in order for the plan to be successful. The first is the identification and prioritization of public improvements required to support and serve the future development areas. Second, is the adoption or modification of applicable implementation tools, such as regulatory ordinances to ensure that the objectives embodied in the plan are adhered to as future parcels and tracts of land are developed. These tools, which are discussed in the following section, may include zoning and subdivision ordinances, building codes, etc. Finally, the Deuel County Planning Commission should continue to review all matters affecting physical development and remain active in promoting the plan with other planning agencies in the area.

ZONING ORDINANCE

The basic function of the zoning ordinance is to carry out the goals, objectives, and policies of the comprehensive land use plan. The zoning ordinance, which reflects these long-range goals, is the primary regulatory tool utilized by the county for various land use activities in the rural unincorporated area.

Since the inception of zoning, the county has amended the ordinance as needed with a comprehensive update in 2004. It is recommended that to insure the policies embodied within this plan are implemented, the zoning ordinance should be reviewed and appropriate changes incorporated.

ZONING TECHNIQUES

Density Zoning

Deuel County utilizes a three (3) acre minimum lot size with density requirement in the Agricultural District. Based upon existing development patterns and levels, the Planning Commission feels that the existing density requirement is adequate for the county. However, the future may require the county to consider increasing the minimum lot requirement. The reasons for increasing the minimum lot size include but are not limited to the following:

- Pollution of groundwater/aquifers from septic tanks;
 - Deuel County has instituted an aquifer protection ordinance. There are shallow aquifers dispersed throughout the county. Concentrated, small lot developments have the potential to pollute the aquifer directly or from run-off situations.
 - Communities have invested hundreds of thousands of dollars in sewage treatment facilities. These facilities generally have excess capacity which could be utilized, not only in the City of Clear Lake, but also in the smaller communities as well.
- Demand for increased services – road improvements, snow removal – beyond what farmers and township officials need or want to pay for;
 - Rural subdivisions or strip developments often demand improvements or increased services over and above what is normally required by the farming community. These requirements often come in the form of improved road surfacing or maintenance and snow removal requirements. At a time when residents of the county are requesting reduced property taxes and in some instances, reduced services, the change from large lot zoning to small lot zoning would only tend to increase the demand for tax dollars.
- Conflict between non-farm residential development and farming operations;
 - Farming operations continue to change over time. Farming today needs to be classified as heavy industry. Heavy industry and residential uses are generally not compatible. It used to be that a livestock operation would be comprised of one hundred (100) head of stock cows. Today many feedlots must include a thousand head of cattle to be economically viable. Crop farming is not generally compatible with residential development. Potential conflicts here include herbicide drift, blowing dirt, and noise. Obviously, the spreading of animal waste and odors from livestock operations has been, and will continue to be, a major problem.

- Problems relating to strip development along county and state highways; and
 - Small lot developments along county and state highways pose a different type of problem. A strip development along these highways with multiple driveways reduces the function of the highway and also causes a traffic problem. School bus stops along these strip developments not only cause potential for accidents, but also reduce the flow of traffic.

- Removal of farmland from agricultural use.
 - The end result of small lot development in the established rural agricultural area is the removal of prime farmland from its “highest and best” use.

The practice of low-density, large-lot zoning is an effective tool which Deuel County may need to utilize in the future to reduce potential conflict between agricultural and non-agricultural uses. Possible benefits of low-density, large-lot zoning include the reduction of the need to have increased level of services and the preservation of farmland for agricultural uses. Obviously, at this time, there is a demand for small lot development in rural areas. However, this demand for rural-type living should be encouraged to develop in and adjacent to communities which have the ability to provide the necessary services. Small lot zoning with a specific density may be appropriate in identified areas within this land use plan.

Agriculture Preservation

Farmland protection has come to be recognized as a key ingredient in the overall effort to manage growth. Land use planning and regulatory control's primary purpose is to separate conflicting land uses. Deuel County has and will continue to use zoning to promote the continuation of agricultural activities in the rural area and to minimize residential land uses that are incompatible with farming.

In the future, the county should assist the agricultural sector in exploring methods for preserving and protecting agricultural resources. These methods may include the development of nuisance disclaimers, urban growth boundaries, exclusive agricultural zones and right-to-farm ordinances.

JOINT JURISDICTIONAL (EXTRATERRITORIAL ZONING)

The County recognizes the rights of and obligations of municipalities to plan for their individual development. South Dakota Codified Laws enable municipalities to adopt zoning regulations for areas within their corporate limits and, with county approval; they may exercise zoning powers in areas up to six (6) miles outside of their municipal boundaries. For municipalities to exercise these extraterritorial zoning powers, the county and city must adopt identical zoning ordinances. Presently, there are no areas of joint jurisdictional zoning within the County.

If communities do not want to go through the formalized relations of joint jurisdictional zoning, another approach is to have effective communication between the governing bodies. Coordination between Deuel County and the incorporated municipalities will be essential if the goals, objectives, policies, and recommendations within this plan are to be realized. Without a coordinated approach, urban/rural sprawl and scattered development could simply push the problem out beyond the extraterritorial jurisdiction. A high priority should, therefore, be placed on resolving any policy conflicts which might exist between the County and the incorporated communities.

SUBDIVISION ORDINANCE

The Subdivision Ordinance constitutes another tool that the county may utilize in carrying out the objectives of the comprehensive land use plan.

Subdivision regulations are enforceable by communities in the county that have adopted comprehensive land use plans and a major street plan, filed with the County Register of Deeds. The reason for this joint authority is that if development is to occur within these prescribed areas, it should conform to development standards as required within the community. This is because these areas are those most susceptible to annexation; therefore, they will become a part of the same municipal structure which determined the physical standards under which they are constructed. When a community exercises platting control over rural property, the statutes require plats to be submitted to the County Planning Commission for review and recommendation. Communities with extraterritorial platting authority in Deuel County include – Clear Lake and Toronto.

Because municipal subdivision regulations may require unrealistic or unreasonable development requirements when applied to the rural areas of the county, the county should work with those communities who are or will be involved in platting outside municipal borders to ensure that subdivision regulations take into consideration the rural character of the property.

It is recommended that to insure the policies embodied within this plan are implemented, a subdivision ordinance should be developed.

BUILDING CODE

A building code establishes minimum construction standards for new structures as well as for remodeling and repair work performed on existing buildings. These standards are intended to safeguard life, health, property, and the public welfare by regulating and controlling design, construction, quality of materials, and occupancy of structures.

Presently Deuel County does not maintain a building inspection program utilizing a nationally recognized building code. It is recommended that when determined to be necessary, the county pursue the development of a building code, which would ensure that construction meets minimum structural and life requirements.

SITE DEVELOPMENT REVIEW

Deuel County's present ordinances utilize site plan and special exception processes for development review purposes. It is recommended that these practices continue and be further refined to address specific design requirements such as screening, setbacks, landscaping, site configuration, access etc. These procedures will accelerate the administrative review process and expedite the Planning Commission/Board of Adjustment decision-making process. In addition it is recommended that Township Boards and municipalities be acknowledged as required participants in the discussions regarding special exception and variance requests within their respective areas of planning authority and township boundaries.

GIS (GEOGRAPHIC INFORMATION SYSTEMS)

GIS is a computer technology used to capture, manage, store, manipulate, analyze and display spatial information.

GIS technology provides a valuable tool to assist in implementing the comprehensive land use plan. Much of the spatial data information gathered for this plan has been entered into a GIS, including, existing land use, flood plains, aquifers, water resources, and transportation systems.

GIS involves spacial operations such as the linking of data from different sets, which is stored in a digital form. An infinite variety of analyses could be conducted on the data. Examples may include:

- What is at a certain location?
- Where do certain conditions exist?
- What has changed over time?
- What spatial patterns exist with the data?
- What if..?

Modeling can be performed to determine the impact of the location of a new concentrated animal feeding operation may have on the aquifer. The possibilities are only constrained by the limits of the database. It is recommended that GIS technology be implemented in order to assist in the implementation of the Comprehensive Land Use Plan as well as to support other county departments.