COMPREHENSIVE DEVELOPMENT PLAN

HITCHCOCK COUNTY, AND STRATTON, NEBRASKA

ADOPTED 2001

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LOCATION

Hitchcock County is located in the southwest region of the State of Nebraska. Hitchcock County is adjacent to Rawlins County, Kansas to the south, Decatur County, Kansas to the southeast, Dundy County to the west, Hayes County to the north, Cheyenne County, Kansas to the southwest, Chase County to the northwest, and Red Willow County to the east. The county is twenty-four miles in extent from north to south, and thirty miles from east to west. The Village of Trenton is the County seat and is located in the approximate center of the County. Stratton is located in the western portion of Hitchcock County along US Highway 34, approximately ~~20~~ 12 miles west of Trenton. The City of McCook, Red Willow County is located approximately 25 miles to the east of the Village of Trenton. Located in Hitchcock County is the Republican Valley, which contains the Republican River.

The Republican River enters the county from the west about ten miles north of its southern boundary, and flows across the county nearly in an easterly direction, and leaves it about six miles further to the north. This River has several tributaries on both the north and south side. The soil in all parts of the county is deep and fertile, capable with a sufficient amount of moisture of producing excellent crops of all kinds of grains and vegetables. The bluffs or hills bordering the streams afford excellent pastures for cattle, and has a rich growth of grass. In the winter, the bluffs afford shelter from the winds and occasional storms for cattle. The uplands are covered with buffalo grass. Hitchcock County is a portion of the great natural pasture of Western Nebraska. The Burlington Northern Railroad serves parts of the County. US Highway 34 runs east and west approximately through the center of the county. State Highway 25 runs north and south and US Highway 6 runs northeast and then turns into State Highway 17 which goes north and south in direction.

CLIMATE

The climate in Hitchcock County is one of limited precipitation, low humidity, frequent wind shifts and frequent sharp changes in temperature. Winters can be cold in Hitchcock County due to frequent incursions of cold continental air. Summers can be hot with temperatures above 100 degrees F. These temperatures are not uncommon from June through August. Snowfall is fairly frequently in winter, but the snow cover is usually not continuous. Temperatures below zero occur regularly in the winter. Rainfall is heaviest in late spring through September. As a result of the upward slope to the west for the county, prolonged easterly winds encourage fog and damp weather. Downslope winds from the west bring low humidity and clear skies. The elevation and frequently low humidity combine to cause a wide range of temperatures between night and day, about 30 degrees F. Because of shifts in wind direction, there is a considerable variation in annual precipitation. Winter snows are light and dry; often accompanied by

strong northerly winds. Snowfall usually increases throughout late winter and peaks out in March. The average last freeze in the spring ranges from late April to early May.

HISTORY OF HITCHCOCK COUNTY

Hitchcock County was settled in 1873, when George C. Gessleman staked claims along Blackwood Creek to the east and north of the present Culbertson. Prior to 1869, the Republican Valley was a major retreat for the Sioux and Cheyenne Indians. The valley was in the heart of buffalo range and was one of the greatest hunting grounds of the West. In the summer of 1869, at the Battle of Summit Springs, near present Sterling, Colorado, General Eugene A. Carr and his Republican River Expedition defeated the Indians under Chief Tall Bull, which virtually cleared the Republican for settlement. The first white settlers in Hitchcock County were men staking claims along Blackwood Creek. Hitchcock County was established in 1873, and was named after Phineas W. Hitchcock, who was a United States Senator for Nebraska

Construction of the first railroad, the Burlington and Missouri Railroad Company, began in Hitchcock County in 1881 when a route was completed to Culbertson. By 1882, the railroad route reached as far as Akron, Colorado. Culbertson was the original county seat but was moved to Trenton in 1896. In 1885, the railroads sent Anselmo Smith to survey and plat a new town; thus Trenton was placed on the map. The Lincoln Land Company established Trenton, in June of 1885, named after Trenton, New Jersey. The original area where Trenton was established is now known as the Pow-Wow grounds, where Indians held dances from 1923 to 1956. The original rail line was closed in 1949 due to Trenton Dam that was built to help control flooding.

According to the 1990 Census, the population of Hitchcock County was 3,750. Trenton, which is near the center of the County, had a population of 580. Other communities in the County are Stratton, Culbertson and Palisade. In the 1880s, Hitchcock County was a cattleman's paradise. When barbed wire made it's way to the County, homesteaders fenced their land and began planting grain. In 1893, farming took a turn for the worse due to drought and grasshoppers. The availability of irrigation assured people of this region that farming was still a viable business. Only when the railroad went through this area did the population begin to increase because the people had a way to export and import their goods. By 1985 there were 546 oil wells producing large quantities of oil. Agriculture continues to be the primary industry for this County; cattle farming as well as crop production are large parts of this agricultural industry.

HISTORY OF STRATTON

Stratton is located in the western portion of Hitchcock County. Cattlemen, cowboys and homesteaders settled this area, in western Hitchcock County. Stratton was initially started in 1879 and originally named Frontier. A log cabin, built by C.V. Bailey, marked the first establishment of this location. Mail was held

for the Texas Trail cowboys here and general merchandise was handled at the cabin as well. In 1881 the name was changed to Stratton, in honor of one of the first settlers, Mary Stratton, who traded her 80 acre "squatter's rights" claim to the Chicago, Burlington and Quincy Railroad. The railroad reached the village in 1882 as a stop to Denver. Many businesses settled around the depot; thus the beginnings of a community. In 1888, Stratton was incorporated and became a center for many services because of the railroad mainline through southwestern Nebraska. By 1985 there were 380 producing oil wells in a ten-mile radius of Stratton.

THE PURPOSE OF COMPREHENSIVE PLANNING

The Hitchcock County Comprehensive Plan is designed to promote orderly growth and development for the County and its communities. The Comprehensive Plan will provide policy guidelines to enable citizens and elected officials to make informed decisions about the future of the community.

The Plan acts as a tool to "Develop
a road map that guides the community
through change"

The Comprehensive Plan will provide a guideline for the location of future developments within the planning jurisdiction of Hitchcock County. The Comprehensive Plan is intended to encourage a strong economic base for their community, so the goals of the community are achieved. Stratton chose to participate with the County to complete a Comprehensive Plan. The other communities were offered the same services but were already under contract with other entities.

The Plan will assist Hitchcock County and Stratton in evaluating the impacts of development (i.e. economic, social, fiscal, service and amenity provision, health, safety and welfare) and encourage appropriate land uses throughout the jurisdictional area of the County. The objective of planning is to provide a framework for guiding the community—whether a village, city, county, toward orderly growth and development. The Plan assists the County and Village in balancing the physical, social, economic, and aesthetic features as it responds to private sector interests.

Planned growth will make Hitchcock County and Stratton more effective in serving residents, more efficient in using resources, and able to meet the standard of living and quality of life every individual desires.

THE PLANNING PROCESS

Planning begins with the collection of data in order to provide a snapshot of the past and present community conditions. Analyses of data provide the basis for developing forecasts for future land-use demands in the County, as well as Stratton.

The second phase of the comprehensive planning process is the development of general goals and policies. These are practical guidelines for improving existing conditions and guiding future growth. The Comprehensive Plan is a vision presented in text, graphics and tables that represent the desires of the community for the future.

The Comprehensive Plan represents a blueprint designed to identify, assess, and develop actions and policies in the areas of population, land use, transportation, housing, economic development, community facilities, and utilities. The Comprehensive Plan contains recommendations that when implemented will be of value to the community and its residents.

Implementation is the final phase of the process. A broad range of development policies and programs are required to implement the Comprehensive Plan. The Comprehensive Plan identifies the tools, programs, and methods necessary to carry out the recommendations. Nevertheless, the implementation of the development policies contained within the Comprehensive Plan is dependent upon the adoption of the Plan by the governing body, and the leadership exercised by the present and future elected and appointed officials of the County and Village.

The Comprehensive Plan was prepared under the direction of the Hitchcock County/Stratton Joint Planning Commission with the assistance and participation of the Hitchcock County Board of Commissioners and the Village Board of Trustees in Stratton, the Plan Review Committee and citizen of Hitchcock County and Stratton. The planning time period for achieving goals, programs, and developments identified in the Hitchcock County and Stratton Comprehensive Plan is twenty (20) years. However, the county and community should review the Comprehensive Plan annually and update the document in ten to fifteen years, or when a pressing need is identified. Updating the Comprehensive Plan will allow the county and community to incorporate ideas and developments that were not known at the time of the present comprehensive planning process.

COMPREHENSIVE PLAN COMPONENTS

Nebraska State Statutes require the inclusion of certain elements in a Comprehensive Plan. State Statutes prescribes a "Comprehensive Development Plan" consists of both graphic and textual material, and is designed to accommodate anticipated long-range future growth. The Comprehensive Plan is comprised of the following components:

- A Community Profile, including an overview of population characteristics, housing and the local economy,
- Community Facilities,
- Community Goals and Policies,

- Land Use Analysis,
- Transportation, and
- Plan Implementation.

Analyzing past and existing demographic, housing, economic and social trends permit the projection of likely conditions in the future. Projections and forecasts are useful tools in planning for the future; however, these tools are not always accurate and may change due to unforeseen factors. Also, past trends may be skewed or the data may be inaccurate; creating a distorted picture of past conditions. Therefore, it is important for Hitchcock County and Stratton to closely monitor population, housing and economic conditions that may impact the community. Through periodic monitoring, the community can adapt- and adjust-to changes at the local level. Adaptability to socio-economic change allows the community to maintain an effective Comprehensive Plan for the future; to enhance the quality of life and standard of living for all residents.

The Comprehensive Plan documents where Hitchcock County and Stratton have come from, where it is now, and the likely direction it may be heading in the future. The Comprehensive Plan is not a static document, but should evolve as changes in the land-use, population or local economy occur during the planning period. The Comprehensive Plan is a management tool for community leaders to base their decision-making process upon when considering future developments. These decisions will assist Hitchcock County and Stratton in achieving their physical, social, and economic goals.

GOVERNMENTAL AND JURISDICTIONAL ORGANIZATION

The governmental functions of Hitchcock County, Nebraska are provided and coordinated by the County Board of Commissioners, comprised of three (3) elected officials. Each incorporated community in Hitchcock County has elected officials and officers that oversee the governing of their community. The planning and zoning jurisdiction for the incorporated communities in Hitchcock County that have adopted Comprehensive Planning and Zoning Ordinances includes the area within one mile of their corporate limits, as written under the authority of Section §17-1002, Nebraska Revised Statutes, 1943 (as amended). As these communities grow and annex land into their corporate limits, their extraterritorial jurisdictions will extend further into the County. There are four (4) communities in Hitchcock County that are incorporated, including the Villages' of Culbertson, Stratton, Trenton, and Palisade.

The planning and zoning jurisdiction of Hitchcock County includes the unincorporated portions of the County, excluding the established extraterritorial jurisdiction of each community and their corporate limits, as written under the authority of Section §23-114, Nebraska Revised Statutes, 1943 (as amended).

COMMUNITY ASSESSMENT: CONDITIONS AND TREND ANALYSIS

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DEMOGRAPHIC PROFILE

Population statistics aid in developing a picture for Hitchcock County and Stratton. It is important for Hitchcock County and Stratton to understand where it has been and in which direction it appears to be going. Population is the driving force behind housing, the economy, employment and fiscal stability of communities and counties. Historic population conditions assist in developing demographic projections, which in turn assist in determining future housing, retail, medical, employment and educational needs within the County and Village. Projections provide an estimate for the County and Village from which to base future land-use and development decisions. However, population projections are only estimates and unforeseen factors may effect projections significantly.

POPULATION TRENDS AND ANALYSIS

Table 1 indicates the population for the incorporated communities in Hitchcock County, the unincorporated areas and Hitchcock County between 1970 and 1998. This information provides the residents of Hitchcock County and Stratton a better understanding of past and present trends regarding the population changes within the County and Village. Hitchcock County's population in 1990 amounted to 3,750 persons, which was a change of -329 persons or –8.1% from 1980. Stratton's population in 1990 was 427 persons, which was a decrease of 72 persons or –14.4% from 1980.

TABLE 1: POPULATION TRENDS, HITCHCOCK COUNTY & COMMUNITIES, 1970 TO 1998

Community	1970	1980	% Change 1970 to 1980	1990	% Change 1980 to 1990	1998	% Change 1990 to 1998	% Change 1970 to 1998
Trenton	770	796	3.4%	656	-17.6%	580	-11.6%	-24.7%
Stratton	481	499	3.7%	427	-14.4%	373	-12.6%	-22.5%
Culbertson	801	767	-4.2%	795	3.7%	710	-10.7%	-11.4%
Palisade	372	401	7.8%	381	-5.0%	353	-7.3%	-5.1%
Incorporated Areas	2,424	2,463	1.6%	2,259	-8.3%	2,016	-10.8%	-16.8%
Unincorporated Areas	1,627	1,616	-0.7%	1,491	-7.7%	1,426	-4.4%	-12.4%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: U.S. Census Bureau, Census of Population and Housing, 1970 - 1990, 1998 estimates

Table 1 indicates Hitchcock County had a net change of -579 persons (-12.4%) between 1970 and 1998, although the population had a small peak in 1980 with 4,079 persons. The population loss occurred primarily in Trenton, Stratton, Culbertson, and Palisade. However, as shown in Figure 2, the peak population for Hitchcock County occurred in 1930 with 7,269 people.

Hitchcock County exhibited its greatest population loss, for the period shown in Table 1 between 1980 and 1990 which was -329 persons (-8.1%). The unincorporated areas of Hitchcock County experienced a

population loss of -125 persons or -7.7%. Overall, between 1980 and 1990, all incorporated and unincorporated communities in Hitchcock County experienced population decline.

Since 1990, estimates for Hitchcock County show the population continued to decline in size. Hitchcock County during the first eight years of the 1990's had an estimated change of -308 persons (-8.2%). For the same period, the Village of Stratton exhibited an estimated change of -54 people (-12.6%).

MIGRATION ANALYSIS

Migration Analysis allows a county to understand how specific dynamics are in influencing population change. Migration indicates the population size that has migrated in or out of the County. Migration is the remaining number of individuals after the natural change (i.e. births minus deaths) is subtracted from the total change in population. Table 2 shows the total change in population for Hitchcock County from 1960-1970; 1970-1980; 1980-1990; and 1990-1998. A negative number in the "Total Migration" column indicates the number of persons that have migrated out of the County, while a positive number indicates the number of persons migrating into the County. Unfortunately, this analysis is only available for the county as a whole. These data are not available for communities the size of Stratton.

Table 2 indicates deaths in Hitchcock County's were exceeded by births for each reporting period, except between 1990 to 1998 which was due to a decline in the number of births and an increase in deaths. Based upon the formula, the primary contributor to Hitchcock County's declining population is out-migration. The largest occurrence of out-migration was between 1960 and 1970, when Hitchcock County had a total change of -778 persons; births exceeded deaths by 214; thus migration accounted for -992 persons. The next largest decade of out-migration occurred between 1980 and 1990, when total population declined -329 persons, births exceeded deaths by 106 persons; resulting in an out-migration of -435 persons. Between 1960 and 1998, Hitchcock County lost 1,751 persons to migration.

TABLE 2: MIGRATION ANALYSIS, HITCHCOCK COUNTY, 1960 TO 1998

Hitchcock County	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1960-1970	-778	214	-992
1970-1980	28	110	-82
1980-1990	-329	106	-435
1990-1998	-308	-66	-242
Total	-1,387	364	-1,751

Source(s): U.S. Census Bureau, Census of Population and Housing, 1960 - 1990, 1998 estimates; Nebraska Department of Health and Human Services System, Vital Statistics Report(s), 1960 -1998

AGE STRUCTURE

Age structure is an important component of population analysis. By analyzing age structure, one can determine which age cohorts within Hitchcock County are being affected by population shifts and changes. Each age cohort effects the population in a number of different ways, for example, the existence of a larger young cohort (20-44 years) has a greater ability to sustain future population growth rather than a predominance of older cohorts.

Table 3 exhibits the age cohort structure for Hitchcock County in 1980 and 1990. Examining population age structure will indicate the significant changes affecting the different population segments within the County. As shown in Table 3, changes between 1980 and 1990 occurred within a number of different age group cohorts. Using the last two columns, every age cohort lost population when it aged 10 years.

TABLE 3: AGE-SEX CHARACTERISTICS, HITCHCOCK COUNTY, 1980 TO 1990

Age	1980		1990		1980-1990		1980 - 1990	
	Male and Female	% of Total	Male and Female	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	357	8.8%	252	6.7%	-105	-29.4%	252	-
5-9	299	7.3%	304	8.1%	5	1.7%	304	-
10-14	263	6.4%	335	8.9%	72	27.4%	-22	-6.2%
15-19	332	8.1%	259	6.9%	-73	-22.0%	-40	-13.4%
20-24	278	6.8%	113	3.0%	-165	-59.4%	-150	-57.0%
25-29	312	7.6%	202	5.4%	-110	-35.3%	-130	-39.2%
30-34	242	5.9%	275	7.3%	33	13.6%	-3	-1.1%
35-44	374	9.2%	496	13.2%	122	32.6%	-58	-10.5%
45-54	410	10.1%	326	8.7%	-84	-20.5%	-48	-12.8%
55-64	460	11.3%	387	10.3%	-73	-15.9%	-23	-5.6%
65-74	395	9.7%	393	10.5%	-2	-0.5%	-67	-14.6%
75 & older	357	8.8%	408	10.9%	51	14.3%	-344	-45.7%
Total	4,079	100.0%	3,750	100.0%	-329	-8.1%	-329	-8.1%

Selected Characteristics	1980		1990	
	Total 18 yrs and Under	1,205	Total 18 yrs and Under	1,083
	% of total population	29.5%	% of total population	28.9%
	Total 65 yrs and older	752	Total 65 yrs and older	801
	% of total population	18.4%	% of total population	21.4%
	Median Age	34.1	Median Age	37.5
	Total Females	2,003	Total Females	1,909
	Total Males	2,076	Total Males	1,841
	Total Population	4,079	Total Population	3,750

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1980, 1990

An example of analyzing cohort movement in a population would involve counting the number of persons aged between 0 and 4 years in 1980 with the existence of persons in the same age cohort 10 years later or aged between 10 and 14 years in 1990. For example, in Hitchcock County, there were 357 children in this age cohort in 1980 and in 1990 there were 335 children, a decline of 22 children. A review of population by this method permits one to undertake a detailed analysis of which cohorts are moving in and out of the County.

Increases in the cohorts occurred only in two age groups between 1980 and 1990, these cohort shifts were:

1980 Age Cohort	Number	1990 Age Cohort	Number	Change
NA	NA	0-4 years	252 persons	+252 persons
NA	NA	5-9 years	304 persons	+304 persons
Total Change				**+556 persons**

Decreases in the cohorts occurred in a number of age groups between 1980 and 1990, these cohort shifts were:

1980 Age Cohort	Number	1990 Age Cohort	Number	Change
0-4 years	357 persons	10-14 years	335 persons	-22 persons
5-9 years	299 persons	15-19 years	259 persons	-40 persons
10-14 years	263 persons	20-24 years	113 persons	-150 persons
15-19 years	332 persons	25-29 years	202 persons	-130 persons
20-24 years	278 persons	30-34 years	275 persons	-3 persons
25-34 years	554 persons	35-44 years	496 persons	-58 persons
35-44 years	374 persons	45-54 years	326 persons	-48 persons
45-54 years	410 persons	55-64 years	387 persons	-23 persons
55-64 years	460 persons	65-74 years	393 persons	-67 persons
65 years +	752 persons	75 years +	408 persons	-344 persons
Total Change				**-885 persons**

First, all age-cohorts that existed in 1980 and 1990 declined in number, except for the 0 to 4 and 5 to 9 age cohorts in 1990. The three age cohorts, from 1990, representing the most change includes the 20 to 24 and 25 to 29 age groups, and the 75 years and older age cohort. The changes in the younger age cohorts are directly related to persons completing high school or vocation training and moving onto further tertiary education or new careers outside of the County. The changes in the 75 years and older age cohort were most likely due to the combination of deaths or movement to elderly care facilities located in other counties.

The median age in Hitchcock County increased from 34.1 years in 1980 to 37.5 years in 1990. The proportion of persons less than 18 years of age decreased slightly in total population between 1980 and 1990, while those aged 65 years and older increased by 3% overall in proportion to the total population. Overall, the population of Hitchcock County appears to be aging. The change in elderly people, ages 55-74, has decreased slightly, which could indicate a lack of facilities for this segment of the population.

In order to accommodate a number of elderly, whom generally plan to age in place, Hitchcock County must continue to be involved in developing a facility where the elderly feel safe and comfortable. To encourage the return of the younger and middle age groups, the County should assist in the provision of economic development opportunities, including housing options and the continued maintenance and improvement of infrastructure to accommodate new growth, making Hitchcock County an attractive place to live and work.

Table 4 shows the structure of the age cohorts in Stratton in 1980 and 1990. Changes between 1980 and 1990 occurred within all age groups. An example of analyzing cohort movement in a population would involve counting the number of persons aged between 0 and 4 years in 1980 with the existence of persons in the same age cohort 10 years later or aged between 10 and 14 years in 1990. A review of population by this method permits one to undertake a detailed analysis of which cohorts are moving in and out of the County.

TABLE 4: AGE-SEX CHARACTERISTICS, STRATTON, 1980 TO 1990

Age	1980		1990		1980-1990		1980 - 1990	
	Male and Female	% of Total	Male and Female	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	39	7.8%	28	6.6%	-11	-28.2%	28	-
5-9	32	6.4%	39	9.1%	7	21.9%	39	-
10-14	32	6.4%	36	8.4%	4	12.5%	-3	-7.7%
15-19	26	5.2%	23	5.4%	-3	-11.5%	-9	-28.1%
20-24	32	6.4%	14	3.3%	-18	-56.3%	-18	-56.3%
25-29	42	8.4%	20	4.7%	-22	-52.4%	-6	-23.1%
30-34	30	6.0%	36	8.4%	6	20.0%	4	12.5%
35-44	41	8.2%	54	12.6%	13	31.7%	-18	-25.0%
45-54	55	11.0%	35	8.2%	-20	-36.4%	-6	-14.6%
55-64	48	9.6%	43	10.1%	-5	-10.4%	-12	-21.8%
65-74	51	10.2%	51	11.9%	0	0.0%	3	6.3%
75 & older	71	14.2%	48	11.2%	-23	-32.4%	-74	-60.7%
Total	499	100.0%	427	100.0%	-72	-14.4%	-72	-14.4%

Selected Characteristics	1980		1990	
	Total 18 yrs and Under	126	Total 18 yrs and Under	118
	% of total population	25.2%	% of total population	27.6%
	Total 65 yrs and older	122	Total 65 yrs and older	99
	% of total population	24.4%	% of total population	23.2%
	Median Age	39.0	Median Age	38.1
	Total Females	258	Total Females	227
	Total Males	241	Total Males	200
	Total Population	499	Total Population	427

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1980, 1990

The cohort change in Table 4 indicates the population declined from 1980 to 1990 and was spread amongst several of the age cohorts. Increases in the cohorts occurred in a number of age groups between 1980 and 1990, these cohort shifts were:

1980 Age Cohort	Number	1990 Age Cohort	Number	Change
NA	NA	0-4 years	28 persons	+28 persons
NA	NA	5-9 years	39 persons	+39 persons
20-24 years	32 persons	30-34 years	36 persons	+4 persons
25-34 years	42 persons	35-44 years	54 persons	+12 persons
55-64 years	48 persons	65-74 years	51 persons	+3 persons
Total Change				**+86 persons**

Decreases in the cohorts occurred in a number of age groups between 1980 and 1990, these cohort shifts were:

1980 Age Cohort	Number	1990 Age Cohort	Number	Change
0-4 years	39 persons	10-14 years	36 persons	-3 persons
5-9 years	32 persons	15-19 years	23 persons	-9 persons
10-14 years	32 persons	20-24 years	14 persons	-18 persons
15-19 years	26 persons	25-29 years	20 persons	-6 persons
35-44 years	41 persons	45-54 years	35 persons	-6 persons
45-54 years	55 persons	55-64 years	43 persons	-12 persons
65 years +	122 persons	75 years +	48 persons	-74 persons
Total Change				**-128 persons**

Each of the age cohorts has affected the Village of Stratton in its own way. The three younger cohort groups represent more of an out-migration affect. The vast majority of the out-migration in these three groups was likely due to their departure for institutes of higher learning or for better paying jobs in the larger cities of the region, like McCook. The elderly persons of Stratton had a loss of 74 person. Some of the elderly declines were likely due to two factors: 1) relocation to different locations for both climate or health facilities reasons, and 2) the mortality rate of these age cohorts tends to be higher than most other cohorts. In order to insure growth in population, the community needs to identify strategies to attract younger age cohorts back to the Village after they have completed their advanced education. This will provide the ability to further increase future births, which will allow the future population to stabilize and grow.

Besides looking at the movement between age cohorts, table 4 indicates a loss of population for Stratton from 1980 to 1990. The median age for Stratton decreased from 39.0 in 1980 to 38.1 in 1990. Table 4 shows a decrease in the total number of persons 18 and under. However, the proportion of this cohort to the total population showed an increase from 25.2 % in 1980 to 27.6% in 1990. Stratton's older cohorts, over 65 years of age has decreased by 1.2% from 1980 to 1990. This would suggest that the population of Stratton is retaining more citizens in the younger age cohorts, proportionally than in the older age cohorts.

POPULATION PROJECTIONS

Population projections allow Hitchcock County and Stratton, if all things stay equal, to estimate what the population will be in future years. Projections are estimates based upon present day and past circumstances. A number of factors (demographics, economics, social, etc.) may affect projections positively or negatively. At the present time, these projections are the best crystal ball Hitchcock County and Stratton have for predicting future population changes. There are several methods to project the future population trends; the six methods used below are intended to give Hitchcock County an overview of what could happen population wise for the future. Also below are two methods intended to give Stratton an overview of their future population patterns.

Trend Line Analysis

Trend line analysis is a process of projecting future populations based upon changes during a specified period of time. In the analysis of Hitchcock County, three different trend lines were reviewed; 1960 to 1998 (estimate), 1980 to 1998 (estimate) and 1990 to 1998 (estimate). Review of these trend lines indicates Hitchcock County and the Village of Stratton will continue to decline in population through 2020. The following projections summarize the decennial population for Hitchcock County through 2020:

Hitchcock County Trend Analysis

Year	Trend: 1960 to 1998	Trend: 1980 to 1998	Trend: 1990 to 1998
2000	3,390 persons	3,382 persons	3,371 persons
2010	3,134 persons	3,089 persons	3,025 persons
2020	2,897 persons	2,821 persons	2,715 persons

Stratton Trend Analysis

The following projections summarize the decennial population for Stratton through 2020:

Year	Trend: 1960 to 1998	Trend: 1980 to 1998	Trend: 1990 to 1998
2000	366 persons	357 persons	355 persons
2010	343 persons	307 persons	299 persons
2020	321 persons	264 persons	252 persons

Cohort Survival Analysis

Cohort survival analysis reviews a population by different age groups and sex. The population age groups are then projected forward by decade using survival rates for the different age cohorts. This projection model accounts for average birth rates by sex and adds the new births into the future population. The Cohort Survival Model projection indicates Hitchcock County and Stratton's population may or may not decline between 1990 and 2000 then begin to increase each decade through 2020. However, these results are based upon the 1990 population remaining static in the County. The model does not account for Hitchcock County's greatest population factor and Stratton's most likely population problem, out-migration. The following projection for Hitchcock County is based on applying survival rates to age cohorts, but does not consider the effects of either in-migration or out-migration:

Hitchcock County Cohort Survival Analysis

Year	Cohort Survival Model
2000	3,427 persons
2010	3,634 persons
2020	3,997 persons

Hitchcock County "Modified" Cohort Survival Analysis

A "Modified" Cohort Survival Model has been developed and adjusted to account for the County's average annual out-migration between 1990 and 1998. This projection shows a significant difference in forecasted population in the years 2000, 2010, and 2020. This model indicates the population of Hitchcock County will decline through the year 2020. The following projection is a result of applying average out-migration rates for the County between 1990 and 1998 to the Cohort Survival model:

Year	Cohort Survival (Modified)
2000	3,367 persons
2010	3,065 persons
2020	2,763 persons

The following projection for the Village of Stratton is based on applying the standard Cohort Survival Model, but does not consider the effects of either in-migration or out-migration:

Stratton Cohort Survival Analysis

Year	Cohort Survival Model
2000	388 persons
2010	415 persons
2020	463 persons

A "Modified" Cohort Model is not possible for Stratton since there is not enough data to calculate either in- or out-migration.

Bureau of Business Research (BBR)-Hitchcock County

The Bureau of Business Research at the University of Nebraska-Lincoln developed the following population projection. The BBR projects population sizes for the State and all counties in Nebraska through the year 2020. The BBR projection reveals the following trend:

Year	BBR
Year 2000	3,233 persons
Year 2010	2,915 persons
Year 2020	2,738 persons

Summary of Population Projections

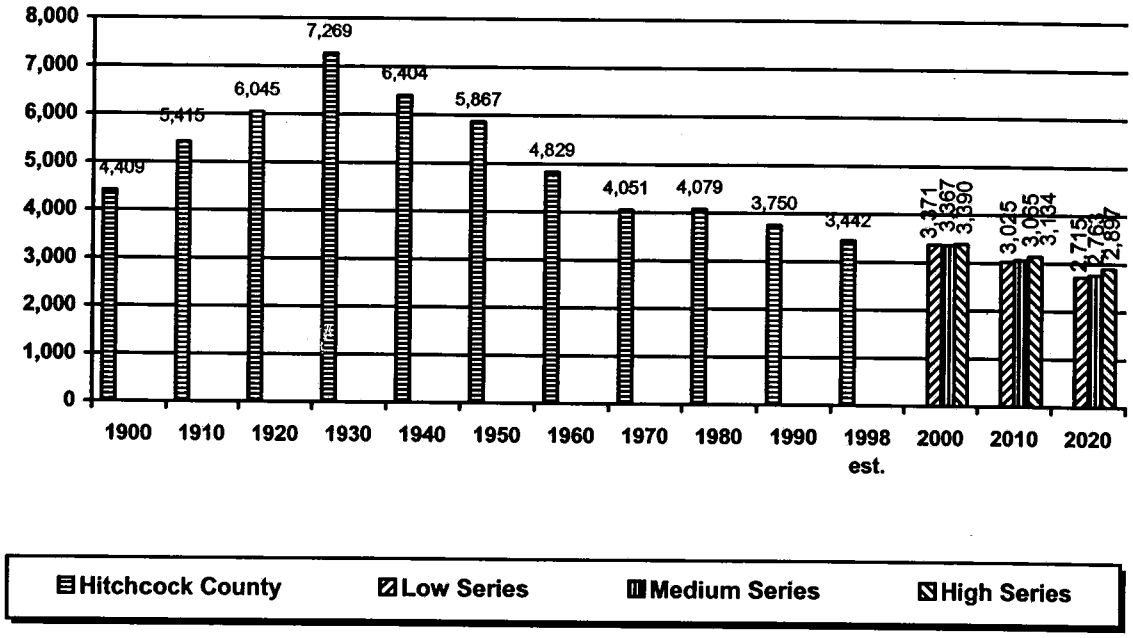
Using the modeling techniques discussed in the previous paragraphs, a summary of the six population projections for Hitchcock County through the year 2020 are shown in Figure 1. Three population projection scenarios were selected and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series. The

Low and Medium forecasts indicate a decline, while the High scenario forecasts a decrease in County population through the year 2020. The following population projections indicate the different scenarios that may be encountered by Hitchcock County through the year 2020:

Year	Low Series = 1990-98	Medium Series = Cohort (Modified)	High Series = 1960-98
2000	3,371 persons	3,367 persons	3,390 persons
2010	3,025 persons	3,065 persons	3,134 persons
2020	2,715 persons	2,763 persons	2,897 persons

Figure 1 reviews the population history of Hitchcock County between 1900 and 1998; and identifies three population projection scenarios into the years 2000, 2010, and 2020. Figure 1 indicates the peak population for Hitchcock County occurred in 1930 with 7,269 people. Since 1930, the population has steadily declined except for a minimal increase in 1980, then the trend declined again. These changes are likely the result of cyclical changes in the growth and stability of agricultural markets over time.

FIGURE 1: POPULATION TRENDS AND PROJECTIONS, HITCHCOCK COUNTY, 1900 TO 2020



Source: U.S. Census Bureau, Census of Population and Housing, 1900-1990; 1998 estimates

As stated previously, these projections are based upon data from past trends and present conditions. A number of external and internal demographic, economic and social factors may affect these population forecasts. Hitchcock County should monitor population trends, size and composition periodically in order to understand in what direction their community is heading. Hitchcock County's greatest population threat

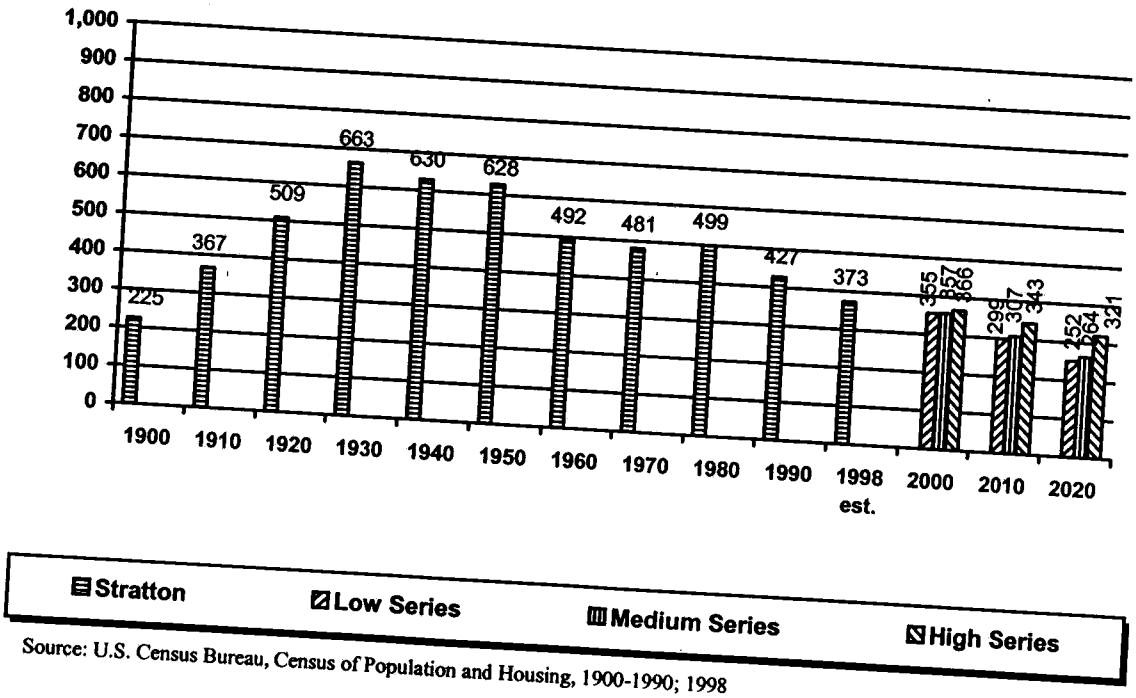
continues to be out-migration, and strategies should be developed to further examine and prevent this phenomenon.

Using the modeling techniques discussed previously for Stratton, a summary of the population projections for Stratton through the year 2020 is shown in Figure 2. Three population projection scenarios were selected and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series. The series indicate that Stratton will decline in population in the future.

Year	Low Series =1990-98	Medium Series =1980-98	High Series =1960-98
2000	355 persons	357 persons	366 persons
2010	299 persons	307 persons	343 persons
2020	252 persons	264 persons	321 persons

Figure 2 reviews the population history of Stratton between 1900 and 1998; and identifies the three population projection scenarios above into the years 2000, 2010, and 2020. The peak population, as indicated by Figure 2, occurred in 1930 with 663 people. Since 1930, the population has fluctuated slightly with increases and decreases, but continued to decrease for the most part. These changes are likely the result of cyclical changes in the growth and stability of agricultural markets over time.

FIGURE 2: POPULATION TRENDS AND PROJECTIONS, STRATTON, 1900 TO 2020



Source: U.S. Census Bureau, Census of Population and Housing, 1900-1990; 1998

HOUSING PROFILE

The Housing element of the Comprehensive Development Plan identifies existing housing characteristics and projected housing needs for residents of Hitchcock County and Stratton. A primary goal of the County and the Community should be to provide safe, decent, sanitary and affordable housing for every family and individual residing within Hitchcock County and Stratton. The housing profile for Hitchcock County and Stratton are analysis that aid in determining the composition of owner-occupied, renter-occupied, and the existence of vacant units. It is also important to evaluate information on the value of owner-occupied housing units, and monthly rents for renter-occupied housing units, to determine if housing cost are a financial burden to Hitchcock County and Stratton residents.

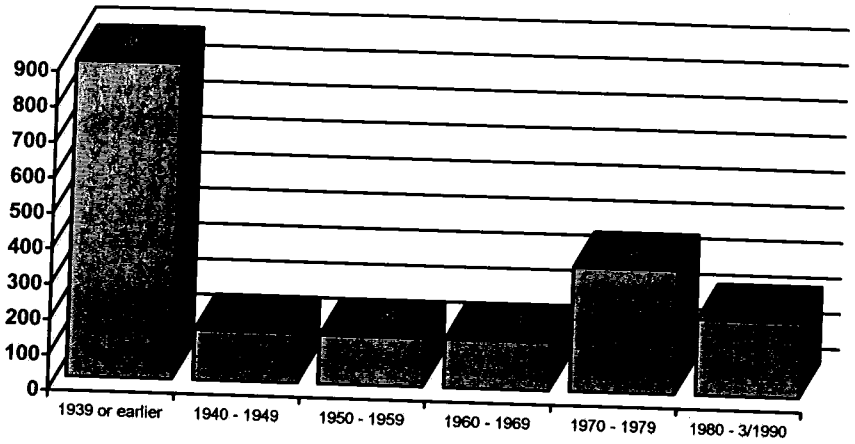
To project future housing needs, several factors must be considered. These factors include population change, household income, employment, land use, and residents' attitudes. The following tables and figures will provide the information that will aid in determining future housing needs and direct policies designed to accomplish the housing goals for Hitchcock County and Stratton.

AGE OF EXISTING HOUSING STOCK

The age of Hitchcock County and Stratton's housing stock reveals a great deal about population and economic conditions of the past. The age of the housing stock may also indicate the need for rehabilitation efforts, or new construction within the County and/or community of Stratton. Examining the housing stock is important in order to understand the overall quality of housing and the quality of life in Hitchcock County and in Stratton.

Figure 3 indicates 1,033 (55.2%) of Hitchcock County's 1,873 housing units were constructed prior to 1950, with a major portion of the housing units built prior to 1939. There were 351 housing units (19.1%) constructed between 1970 and 1979. The number of new housing units built between 1980 and March 1990 was 215 units or 11.5% of the total number of housing units. Hitchcock County has a predominance of older housing units (i.e., pre 1950) and this may indicate a need for a housing rehabilitation program to improve the quality and energy efficiency of the older housing stock. Additionally, demolition of units that are beyond rehabilitation may be required. New construction may also be a program that the County may want to support, as housing becomes an integral component of a community's ability to pursue economic development activities.

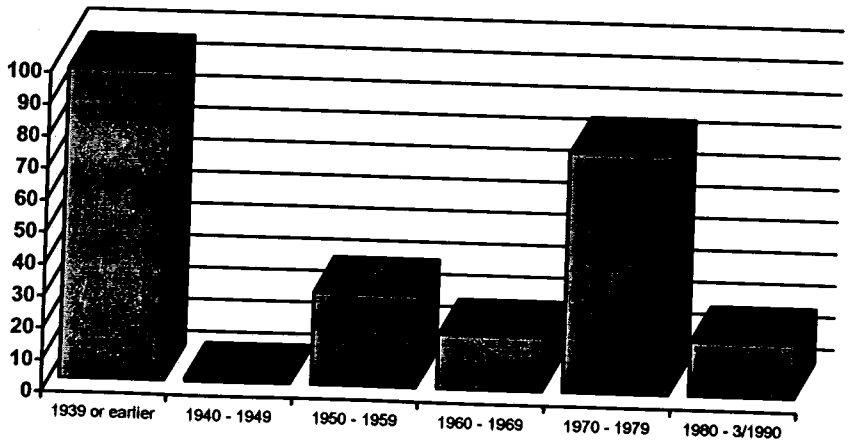
FIGURE 3: AGE OF EXISTING HOUSING STOCK, HITCHCOCK COUNTY, 1990



Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Figure 4 indicates 98 (41.5%) of Stratton's 236 housing units were constructed prior to 1950, with 97 units built before 1939. There was a surge of housing construction in the decade of the 1970s; with 75 (31.8% of total housing) new dwelling units built during the time period. Only 17 housing units or 7.0% were built from 1980 through March of 1990. A predominance of homes built before 1950 and the small amount of housing units built after 1980 would indicate that some of the homes are in need of rehabilitation. A housing rehabilitation program for the community could be an integral component of the community's ability to pursue economic development activities.

FIGURE 4: AGE OF EXISTING HOUSING STOCK, STRATTON, 1990



Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

HOUSING TRENDS

Table 5 indicates the household population declined between 1980 and 1990. In addition the number of persons per household also decreased. Declining household size is a national trend and is anticipated to impact Hitchcock County in the future. There is a high probability that household sizes will continue to decline in Hitchcock County in the future; however, the exact impact is yet to be determined.

Table 5, also indicates the number of occupied-housing units declined between 1980 and 1990 from 1,536 to 1,467 housing units. Vacant housing units increased from 184 in 1980 to 406 in 1990. However, this dramatic of a change may be directly related to an error in the US Census in either year. The change in housing units by type, between 1980 and 1990, exhibits some interesting trends. Single-family housing units decreased slightly from 1,565 in 1980 to 1,498 in 1990. Duplex and multi-family units decreased between 1980 and 1990 by 24 housing units, while mobile homes and trailers more than doubled in numbers between 1980 and 1990.

Median monthly contract rent in Hitchcock County increased from $97 in 1980 to $158 in 1990 and represents an increase of 62.9%, while the State's median monthly contract rent increased 104% during the same time period. Comparing changes in monthly rents between 1980 and 1990 with the Consumer Price Index (CPI) enables the local housing market to be compared to national economic conditions. Inflation between 1980 and 1990 increased at a rate of 60.7%, indicating Hitchcock County rents increased slightly higher than the rate of inflation. Thus, Hitchcock County tenants were paying slightly higher monthly rents in 1990, in real dollars, than they were in 1980.

The Median value of owner-occupied housing units in Hitchcock County increased from $21,300 in 1980 to $22,700 in 1990 and represents an increase of 6.6%, while the State's median value of owner-occupied housing units increased 31.6%. Between 1980 and 1990, housing values in Hitchcock County increased at 6.6%, much lower than the CPI of 60.7%. Housing values statewide failed to keep pace with inflation and were valued less in 1990, in real dollars, than in 1980.

TABLE 5: COMMUNITY HOUSING TRENDS, HITCHCOCK COUNTY, 1980 AND 1990

Selected Characteristics	1980	1990	% Change 1980-1990
Population	4,079	3,750	-8.1%
Persons in Household	4,006	3,644	-9.0%
Persons in Group Quarters	73	106	45.2%
Persons per Household	2.61	2.48	-5.0%
Total Housing Units	1,722	1,873	8.8%
Occupied Housing Units	1,536	1,467	-4.5%
Owner-occupied units	1,197	1,108	-7.4%
Renter-occupied units	339	359	5.9%
Vacant Housing Units	184	406	120.7%
Owner-occupied vacancy rate	NA	2.6%	
Renter-occupied vacancy rate	NA	12.5%	
Single-family Units	1,565	1,498	-4.3%
Duplex/Multiple-family units	92	68	-26.1%
Mobile Homes, trailer, other	65	307	372.3%
Median Contract Rent - 1980 and 1990			
Hitchcock County	$97	$158	**62.9%**
Nebraska	**$170**	**$348**	**104.7%**
Median Value of Owner-Occupied Units - 1980 and 1990			
Hitchcock County	$21,300	$22,700	**6.6%**
Nebraska	**$38,000**	**$50,000**	**31.6%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1980, 1990

Table 6 indicates the Housing trends for Stratton. The table shows the household population declined between 1980 and 1990, yet the number of persons per household increased from 2.35 to 2.38. Declining household size is a trend nationally and is anticipated to influence the future population of Stratton. As indicated in Table 6, the number of occupied-housing units declined between 1980 and 1990 from 172 to 143 housing units. Vacant housing units increased from 22 to 54 dwellings, which was a 145.5% increase for the decade. The change in housing type indicates that less people are owning or renting houses and more people are settling into mobile homes or trailers (increased from 4 to 28).

Median monthly contract rent in Stratton increased from $125 in 1980 to $183 in 1990, which represents an increase of 46.4%, while the State's median monthly contract rent increased 104% during the same time period. As stated previously, inflation between 1980 and 1990 increased at 60.7%, indicating Stratton rents increased lower than the rate of inflation; yet the State's median value for rents increased faster than the rate of inflation. Thus, Stratton tenants were paying slightly lower monthly rents in 1990, in real dollars, than they were in 1980. Median value of owner-occupied housing units in Stratton increased from $21,200 in 1980 to $22,900 in 1990 and represents an increase of 8.0%, while the State's median value of owner-occupied housing units increased 31.0% in value. Between 1980 and 1990, housing values increased at a much lower rate of inflation for Stratton.

TABLE 6: COMMUNITY HOUSING TRENDS, STRATTON, 1980 AND 1990

Selected Characteristics	1980	1990	% Change 1980-1990
Population	499	429	-14.0%
Persons in Household	499	423	-15.2%
Persons in Group Quarters	-	4	NA
Persons per Household	2.35	2.38	1.3%
Total Housing Units	234	232	-0.9%
Occupied Housing Units	212	178	-16.0%
Owner-occupied units	172	143	-16.9%
Renter-occupied units	40	35	-12.5%
Vacant Housing Units	22	54	145.5%
Owner-occupied vacancy rate	NA	3.4%	
Renter-occupied vacancy rate	NA	10.3%	
Single-family Units	221	196	-11.3%
Duplex/Multiple-family units	9	8	-11.1%
Mobile Homes, trailer, other	4	28	600.0%
Median Contract Rent - 1980 and 1990			
Stratton	$125	$183	**46.4%**
Nebraska	**$170**	**$348**	**104.7%**
Median Value of Owner-Occupied Units - 1980 and 1990			
Hitchcock County	$21,200	$22,900	**8.0%**
Nebraska	**$38,000**	**$50,000**	**31.6%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1980, 1990

Table 7 exhibits tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Hitchcock County is comprised of a majority of 1 and 2 person(s) households; with 69% of total owner-occupied and 54% of the total renter-occupied. These smaller household sizes are expected to continue and usually represent elderly households.

Tenure (owner occupied unit or renter occupied unit) by age indicates that 60.3% of owner-occupied housing units were comprised of persons aged 55 years and older. Renter-occupied units were more varied, with a range of ages comprising the rental market. However, 25 to 34 years old occupied 30.4% of renter-occupied units. Additionally, 25.6% of all renter-occupied housing units were comprised of those 55 years and older and are usually those age groups moving into appropriate care facilities that are rental in nature or are living on limited and fixed incomes. The renter-occupied vacancy rate was high at 12.5% and further studies should be done to deal with this and other housing issues.

TABLE 7: TENURE OF HOUSEHOLD BY SELECTED HOUSING CHARACTERISTICS, HITCHCOCK COUNTY, 1990

Householder Characteristic	Owner-Occupied	% O.O	Renter-Occupied	% R.O
Tenure by Number of Persons in Housing Unit (Occupied Housing Units)				
1 person	312	28.2%	108	30.1%
2 persons	453	40.9%	86	24.0%
3 persons	112	10.1%	50	13.9%
4 persons	99	8.9%	60	16.7%
5 persons	92	8.3%	29	8.1%
6 persons	30	2.7%	18	5.0%
7 persons or more	10	0.9%	8	2.2%
TOTAL	**1108**	**100.0%**	**359**	**100.0%**
Tenure by Age of Householder (Occupied Housing Units)				
15 to 24 years	12	1.1%	31	8.6%
25 to 34 years	126	11.4%	109	30.4%
35 to 44 years	168	15.2%	90	25.1%
45 to 54 years	133	12.0%	37	10.3%
55 to 64 years	190	17.1%	31	8.6%
65 to 74 years	223	20.1%	29	8.1%
75 years and over	256	23.1%	32	8.9%
TOTAL	**1108**	**100.0%**	**359**	**100.0%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1990

Table 8 exhibits tenure of households by number and age of persons in each housing unit in Stratton. Stratton was mainly comprised of 1 and 2 person(s) households; with 68.6% of the total being owner-occupied and 62.8% of the total being renter-occupied. These smaller household sizes are expected to continue and frequently represent elderly households.

Tenure by age indicates 62.4% of owner-occupied housing units were comprised of persons aged 55 years and older. Renter-occupied units were different with the 25 to 44 years age cohorts representing 57.1% of rented dwellings. Furthermore, 20.1% of all renter-occupied units were made up of those who were 55 or older.

TABLE 8: TENURE OF HOUSEHOLD BY SELECTED HOUSING CHARACTERISTICS, STRATTON, 1990

Householder Characteristic	Owner-Occupied	% O.O	Renter-Occupied	% R.O
Tenure by Number of Persons in Housing Unit (Occupied Housing Units)				
1 person	43	30.1%	13	37.1%
2 persons	55	38.5%	9	25.7%
3 persons	15	10.5%	3	8.6%
4 persons	14	9.8%	7	20.0%
5 persons	12	8.4%	1	2.9%
6 persons	4	2.8%	2	5.7%
7 persons or more	0	0.0%	0	0.0%
TOTAL	**143**	**100.0%**	**35**	**100.0%**
Tenure by Age of Householder (Occupied Housing Units)				
15 to 24 years	2	1.4%	5	14.3%
25 to 34 years	17	11.9%	13	37.1%
35 to 44 years	20	14.0%	7	20.0%
45 to 54 years	15	10.5%	3	8.6%
55 to 64 years	23	16.1%	3	8.6%
65 to 74 years	34	23.8%	1	2.9%
75 years and over	32	22.4%	3	8.6%
TOTAL	**143**	**100.0%**	**35**	**100.0%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1990

Table 9 indicates the changes in housing conditions and inventory of substandard housing for Hitchcock County between 1980 and 1990. Between 1980 and 1990, Hitchcock County increased by 151 housing units which was 15.1 units per year. Housing units lacking complete plumbing or are overcrowded (more than 1.01 persons or more per room) represent the minimum amount of substandard housing units in a community. In Hitchcock County, 57 housing units (3.9%) of 1,467 were considered substandard.

These figures do not represent the total number of housing units containing major defects requiring rehabilitation or upgrading to meet building, electrical or plumbing codes. A comprehensive survey of the entire housing stock should be completed every five years to determine and identify the housing units that would benefit from improving, remodeling or rehabilitation (including energy efficiency) work. This process would ensure that a community protects the quality and quantity of their housing stock so they may continue to develop.

TABLE 9: SELECTED HOUSING CONDITIONS
HITCHCOCK COUNTY, 1980 AND 1990

Inventory Change Profile	Hitchcock County
1980 Total Housing Units	1,722
1990 Total Housing Units	1,873
Change in Number of Housing Units between 1980 and 1990	
Total Units	151
Annual Units	15.1
1990 Total Housing Units – Plumbing Facilities & Overcrowded Units	
Occupied Housing Units	1,467
Lacking Complete Plumbing Facilities	32
Units with 1.01 persons or more per room	25
Substandard Housing Units*	57

*Substandard housing is defined by the U.S. Department of Housing and Urban Development as (1) lacking complete plumbing facilities; and, (2) with more than 1.01 persons or more per room.
Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Table 10 indicates the changes in housing conditions and inventory of substandard housing for Stratton between 1980 and 1990. Between 1980 and 1990, Stratton decreased by 2 housing units or 0.2 units per year. Housing units lacking complete plumbing or are overcrowded (more than 1.01 persons per room) represents the minimum amount of substandard housing units in the community. In Stratton, four (4) housing units (1.7%) of 232 units were considered substandard.

These figures, as before, do not represent the total number of dwelling units containing major defects requiring rehabilitation or upgrading to meet building, electrical or plumbing codes. A comprehensive survey of the entire housing stock should be completed every five years to determine and identify housing needs. This process would ensure that Stratton protects the quality and quantity of their housing stock so they may continue to develop.

TABLE 10: SELECTED HOUSING CONDITIONS
STRATTON, 1980 AND 1990

Inventory Change Profile	Stratton
1980 Total Housing Units	234
1990 Total Housing Units	232
Change in Number of Housing Units between 1980 and 1990	
Total Units	-2
Annual Units	-0.2
1990 Total Housing Units – Plumbing Facilities & Overcrowded Units	
Occupied Housing Units	178
Lacking Complete Plumbing Facilities	2
Units with 1.01 persons or more per room	2
Substandard Housing Units*	4

*Substandard housing is defined by the U.S. Department of Housing and Urban Development as (1) lacking complete plumbing facilities; and, (2) with more than 1.01 persons or more per room.
Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

ECONOMIC AND EMPLOYMENT PROFILE

Economic data are collected in order to understand area markets, changes in economic activity and employment needs and opportunities in Hitchcock County. In this section, employment by industry, household income statistics, and basic/non-basic analyses were reviewed for Hitchcock County, Stratton and Nebraska. In order to better understand the economic forces at work transfer payments were reviewed for Hitchcock County.

INCOME STATISTICS

Income statistics for households are important in determining the earning power of the households in a community. These data review household income levels in comparison to the State. In addition, these data sets were reviewed to determine whether households were exhibiting income increases at a rate comparable to the Consumer Price Index (CPI).

Table 11 indicates the number of households in each income range in Hitchcock County for 1980 and 1990. In 1980, the household income range most commonly reported was $15,000 to $24,999, followed by $10,000 to $14,999/year, then $5,000 to $9,999 and then less than $5,000. In 1980, household incomes between $35,000 and $49,999 and above $50,000 per annum consisted of only 54 households or 3.8% and 31 households or 2.2% respectively. In 1980, the median household income was $12,409 for Hitchcock County.

Household incomes in Hitchcock County increased between 1980 and 1990. Most of the change was attributed to households moving into the $35,000 to $49,999 and $50,000 and above income ranges, which consisted of 11.0% and 9.0% of households respectively. This represents almost a tripling in the number of households reporting these incomes from 1980. This change is important, especially at a time when the agricultural economy was in a state of fluctuation. In 1990, the median household income was $19,735, or an increase of 59.0% from 1980. The CPI for the same period was 60.7%, which indicates income in Hitchcock County did not exceed inflation; therefore, households were earning less in real dollars in 1990 than in 1980.

TABLE 11: HOUSEHOLD INCOME, HITCHCOCK COUNTY, 1980 and 1990

Household Income Ranges	1980				1990			
	Hitchcock County	% of Total	State of Nebraska	% of Total	Hitchcock County	% of Total	State of Nebraska	% of Total
Less than $5,000	157	11.0%	76,353	13.3%	129	8.8%	33,706	5.6%
$5,000 to $9,999	319	22.4%	95,803	16.7%	225	15.4%	61,896	10.3%
$10,000 to $14,999	328	23.1%	96,836	16.9%	171	11.7%	64,661	10.7%
$15,000 to $24,999	391	27.5%	162,608	28.4%	402	27.6%	128,454	21.3%
$25,000 to $34,999	142	10.0%	82,658	14.4%	240	16.5%	108,560	18.0%
$35,000 to $49,999	54	3.8%	38,583	6.7%	160	11.0%	107,111	17.8%
$50,000 and over	31	2.2%	19,774	3.5%	131	9.0%	98,470	16.3%
Total	1,422	100.0%	572,615	100.0%	1,458	100.0%	602,858	100.0%
Median Household Income	$12,409		$15,925		$19,735		$26,016	
Number of Households	1,422		572,615		1,458		602,858	

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Table 12 denotes the number of households in each income range for Stratton in 1980 and 1990. In 1980, the household income range most commonly reported was the less than $5,000 and $10,000 to $14,999, each with 25.7% of the population; followed by $15,000 to $24,999, and then $5,000 to $9,999. In 1980, household incomes between $35,000 to $49,999 and $50,000 and above per year consisted of 10 households or 4.8% and 11 households or 5.2% respectively. During 1980, the median household income was $12,661 in Stratton.

Household incomes in Stratton increased between 1980 and 1990. Most of the change was attributed to more households moving into income ranges $15,000 or more. The total number of households earning $15,000 or more increased from 76, in 1980, to 123, in 1990; an increase of 61.8%. In 1990, the median household income amounted to $20,370, which was a 60.9% increase from the 1980 median income. The CPI for the same period was 60.7%, which indicates incomes in Stratton exceeded inflation, and therefore households were earning more in real dollars in 1990 than in 1980.

TABLE 12: HOUSEHOLD INCOME, STRATTON, 1980 AND 1990

Household Income Ranges	1980				1990			
	Stratton	% of Total	State of Nebraska	% of Total	Stratton	% of Total	State of Nebraska	% of Total
Less than $5,000	54	25.7%	76,353	13.3%	17	9.2%	33,706	5.6%
$5,000 to $9,999	26	12.4%	95,803	16.7%	26	14.1%	61,896	10.3%
$10,000 to $14,999	54	25.7%	96,836	16.9%	18	9.8%	64,661	10.7%
$15,000 to $24,999	38	18.1%	162,608	28.4%	63	34.2%	128,454	21.3%
$25,000 to $34,999	17	8.1%	82,658	14.4%	22	12.0%	108,560	18.0%
$35,000 to $49,999	10	4.8%	38,583	6.7%	16	8.7%	107,111	17.8%
$50,000 and over	11	5.2%	19,774	3.5%	22	12.0%	98,470	16.3%
Total	210	100.0%	572,615	100.0%	184	100.0%	602,858	100.0%
Median Household Income	$12,661		$15,925		$20,370		$26,016	
Number of Households	210		572,615		184		602,858	

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Table 13 indicates household income for Hitchcock County householders aged 55 years and over in 1990. The purpose for this information is to determine the income level of Hitchcock County's senior households. The table indicates 556 senior households or 73.9% of the total senior population had incomes of less than $25,000 per year. In Hitchcock County, 375 senior households' or 49.9% of the total senior population had incomes less than $15,000 per year. This information indicates many senior households could be eligible for housing assistance to ensure they continue to live at an appropriate standard of living. The number of senior households should continue to grow; and fixed income households may be required to provide their entire housing needs for a longer period of time. However, fixed incomes for seniors tend to decline in real dollars at a faster rate than any other segment of the population, when compared with the rate of inflation.

The last two columns of Table 13 indicate the total number of households in each income level and the proportion of households age 55 years and older have by income level. Note that the income level of less than $5,000, 82.9% of total households in this income range were over the age of 55.

TABLE 13: HOUSEHOLD INCOME BY AGE (55 YEARS & OLDER) HITCHCOCK COUNTY, 1990

Income Categories	55 to 64 years	65 to 74 years	75 years &older	All Households 55 years & older	% of Households	Total Households	Proportion of Households by age 55 & older
Less than $5,000	23	37	47	107	14.2%	129	82.9%
$5,000 to $9,999	20	42	105	167	22.2%	225	74.2%
$10,000 to $14,999	22	37	42	101	13.4%	171	59.1%
$15,000 to $24,999	66	63	52	181	24.1%	402	45.0%
$25,000 to $34,999	27	34	32	93	12.4%	240	38.8%
$35,000 to $49,999	29	10	8	47	6.3%	160	29.4%
$50,000 or more	35	15	6	56	7.4%	131	42.7%
Total	222	238	292	752	100.0%	1458	51.6%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 14 specifies household income for Stratton householders aged 55 years and over in 1990. The purpose for this information is to determine the income level of Stratton's senior households. The table shows 77 households or 72.6% of the total senior population had incomes of less than $25,000 per year. Furthermore, there were 45 senior households' or 42.5% had incomes less than $15,000 per year. This information, as with Hitchcock County as a whole, indicates many senior households could be eligible for housing assistance to ensure they continue to live at an appropriate standard of living.

TABLE 14: HOUSEHOLD INCOME BY AGE (55 YEARS & OLDER) STRATTON, 1990

Income Categories	55 to 64 years	65 to 74 years	75 years &older	All Households 55 years & older	% of Households	Total Households	Proportion of Households by age 55 &.older
Less than $5,000	0	3	9	12	11.3%	17	70.6%
$5,000 to $9,999	5	2	16	23	21.7%	26	88.5%
$10,000 to $14,999	0	2	8	10	9.4%	18	55.6%
$15,000 to $24,999	11	10	11	32	30.2%	63	50.8%
$25,000 to $34,999	3	5	2	10	9.4%	22	45.5%
$35,000 to $49,999	6	0	2	8	7.5%	16	50.0%
$50,000 or more	6	3	2	11	10.4%	22	50.0%
Total	31	25	50	106	100.0%	184	57.6%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 15 shows owner-occupied and renter-occupied housing costs as a percentage of householder income in 1990. In addition, the table estimates the number of households experiencing a housing cost burden. A housing cost burden is defined by the U.S. Department of Housing and Urban Development (HUD) as the extent to which gross housing costs, including utility costs, exceeds 30% of gross household income, based on data published by the U.S. Census Bureau. The information shows households earning less than $20,000 per year experienced higher housing costs more than those earning more than $20,000 per year. Renter-occupied households had 19.9% of renter units experiencing a housing cost burden in Hitchcock County. Owner-occupied households had 12.0% of the total owner units experiencing a housing cost burden. Overall, in 1990, 119 households or 13.8% in Hitchcock County experienced housing cost burden.

TABLE 15: SPECIFIED OWNER AND RENTER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME, HITCHCOCK COUNTY, 1990

Income Categories	Owner-Occupied Households	% O.O. Households	Renter-Occupied Households	% R.O. Households	Total Households	% of Total Households
Less than $10,000						
Less than 30% of income	118	17.5%	28	14.7%	146	16.9%
More than 30% of income	63	9.3%	33	17.3%	96	11.1%
$10,000 to $19,000						
Less than 30% of income	135	20.0%	62	32.5%	198	22.8%
More than 30% of income	12	1.8%	5	2.6%	17	2.0%
$20,000 to $34,000						
Less than 30% of income	186	27.6%	45	23.6%	232	26.8%
More than 30% of income	5	0.7%	0	0.0%	5	0.6%
$35,000 to $49,999						
Less than 30% of income	79	11.7%	12	6.3%	91	10.5%
More than 30% of income	1	0.1%	0	0.0%	1	0.1%
$50,000 or more						
Less than 30% of income	75	11.1%	6	3.1%	81	9.4%
More than 30% of income	0	0.0%	0	0.0%	0	0.0%
TOTAL	674	100.0%	191	100.0%	865	100.0%
Housing Cost Analysis						
Less than 30% of income	593	88.0%	153	80.1%	746	86.2%
More than 30% of income	81	12.0%	38	19.9%	119	13.8%
TOTAL	674	100.0%	191	100.0%	865	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 16 indicates owner-occupied and renter-occupied housing costs as a percentage of householder income in 1990 for Stratton, and estimates the number of households experiencing a housing cost burden. The information shows households earning less than $20,000 per year experienced higher housing costs more than households with incomes greater than $20,000 per year. In general, renter-occupied households had 20.8% of the renter households in Stratton, experiencing a housing cost burden. Owner-occupied households had 12.0% of the total owner-occupied units experiencing a housing cost burden. Overall, in 1990, 17 households or 12.6%, in Stratton, experienced some type of housing cost burden.

TABLE 16: SPECIFIED OWNER AND RENTER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME, STRATTON, 1990

Income Categories	Owner-Occupied Households	% O.O. Households	Renter-Occupied Households	% R.O. Households	Total Households	% of Total Households
Less than $10,000						
Less than 30% of income	12	10.8%	2	8.3%	14	10.5%
More than 30% of income	10	9.0%	5	20.8%	15	11.1%
$10,000 to $19,000						
Less than 30% of income	16	14.4%	11	45.8%	28	20.4%
More than 30% of income	2	1.8%	0	0.0%	2	1.5%
$20,000 to $34,000						
Less than 30% of income	33	29.7%	6	25.0%	40	29.3%
More than 30% of income	0	0.0%	0	0.0%	0	0.0%
$35,000 to $49,999						
Less than 30% of income	15	13.5%	0	0.0%	15	11.2%
More than 30% of income	0	0.0%	0	0.0%	0	0.0%
$50,000 or more						
Less than 30% of income	23	20.7%	0	0.0%	23	17.2%
More than 30% of income	0	0.0%	0	0.0%	0	0.0%
TOTAL	111	100.0%	24	100.0%	135	100.0%
Housing Cost Analysis						
Less than 30% of income	**99**	**89.2%**	**19**	**79.2%**	**118**	**87.4%**
More than 30% of income	**12**	**10.8%**	**5**	**20.8%**	**17**	**12.6%**
TOTAL	111	100.0%	24	100.0%	135	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 17 indicates owner and renter costs for persons in households aged 65 years and over. Again similar trends are exhibited for households in Table 15. A housing cost burden is more pronounced for elderly rental households, 41.2% than elderly homeowners, 13.7%. Overall in 1990, 61 elderly households, or 16.2% experienced housing costs exceeding 30% of their income. This finding is of particular importance, as many elderly households will continue to face increasing housing costs and decreasing or fixed incomes. Elderly households experiencing a housing cost burden accounted for 51.3% of the total households with a cost burden, as seen in Table 15.

TABLE 17: OWNER AND RENTER COSTS BY AGE OF HOUSEHOLDER (65 YEARS & OLDER) AS A PERCENTAGE OF HOUSEHOLD INCOME, HITCHCOCK COUNTY, 1990

Income Categories	Owner-Occupied Households	% O.O. Households	Renter-Occupied Households	% R.O. Households	Total Households	% of Total Households
Housing Cost Analysis						
Less than 30% of income	296	86.3%	20	58.8%	316	83.8%
More than 30% of income	47	13.7%	14	41.2%	61	16.2%
TOTAL	343	100.0%	34	100.0%	377	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 18 has owner and renter costs by age of householders 65 years of age and older. Out of the 17, in Table 16, households that experience a housing cost burden, 10 or 58.8% were elderly households. A housing cost burden is more pronounced for elderly rental households (100%) than elderly homeowners

(13.1%) in Stratton. This finding is of particular importance, as many elderly households will continue to face increasing housing costs and decreasing or fixed incomes.

TABLE 18: OWNER AND RENTER COSTS BY AGE OF HOUSEHOLDER (65 YEARS & OLDER) AS A PERCENTAGE OF HOUSEHOLD INCOME, STRATTON, 1990

Income Categories	Owner-Occupied Households	% O.O. Households	Renter-Occupied Households	% R.O. Households	Total Households	% of Total Households
Housing Cost Analysis						
Less than 30% of income	53	86.9%	0	0.0%	53	84.1%
More than 30% of income	8	13.1%	2	100.0%	10	15.9%
TOTAL	61	100.0%	2	100.0%	63	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

INCOME AND HOUSING

The relationship between income and housing is the most crucial factor in the provision of safe, decent, sanitary and affordable housing for all households and individuals. Hitchcock County and Stratton should look at developing and implementing a set of housing goals when making decisions regarding future developments. Specifically, Hitchcock County and Stratton should develop a list of policies that are based on the following factors.

- Hitchcock County and Stratton should assist the elderly populations by ensuring policies are developed that permit and encourage the continued support of services that aid in the quality of life for elderly residents.
- Hitchcock County and Stratton should continue to play an important role in the development of affordable housing options for all residents through appropriate land-use policies.

INCOME SOURCE AND PUBLIC ASSISTANCE

Personal income by source, for Hitchcock County residents, is shown in Table 19. Between 1970 and 1997 total income and per capita income exhibited continued growth, especially non-farm income. Non-farm income increased from $9,443,000 in 1970 to $61,005,000 in 1997 or 546.0%. In 1997, farm income declined to $1,956,000, from $4,263,000 in 1970 or –54.1%. Farm Income was the primary factor in keeping the Total Personal Income lower for Hitchcock County in 1997. Per capita income increased from $3,396, in 1970 to $17,911 in 1997, an increase of 427.4%.

TABLE 19: INCOME BY SOURCE, HITCHCOCK COUNTY, 1970 TO 1997

Income Characteristics	1970	1980	1990	1997	% Change 1970-1997	% Annual Change
Total Personal Income	$13,706,000	$31,013,000	$56,029,000	$61,005,000	345.1%	9.3%
Non-farm Income	$9,443,000	$29,942,000	$45,247,000	$59,049,000	525.3%	14.2%
Farm Income	$4,263,000	$1,071,000	$10,782,000	$1,956,000	-54.1%	-1.5%
Per Capita Income	$3,396	$7,590	$14,937	$17,911	427.4%	11.6%

Source: Bureau of Economic Analysis, Regional Economic Information System, 1999

Table 20 indicates Transfer Payments to individuals in Hitchcock County from 1970 to 1997. Total transfer payments between 1970 and 1997 exhibited an increase between each reporting period. Specifically, government payments, retirement and disability insurance benefits, and medical payments comprise the majority of total transfer payments. The trend for transfer payments per capita between 1970 and 1997 indicates payments increased significantly to individuals in Hitchcock County. More importantly, transfer payments, as a proportion of per capita income has steadily become more significant between 1970 and 1997. In 1970, transfer payments comprised 12.7% of the total per capita income in 1970 and increasing to 23.7% of per capita income in 1997.

TABLE 20: TRANSFER PAYMENTS, HITCHCOCK COUNTY, 1970 TO 1997

Payment Type	1970	1980	1990	1997	% Change 1970 to 1997	% Change Per Year
Government payments to individuals	$1,628,000	$5,165,000	$8,489,000	$13,919,000	755.0%	28.0%
Retirement, Disability & Insurance Benefits	$1,121,000	$3,606,000	$5,969,000	$8,543,000	662.1%	24.5%
Medical Payments	$249,000	$1,013,000	$1,729,000	$3,935,000	1480.3%	54.8%
Income Maintenance Benefits (SSI, AFDC, Food Stamps, etc)	$83,000	$223,000	$353,000	$862,000	938.6%	34.8%
Unemployment Insurance Benefits	(D)	(D)	(D)	$91,000	938.6%	34.8%
Veteran's Benefits	$154,000	$247,000	$324,000	$401,000	160.4%	5.9%
Federal Education and Training Assistance	(D)	(D)	(D)	$76,000	–	–
Payment to Non-profit Institutions	$75,000	$179,000	$234,000	$313,000	317.3%	11.8%
Business Payments	(D)	(D)	$72,000	$109,000	–	
Transfer Payments Per Capita	$430	$1,334	$2,379	$4,249	888.1%	32.9%
Total Per Capita Income	$3,396	$7,590	$14,937	$17,911	427.4%	15.8%

(D) – Less than $50,000, estimates are included in totals.
Source: Bureau of Economic Analysis, Regional Economic Information System, 1999

INDUSTRY EMPLOYMENT

Analyzing employment by industry assists in determining key components of Hitchcock County and Stratton's employment force. This section indicates the types of industry that comprise the local surrounding economics. Table 21 indicates Employment Size by Industry for Hitchcock County, and the State of Nebraska between 1980 and 1990. Between 1980 and 1990, Hitchcock County exhibited an array of changes regarding persons employed by industry. Overall, the workforce in Hitchcock County declined by 59 positions or –3.7% between 1980 and 1990, while the State of Nebraska had an increase of 56,780 positions.

TABLE 21: EMPLOYMENT BY INDUSTRY, HITCHCOCK COUNTY, 1980 AND 1990

Industry Categories	Hitchcock County				State of Nebraska			
	1980	% of Total	1990	% of Total	1980	% of Total	1990	% of Total
Agriculture, Forestry, Fisheries, and Mining	557	34.5%	441	28.4%	78,840	11.0%	66,476	8.6%
Construction	108	6.7%	101	6.5%	43,296	6.0%	40,821	5.3%
Manufacturing, nondurable goods	63	3.9%	39	2.5%	45,269	6.3%	47,720	6.2%
Manufacturing, durable goods	98	6.1%	32	2.1%	53,777	7.5%	50,624	6.5%
Transportation	80	5.0%	54	3.5%	40,771	5.7%	37,478	4.8%
Communication and other Public Utilities	30	1.9%	53	3.4%	26,063	3.6%	25,032	3.2%
Wholesale Trade	56	3.5%	85	5.5%	33,961	4.7%	35,726	4.6%
Retail Trade	190	11.8%	224	14.4%	120,958	16.9%	138,179	17.9%
Finance, Insurance, Real Estate	45	2.8%	36	2.3%	44,014	6.1%	52,137	6.7%
Business and Repair Services	30	1.9%	32	2.1%	24,929	3.5%	35,089	4.5%
Personal, Entertainment & Recreational Services	34	2.1%	51	3.3%	27,836	3.9%	30,928	4.0%
Health Services	69	4.3%	95	6.1%	58,363	8.1%	66,275	8.6%
Educational Services	131	8.1%	147	9.5%	63,328	8.8%	68,165	8.8%
Other Professional Services	52	3.2%	104	6.7%	27,084	3.8%	48,754	6.3%
Public Administration	70	4.3%	60	3.9%	28,144	3.9%	30,009	3.9%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Those sectors that lost employment are indicated below:

- Agriculture -116 jobs or –20.8%
- Manufacturing, durable goods -66 jobs or –67.3%
- Transportation -34 jobs or –42.5%
- Manufacturing, non-durable goods -24 jobs or –38.1%
- Public Administration -10 jobs or –14.3%
- Finance, Insurance, Real Estate -9 jobs or –20.0%
- Construction -7 jobs or –6.5%

The greatest amount of jobs were lost in Agriculture. Within agriculture there were 116 jobs lost or approximately one in every five ($1/5^{th}$).

Increases in employment positions occurred in the following industry categories:

- Professional Services +52 jobs or 100.0%
- Retail Trade +34 jobs or 17.9%
- Wholesale Trade +29 jobs or 51.8%
- Health Services +26 jobs or 37.7%
- Communication & Public Utilities +23 jobs or 76.7%
- Personal, Entertainment & Recreation +17 jobs or 50.0%
- Educational Services +16 jobs or 12.2%
- Business & Repair Services +2 jobs or 6.7%

Changes within Hitchcock County are reflective of the move nationally for more service-related industries. Hitchcock County, together with their economic development partners, need to identify community assets and market the County as an attractive location for businesses to relocate, establish new operations, or assist existing businesses in expanding their scope of activity. This may become more probable as telecommuting and technology continue to improve and become assessable to rural communities.

Table 22 indicates the types of industry that were present in the local economy of Stratton and for the State of Nebraska in 1980 and 1990. Between 1980 and 1990, Stratton's workforce declined by 51 persons, while the State of Nebraska had an increase of 56,780 positions.

TABLE 22: EMPLOYMENT BY INDUSTRY, STRATTON, 1980 AND 1990

Industry Categories	Stratton				State of Nebraska			
	1980	% of Total	1990	% of Total	1980	% of Total	1990	% of Total
Agriculture, Forestry, Fisheries, and Mining	27	13.6%	30	20.4%	78,840	11.0%	66,476	8.6%
Construction	6	3.0%	6	4.1%	43,296	6.0%	40,821	5.3%
Manufacturing, nondurable goods	0	0.0%	0	0.0%	45,269	6.3%	47,720	6.2%
Manufacturing, durable goods	57	28.8%	5	3.4%	53,777	7.5%	50,624	6.5%
Transportation	4	2.0%	5	3.4%	40,771	5.7%	37,478	4.8%
Communication and other Public Utilities	2	1.0%	4	2.7%	26,063	3.6%	25,032	3.2%
Wholesale Trade	10	5.1%	3	2.0%	33,961	4.7%	35,726	4.6%
Retail Trade	27	13.6%	24	16.3%	120,958	16.9%	138,179	17.9%
Finance, Insurance, Real Estate	6	3.0%	5	3.4%	44,014	6.1%	52,137	6.7%
Business and Repair Services	5	2.5%	3	2.0%	24,929	3.5%	35,089	4.5%
Personal, Entertainment & Recreational Services	6	3.0%	3	2.0%	27,836	3.9%	30,928	4.0%
Health Services	3	1.5%	17	11.6%	58,363	8.1%	66,275	8.6%
Educational Services	23	11.6%	19	12.9%	63,328	8.8%	68,165	8.8%
Other Professional Services	13	6.6%	10	6.8%	27,084	3.8%	48,754	6.3%
Public Administration	9	4.5%	13	8.8%	28,144	3.9%	30,009	3.9%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Those sectors that indicated a loss were:

- Manufacturing, durable goods -52 jobs or –91.2%
- Wholesale Trade -7 jobs or –70.0%
- Educational Services -4 jobs or –17.4%
- Retail Trade -3 jobs or –11.1%
- Personal, Entertainment & Recreational Services -3 jobs or –50.0%
- Other Professional Services -3 jobs or –23.1%
- Business and Repair Service -2 jobs or –40.0%
- Finance, Insurance, Real Estate -1 job or –16.7%

In the sectors of construction and manufacturing (non-durable goods) Stratton's employment rate remained the same as it was in 1980; no new jobs were created in this sector.

Increases were indicated in the following employment industry categories:

- Health Services +14 jobs or 466.7%
- Public Administration +4 jobs or 44.4%
- Agriculture, Forestry, Fisheries, and Mining +3 jobs or 11.1%
- Communication and other Public Utilities +2 jobs or 100.0%
- Transportation +1 job or 25.0%

Due to the changes seen between 1980 and 1990, Stratton, along with their economic development partners, need to identify community assets and market the community as an attractive location for new businesses to relocate. This may become more probable as telecommuting and technology continue to improve and become assessable to rural communities. One interesting trend to note is the increase of amount of jobs in the health field; this could indicate the community's attempt to provide enough services so the citizens do not have to go out of the community for this kind of assistance.

COMMUTER TRENDS

Table 23 shows commuter characteristics for residents of Hitchcock County. Table 23 indicates that the commuter population of Hitchcock County has fluctuated between 1960 and 1990. A trend seen between 1960 and 1990 indicates the workforce employed in Hitchcock County declined, while the workforce commuter population is increased. The majority of the commuter increase was seen in employment in Red Willow County (McCook). The total workforce commuting outside the County for employment increased from 15.1% in 1960 to 23.4% in 1990.

TABLE 23: COMMUTER POPULATION TRENDS HITCHCOCK COUNTY, 1960 TO 1990

County of Residence	Work County	1960	1970	1980	1990	Change 1960-1990	% of 1960 Total	% of 1990 Total
Hitchcock	Hitchcock County	1,418	1,111	1,184	1,209	-209	84.9%	76.6%
	Chase County	0	0	17	24	24	0.0%	1.5%
	Dundy County	8	7	0	0	-8	0.5%	0.0%
	Hayes County	31	18	0	0	-31	1.9%	0.0%
	Red Willow County	62	154	264	285	223	3.7%	18.1%
	Elsewhere	17	25	74	60	43	1.0%	3.8%
	Not reported	135	96	0	0	-135	8.1%	0.0%
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Total Communter	253	300	355	369	116		
	% Communter	15.1%	21.3%	23.1%	23.4%	45.8%		

Source: Bureau of Economic Analysis, Regional Economic Information System, 1999

Table 24 denotes the commuter population trends in Stratton for 1990. This table shows the breakdown of who works in Stratton, and how many work elsewhere based upon those residing in Stratton. There were 150 people accounted for in the workforce and 82 or 54.7% commuted to employment opportunities outside Stratton.

TABLE 24: COMMUTER POPULATION TRENDS, STRATTON, 1990

Place of Work in 1990	Stratton
Worked in place of residence	68
Worked outside place of residence	79
Worked outside of State	3
Total	**150**

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Travel time to work is another factor to gauge where Hitchcock County's workforce has been commuting. Table 25 indicates the workforce in 1990 spent less time traveling to work than in 1980. The mean travel time decreased from 16 minutes in 1980 to 14.2 minutes in 1990. The number of workers in the 10 to 19 minutes travel categories increased 287.2% from the previous Census. This could be due to the population commuting to Trenton, McCook, Benkelman and other nearby places of opportunity. Persons working at home also changed dramatically between 1980 and 1990, from 56 at home workers to 222 persons or an increase of 296.4%. This may continue to increase due to improved telecommuting capabilities and Hitchcock's location in Nebraska.

TABLE 25: TRAVEL TIME TO WORK HITCHCOCK COUNTY, 1980 AND 1990

Travel Time Categories	1980	1990	% Change
Less than 5 minutes	293	222	-24.2%
5 to 9 minutes	297	372	25.3%
10 to 19 minutes	109	422	287.2%
20 to 29 minutes	174	158	-9.2%
30 to 44 minutes	138	113	-18.1%
45 to 59 minutes	120	33	NA
60 minutes or more	67	36	-46.3%
Worked at home	56	222	296.4%
[illegible]	[illegible]	1578	-25.8%
Mean Travel Time (minutes)	16.0	14.2	-11.3%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

Table 26 examines the travel time to work for those in Stratton. Travel time to work is a factor that effects Stratton's workforce. In 1990, commuters spent more time travelling to work than in 1980. The mean travel time increased from 8.6 minutes in 1980 to 14.6 minutes in 1990. The number of workers in the 20 to 29 minute increased 64.7%, which indicates a large amount of the population is commuting to work.

TABLE 26: TRAVEL TIME TO WORK STRATTON, 1980 AND 1990

Travel Time Categories	1980	1990	% Change
Less than 5 minutes	74	32	-56.8%
5 to 9 minutes	61	39	-36.1%
10 to 19 minutes	19	23	21.1%
20 to 29 minutes	17	28	64.7%
30 to 44 minutes	0	11	NA
45 to 59 minutes	12	9	-25.0%
60 minutes or more	0	3	NA
Worked at home	3	2	-33.3%
Total	186	147	-21.0%
Mean Travel Time (minutes)	8.6	14.6	69.8%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990

REGIONAL BASIC/NON-BASIC ANALYSIS

The following data examines six occupational areas that were established by the U.S. Census Bureau to evaluate trends in employment and the area economy. Basic employment and non-basic employment is defined as follows:

- Basic employment is associated with business activities that provide services primarily outside the area via sales of goods and services, but whose revenues are directed to the local area in the form of wages and payments to local suppliers
- Non-Basic employment is primarily the sale of goods and services within the local area and the revenues re-circulating in the form of wages and payments.

This analysis is used to further understand which occupational areas are exporting goods and services outside the area, thus importing dollars into the local economy. The six occupational areas are listed below:

- Managerial and Professional specialty occupations
- Technical, sales and administrative support occupations
- Service occupations
- Farming, forestry, and fishing occupations
- Precision production, craft and repair occupations
- Operators, fabricators, and laborers

Table 27 indicates the work sector, the percent of basic employment, the percent of non-basic employment, and the percent of the State workforce in each occupational area. Subtraction of the State's workforce in a particular occupation from Hitchcock County's workforce percentage for the same occupation determines which occupations are basic or non-basic. The local occupations having a lower percentage than the State would be considered to be non-basic. Table 27 indicates the occupations(s) which are basic or non-basic in relation to the production of goods and services. In Hitchcock County, Farming, Forestry, and Fishing occupation were basic, meaning goods and services from these occupations were exported to outside markets and in turn generated an infusion of dollars into the local economy. Another occupation that had basic employment was Technical, Sales and Administrative Services. The economic base multiplier for

Hitchcock County, is 4.76, meaning that 4.76 non-basic jobs are supported by every one (1) basic job in Hitchcock County. Every time Hitchcock County loses a job in Farming, Forestry, Fishing, Technical Services, Sales and Administrative Services (basic occupations), the County potentially will lose 4.76 non-basic jobs. Ways to accentuate these basic jobs would be to diversify the employment base even more by attracting basic related jobs into the County in other Occupation areas.

TABLE 27: BASIC/NON-BASIC EMPLOYMENT, HITCHCOCK COUNTY, 1990

Occupation Category	Basic	Non-Basic	% of Hitchcock Workforce	% of State workforce
Managerial & Professional	0.0%	15.5%	15.5%	23.1%
Technical, Sales & Administrative	0.0%	19.1%	19.1%	30.6%
Service	1.2%	14.5%	15.7%	14.5%
Farming, Forestry & Fishing	19.0%	7.4%	26.4%	7.4%
Precision, Craft & Repair	0.0%	8.4%	8.4%	10.3%
Operators, Fabricators & Laborers	0.8%	14.1%	14.9%	14.1%
TOTAL	**21.0%**	**100.0%**	**100.0%**	**100.0%**

Economic Base Multiplier for Hitchcock County is 4.76
Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 28 shows the work sector, the percent of basic employment, the percent of non-basic employment for Stratton, and the percent of the State workforce in each occupational area. Subtraction of the State's workforce in a particular occupation from Stratton's workforce percentage for the same occupation determines which occupations are basic or non-basic. The occupations in Stratton having a lower percentage than the same occupation Statewide are considered to be non-basic. Table 28 indicates the occupation(s) which were basic or non-basic in relation to the production of goods and services. For Stratton, Farming, Forestry and Fishing, Managerial and Professional, and Service Occupations are basic, meaning goods and services from these occupations are exported to outside markets and in turn generate an infusion of dollars in to the local economy. The economic base multiplier for Stratton is 4.10, meaning that 4.10 non-basic jobs are supported by one (1) basic job in Stratton.

TABLE 28: BASIC/NON-BASIC EMPLOYMENT, STRATTON, 1990

Occupation Category	Basic	Non-Basic	% of Stratton Workforce	% of State workforce
Managerial & Professional	6.2%	23.1%	29.3%	23.1%
Technical, Sales & Administrative	0.0%	13.6%	13.6%	30.6%
Service	6.6%	14.5%	21.1%	14.5%
Farming, Forestry & Fishing	11.6%	7.4%	19.0%	7.4%
Precision, Craft & Repair	0.0%	5.4%	5.4%	10.3%
Operators, Fabricators & Laborers	0.0%	11.6%	11.6%	14.1%
TOTAL	**24.4%**	**100.0%**	**100.0%**	**100.0%**

Economic Base Multiplier for Stratton is 4.10
Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 29 indicates the percentage employment by occupational categories for residents of Hitchcock County, Nebraska and surrounding counties in 1990. Comparison with surrounding communities, indicates that Hitchcock County has a higher labor force employed in "Farm/Agricultural/Natural Resource" related occupations (26.4%), than surrounding communities who indicate a range of 7.5% to 24.7%. Precision Production occupation category exhibited a slightly smaller labor force composition for Hitchcock County than surrounding communities, except for Keith County. Technical, Sales, Administrative Support; Service; Managerial and Professional; and Operator related occupation categories exhibited similar labor force compositions with surrounding communities.

TABLE 29: REGIONAL AND STATE LABOR FORCE COMPARISONS, HITCHCOCK COUNTY, 1990

Location	Managerial & Professional	Technical, Sales & Administrative	Service	Farming, Forestry & Fishing	Precise, Craft & Repair	Operators, Fabricators & Laborers	Base Multiplier
Nebraska	23.1%	30.6%	14.5%	7.4%	10.3%	14.1%	NA
Hitchcock County	**15.5%**	**19.1%**	**15.7%**	**26.4%**	**8.4%**	**14.9%**	**4.76**
Perkins County	15.4%	24.1%	14.0%	24.7%	9.1%	12.6%	5.78
Keith County	20.0%	29.1%	17.9%	13.5%	1.1%	18.4%	7.26
Furnas County	19.0%	18.5%	16.0%	22.9%	9.1%	14.4%	5.79
Chase County	18.1%	21.9%	13.9%	21.5%	10.1%	14.5%	6.92
Deuel County	15.0%	22.0%	17.2%	18.6%	12.0%	15.2%	5.99

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

Table 30 shows the percentage employment by occupational categories for residents of Stratton and surrounding communities in 1990. Comparing communities similar to Stratton indicates that Stratton has a higher labor force employed in "Managerial and Professional" related occupations (29.3%), than surrounding communities who indicate a range of 10.6% to 24.6%. Service occupations and farming occupations had a larger percentage in Stratton than the rest of the communities as well. The other three occupations exhibited a smaller percentage of the workforce than the other communities compared to Stratton. In comparison to the State of Nebraska, Stratton's labor force is diverse and efforts to continue to maintain the local economy as well as help it grow into a better future.

TABLE 30: REGIONAL AND STATE LABOR FORCE COMPARISONS, STRATTON, 1990

Location	Managerial & Professional	Technical, Sales & Administrative	Service	Farming, Forestry & Fishing	Precise, Craft & Repair	Operators, Fabricators & Laborers	Base Multiplier
Nebraska	23.1%	30.6%	14.5%	7.4%	10.3%	14.1%	NA
Stratton	**29.3%**	**13.6%**	**21.1%**	**19.0%**	**5.4%**	**11.6%**	**4.1**
Culbertson	15.1%	25.7%	19.3%	10.1%	9.2%	20.7%	7.14
Trenton	24.6%	20.5%	18.7%	5.6%	11.6%	19.0%	8.42
Benkleman	22.2%	26.7%	20.3%	10.3%	8.3%	12.2%	11.55
McCook	22.1%	29.5%	13.7%	2.9%	10.7%	21.1%	13.38
Palisade	10.6%	27.6%	20.3%	5.7%	22.0%	13.8%	5.72

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990

AGRICULTURAL PROFILE

The agricultural profile enables a County to evaluate the influence of the agriculture industry on the area economy. Since most Nebraska counties were formed around county seats and agriculture, the agricultural economy, historically, has been the center of economic activity for the County. The U.S. Census Bureau, Census of Agriculture tracks agricultural statistics every five years, however does not coincide with the decennial U.S. Census of Population and Housing, thus making it difficult to compare sets of census data.

AGRICULTURE TRENDS

Table 31 identifies key components affecting Hitchcock County's agricultural profile. The Table indicates the numbers of farms within Hitchcock County have fluctuated between 1982 and 1997, due to an agricultural sector, which continues to operate with economic instability. The average size of farms (acres) increased slightly between 1982 and 1997, from 922 acres in 1982 to 1,198 acres in 1997. The average value of land and buildings fluctuated between 1982 and 1997, from $662,084 for farms and $691 per acre in 1982 to $654,466 for farms and $465 per acre in 1997. These trends have been the norm for rural counties in Nebraska, especially along the southern tier of counties bordering Kansas.

TABLE 31: AGRICULTURAL PROFILE, HITCHCOCK COUNTY, 1982-1997

Agricultural Characteristics	1982	1987	1992	1997	% Change 1982-1997
Number of Farms	443	426	379	339	-23.5%
Land in Farms (acres)	408,346	429,342	403,584	406,227	-0.5%
Average size of farms (acres)	922	1,008	1,065	1,198	29.9%
Total land area for Hitchcock County	453,702	453,702	453,702	453,702	0.0%
Percentage of land in farm production	90.0%	94.6%	89.0%	89.5%	-0.5%
Total cropland (acres)	228,153	252,303	250,985	238,900	4.7%
Harvested cropland (acres)	134,582	127,408	126,259	144,420	7.3%
Estimated Market Value of Land & Bldg (avg./farm)	$662,084	$413,038	$379,994	$654,466	-1.2%
Estimated Market Value of Land & Bldg (avg./acre)	$691	$356	$331	$465	-32.7%

Source: U.S. Census of Agriculture, 1992, 1997

The size of farms, in acres, is indicated in Table 32 between 1982 and 1997. In general, the information suggests that smaller farm sizes are declining in number, while farms are becoming consolidated; thus the declining number of farms.

TABLE 32: NUMBER OF FARMS BY SIZE
HITCHCOCK COUNTY, 1982-1997

Farm Size (acres)	1982	1987	1992	1997	% Change 1982-1997
1 to 9	32	2	21	15	-53.1%
10 to 49	9	13	24	14	55.6%
50 to 179	50	47	35	27	-46.0%
180 to 499	95	81	65	62	-34.7%
500 to 999	90	86	79	75	-16.7%
1,000 or more	167	176	155	146	-12.6%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Source: U.S. Census of Agriculture, 1992, 1997

Table 33 indicates the number of farms and livestock by type for Hitchcock County between 1982 and 1997. The predominant livestock utilized for agricultural purposes in Hitchcock County are cattle and calves. A cattle ranch is the primary livestock operation in Hitchcock County. Between 1992 and 1997 selected cattle ranching indicators reveal a decline in numbers of farms, but an increase in number of cattle. This is partially attributed to the fact that pasture land was rented out instead of owned. The remaining livestock operations show a decline in the number of farms and total livestock of hogs and pigs, sheep and chickens. Average livestock numbers per farm were calculated for each animal and the results indicated that cattle, beef cows, hogs and pigs, sheep and lambs increased relative to the decline in farms, while milk cows and chickens decreased in average number of animals per farm.

TABLE 33: NUMBER OF FARMS & LIVESTOCK BY TYPE-HITCHCOCK COUNTY, 1982-1997

Type of Livestock	1982	1987	1992	1997	% Change 1982 to 1997
Cattle and Calves					
farms	335	275	248	217	-35.2%
number	41,851	35,447	31,979	30,753	-26.5%
average	125	129	129	142	13.4%
Beef Cows					
farms	275	220	206	180	-34.5%
number	17,609	14,372	13,279	12,775	-27.5%
average	64	65	64	71	10.8%
Milk cows					
farms	14	14	7	5	-64.3%
number	226	359	114	63	-72.1%
average	16	26	16	13	-21.9%
Hogs and Pigs					
farms	100	71	56	16	-84.0%
number	24,924	18,603	14,174	5,815	-76.7%
average	249	262	253	363	45.8%
Sheep and lambs					
farms	13	17	14	9	-30.8%
number	854	826	587	386	-54.8%
average	66	49	42	43	-34.7%
Chickens <= 3 months					
farms	55	33	20	16	-70.9%
number*	3,109	4,067	116	D	-96.3%
average*	57	123	6	D	-89.7%

(D) Withheld to avoid disclosing data for individual farms

Source: U.S. Census of Agriculture, 1992, 1997

* Denotes that the percent of change is from 1982 to 1992.

SUMMARY AND PLANNING IMPLICATIONS

HITCHCOCK COUNTY

Hitchcock County's population has exhibited a decline in persons since 1930. The population of the County decreased from 4,051 persons in 1970, to 3,750 persons in 1990. The population estimate for 1998 amounted to 3,442 persons, which represents a continuing population decline. The primary factor effecting population change in Hitchcock County is out-migration, particularly in the 15 to 29 age cohorts. The projections provided in this study indicate several possible scenarios of population forecasts for the County, the most likely scenarios are forecasting a continued decline in population.

There was a predominance of older homes constructed before 1950 (55.2%) within the County. Significant construction occurred during the 1970s, which amounted to 351 housing units. Hitchcock County tenants paid more in monthly rents (median rent) in 1990 than in 1980, when adjusted for inflation. The median value of owner-occupied housing failed to increase at the same rate as inflation; therefore were valued less in 1990 in real dollars, than in 1980.

Households in Hitchcock County were earning more in 1990 on average than they were earning in 1980 when compared to the CPI. Between 1970 and 1990 non-farm, farm and per capita income increased. Between 1990 and 1997, farm income decreased dramatically. Between 1970 and 1997, Transfer Payments in the form of government assistance, retirement and disability insurance benefits, medical payments and social security income increased at almost 90%.

The three largest industries in the County include 1) agriculture, forestry, and fisheries; 2) retail; and 3) educational services. The number of persons working outside of the County continues to increase, while average travel time to work has declined slightly. Agriculture and technical, sales and administrative services are considered to be "basic" industries in Hitchcock County, meaning occupations relating to agriculture and/or technical services bring an infusion of dollars in to the local economy.

Hitchcock County's agricultural industry is undergoing changes as is the whole State of Nebraska. These include a fluctuation in the number of persons employed in farming, number of farms and a decreasing market value of land in farms and farm buildings within the County. Crop farming and cattle livestock operations continue to be the predominant forms of agricultural production within the County.

SUMMARY AND PLANNING IMPLICATIONS

STRATTON

Stratton's population has shown a decline in persons since 1930. The population of the community decreased from 481 in 1970 to 427 in 1990. The estimated population in 1998 was 373 persons, which continued the declining trend of the past. The primary factor effecting the population change in Stratton was likely out-migration, particularly in the 20 to 29 age cohorts. Out-migration is not possible to directly calculate for communities the size of Stratton, due to limited data. However, it is suspected that Stratton is following a similar path as the County. The projections provided in this study denotes several possible scenarios for population forecasts of Stratton. The most likely forecast for this community is a continuation of the decline seen in the past.

The age of housing with Stratton is typical of rural communities. There is a predominance of older homes constructed before 1950 (41.5%). In the 1970s, significant construction occurred; 75 housing units were built in during that period (31.8%). Stratton tenants paid less in monthly rents (median rent) in 1990 than in 1980, when adjusted for inflation. The median value of owner-occupied housing, also did not increase at the same rate as inflation, and were valued less in 1990 in real dollars, than in 1980. Households, in Stratton, were earning more in 1990 than in 1980.

In 1990, the three largest industries include 1) agriculture, forestry, and fisheries; 2) retail trade; and 3) educational services. These industries are the largest industries for the County as well. The number of persons working outside Stratton continues to increase, as well as the average travel time to work. The "basic" industries in Stratton are agriculture, services, and managerial and professional; meaning occupations relating to these industries bring outside money into the local economy.

COMMUNITY FACILITIES

COMMUNITY FACILITIES

State and local governments provide a number of goods and services for their citizens. The people, buildings, equipment and land utilized in the process of providing these goods and services are referred to as public facilities.

Public facilities represent a wide range of buildings, utilities and services that are built and maintained by the different levels of government. Such facilities are provided to insure the safety, well being and enjoyment of the residents of a jurisdiction, in this case, Hitchcock County. These facilities and services provide county residents with social, cultural, educational, law enforcement, fire protection and recreational opportunities designed to meet area needs. It is important for all levels of government to anticipate the future demand for their goods and services if they are to remain strong and vital. The sequential step is to evaluate the ability of the county to meet that future demand and determine the level of services that will be provided. The analysis of existing facilities, future goods and services are contained in the Facilities Plan. Alternatively, in some instances, there are a number of goods and services that are not provided by the local or state governmental body and thus are provided by non-governmental private or non-profit organizations for the County. These organizations are important providers of goods and services, especially in sparsely populated rural counties.

FACILITIES PLAN

The Facilities Plan component of Hitchcock County's Comprehensive Development Plan reviews present capacities of all public and private facilities and services. The section evaluates the current demands and accepted standards to determine whether capacity is adequate, as well as determine what level of service is required to meet future demands within the planning period. Finally, recommended improvements for public goods and services that are not adequate for present or future needs are provided.

The Facilities Plan for Hitchcock County is divided into the following categories:

- Recreational Facilities
- Educational Facilities
- Fire and Police Protection
- County/Community Buildings
- Transportation Facilities
- Communication Facilities
- Utilities
- Health Facilities

RECREATIONAL FACILITIES

Hitchcock County

The recreational facilities within Hitchcock County are located in and supported by the various municipalities in the county. Besides the following recreational facilities in and around Hitchcock County, each Village in the County has a public swimming pool and park.

State Parks & Recreational Areas

Massacre Canyon Historical Marker & Visitor Center is located 3 miles east of Trenton on U.S. Highway 34. This monument was erected in 1931 as a memorial to the last major battle fought between Indian tribes in the United States. The battle took place on August 5th, 1873 between the Sioux and the Pawnee in the canyon just west of the Monument. The 91-ton monument is made of pink granite and stands 35 feet high. Carved at the top and facing west is the face of John Grass, a noted Sioux Indian. The visitor center was constructed in 1999 and features the history of the battle as well as stories of the early history of the early pioneers in the area. The building is handicap accessible, has modern rest rooms and snack machines. There is a pavilion for picnicking and the enjoyment of a panoramic view of the area.

Swanson Reservoir is located two miles west of Trenton on US Highway 34. The area is approximately 6,131 acres; 1,157 acres in pasture and 4,974 acres of water. There are several cooking grills, as well as picnic shelters available. Camping is allowed and shower facilities are available. There is a 48-mile mountain bike and hiking trail system that winds around the reservoir. The area is wheelchair accessible and fishing is allowed in designated areas. Concessions are available and non-wake boating is allowed. There is a park office on site and playground equipment. The wildlife management area that is in the State Recreational Area is 2,800 acres in size. Hunting of pheasant, wild turkey, duck and deer is allowed in this area, but not in the State Recreational Area. The site is open 24 hours a day from May 5th to October 1st of each year.

Other Recreational Facilities and Locations

In addition to recreational facilities in Hitchcock County, the plan reviews data on recreational facilities in nearby counties that may serve the residents of Hitchcock County. The following is a breakdown of those facilities.

Red Willow State Recreational Area (SRA) is located 11 miles north of McCook in southwest Frontier County and was completed in 1962. The Nebraska Game and Parks Commission administers the lake's recreation. The lake covers 1,628 acres and 4,372 acres in land. Fishing is allowed for bass, crappie, northern pike, white bass, wiper and walleye. There are modern camping and recreational facilities at the SRA, as well as hunting and boating. There is a designated swimming beach and modern restrooms.

Rock Creek State Recreation Area and Fish Hatchery is in the southwestern corner of the state about four miles north of Parks (just off US Highway 34 between Benkelman and Haigler). The dam, which holds back about 50 acres of trout-supporting water, was constructed in 1932-33. Fishing, canoeing, and nonpowered boating are the primary aquatic activities. Rock Creek State Recreation Area provides a valuable fishery two miles upstream and provides 3,000 catchable rainbow trout per month during March, April and May. Camping is allowed but it is quite primitive. There are no camper pads or amenities such as electricity and showers.

Champion Mill State Historical Park is located off of Highway 6 about 25 miles from the western edge of Hitchcock County. There is a restored water-powered flour mill on grounds and is open all year. Interpretive facilities are open only Memorial Day to Labor Day. The recreation area offers fee camping and water activities on the mill pond.

Enders Dam and Recreation Area is 5 miles east and 4 ½ miles south of Imperial and was completed in 1951. The area has a 1,707-acre lake with a 26-mile shoreline. It stores water to irrigate some 21,000 acres of land. There is camping, picnic tables, fishing, boat ramps and modern restrooms at this facility. The entire are covers 5,300 acres. The Enders Wildlife Refuge covers 2,146 acres on the western side of the lake. Hunting for big game, waterfowl, and upland game is allowed on public property along the river, west of the refuge. Totally, there are about 1,500 acres of land with managed habitat, open to hunters.

Hitchcock County Racetrack is located at the fairgrounds in Culbertson. This racetrack allows all stock cars to race and there are tentative plans to place a go-cart track at this facility. The racetrack started in 1998 and averages 4 races a year. The fair board and volunteers run the track. Several local businesses assist with water supply and manpower.

Oak Canyons is located between Culbertson and Trenton. This area is old Indian grounds and is the only place in southwest Nebraska that has native oaks.

Golf Courses

Trenton Golf Course is located one-mile north and one-half mile west of Trenton and is a 9-hole course.

Broken Tee is located behind the Elks Club in Trenton and is a 9-hole course.

Heritage Hills is located in McCook and is a 6,715-yard 18-holes golf course. Tee times are suggested up to one week in advance. Their facilities include: putting green, driving range, chipping green, practice

bunker, lessons, club rentals, cart rental, pull carts, lockers, showers, snack bar, bar and meeting room. This facility is a member of the Nebraska Golf Association.

Benkelman County Club is located outside of Benkelman on Highway 34 and is a 3,159-yard 9-holes golf course. Tee times are not required and it cost $15 to play all day. Their facilities include a putting green, chipping green, driving range, cart rental and concessions. This facility is a member of the Nebraska Golf Association.

Enders Lake Golf Course is located in Enders and is a 3,296-yard 9-holes golf course. Tee times are not required. Their facilities include: putting green, driving range, rental clubs, motorized cart rentals, pull carts, snack bar, bar, meeting room, tennis, swimming, and a pro-shop. No spikes are allowed on the greens and this facility is a member of the Nebraska Golf Association.

Arrowhead Meadows is located in Curtis and is a 3,442-yard 9-holes golf course. Tee times are required one week in advance. These facilities include: putting green, chipping green, practice bunker, driving range, rental clubs, rental carts, pull carts, snack bar, restaurant, and meeting room. No spikes are allowed on the course and the facility is a member of the Nebraska Golf Association.

RECREATIONAL RECOMMENDATIONS

Hitchcock County, thus Stratton, is located in Nebraska Recreation Planning Region V. Recreation Planning Region V consists of 18 Nebraska counties. These counties include Hitchcock, Red Willow, Keith, and Lincoln. Basic park and recreation space and location planning offers the following recommendations for parks and recreational areas. High density recreation areas should be located near urban areas and user-oriented in design and a range of recreational facilities should be available that are appropriate to the park setting and mass use; and general outdoor recreation areas should utilize natural resources, and be equipped with man-made facilities.

When the population of Hitchcock County and Stratton increases, the communities will be faced with the need to provide more parkland. It is not only the amount of parkland, but also, the location of the parkland that is important. It is recommended that future parkland be centrally located within new subdivisions in order to provide central access to the recreational opportunities.

EDUCATIONAL FACILITIES

The public schools in Nebraska are grouped into six classes, depending upon the type of educational services provided and the size of the school district. The six classes, as defined by the State of Nebraska, are:

- Class 1 Any school district that maintains only elementary grades
- Class 2 Any school district with territory having a population of one thousand (1,000) inhabitants or less that maintains both elementary and high school grades
- Class 3 Any school district with territory having a population of more than one thousand (1,000) and less than one hundred thousand (100,000) that maintains both elementary and high school grades
- Class 4 Any school district with territory having a population of one hundred thousand (100,000) or more and less than two hundred thousand (200,000) inhabitants that maintains both elementary and high school grades
- Class 5 Any school district with territory having a population of two hundred thousand (200,000) or more that maintains both elementary and high school grades
- Class 6 Any school district that maintains only a high school. The territory of Class 6 district is made up entirely of Class 1 districts (or portions thereof) that has joined the Class 6.

Since 1990, Class 1 districts have had the ability to "affiliate" with Class 2, 3, 4, and 5 districts in order to provide a high school education to the district students.

Public Schools

The residents of Hitchcock County are served by one unified school system. A K-12 school in Culbertson, a high school (9-12) in Trenton and a K-8 school in Stratton serve this system. Each school has a football field and track. Table 35 indicates student enrollment figures for school districts located in Hitchcock County. In addition, enrollments are categorized by age/grade into kindergarten to 6th grades, 7th to 8th grades, and 9th to 12th grades.

Figure 5 represents the school districts that serve Hitchcock County. Note that district numbers 44-0008, 44-0011, and 44-0001 are now a unified school district. The Department of Education has not changed the map as of yet, due to the fact that these school districts just became unified in the 1999-2000 school year. The light blue, darker pink and orange sections of the map are now all one district. The Wauneta/Palisade district still exists and the students are bused to Chase County. There are several districts that serve Hitchcock County students but are not in the County, these include:

- Hayes Center, District 43-0079
- Medicine Valley, District 32-0125
- McCook, District 73-0017

- Fitch, District 73-0017
- Dundy County, District 29-0117

TABLE 35: PUBLIC SCHOOL ENROLLMENTS (COMMUNITY)-HITCHCOCK COUNTY, 1999-2000

School District	K-6	7-8	9-12	Total
Wauneta/Palisade	164	50	100	314
Hitchcock County Unified Schools, 44-2001-000	208	62	196	466

Source: Nebraska Department of Education, 2000; 1999/00 Nebraska Education Directory

Table 36 represents the valuations and cost per student for each school district in Hitchcock County. School officials should be looking at the population projections for the County and municipalities and developing future needs plans for each district. Facilities in each school district, at the time of the plan, were adequate and meeting the needs of faculty and students. Buildings and learning tools of each district are being updated continually. This area of the school districts does not seem to be a problem at this time.

TABLE 36: SCHOOL DISTRICT VALUATIONS & COST PER PUPIL (ADA)- HITCHCOCK COUNTY, 1999

School District	Student Population	District Valuation	Cost Per Student
Wauneta/Palisade	314	$121,272,913	$6,833
Hitchcock	466	$173,831,843	$8,291

Source: Nebraska Department of Education, 2000; JEO

Post-Secondary

There are not a large amount of post-secondary schools in close proximity to Hitchcock County. There is a two-year college with credits transferable to other state colleges and a Vocational Technical Schools in North Platte. McCook has a two-year college with transferable credits. There is a two-year college in Colby, Kansas and a Vocational Technical School in Goodland, Kansas where residents from Hitchcock County attend.

The West Central Research and Extension Center (WCREC) located in North Platte is part of the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources Division. Also located at the WCREC is the Nebraska Plains Higher Education Center (NPHEC), their role is to capitalize on higher education opportunities available for the citizens in western Nebraska. A Distance Learning Center at the WCREC permits the Nebraska Plains Higher Education Center to take advantage of those facilities and provide professional development programs to area residents. Programs and coursework cover the following topics including:

- 4-H Development
- Crop Development
- Livestock Management
- Pest Management
- Human Resource Management
- Leadership skills
- Communication skills
- Teamwork skills

COUNTY/ COMMUNITY BUILDINGS

This section is considered a summary of the facilities and county-owned buildings within Hitchcock County.

County Court House

The County Courthouse is a one-story building located at 229 East D Street in Trenton, the Courthouse was completed in 1969. The first County Courthouse was burned to the ground by a burning oil lamp. The building was built directly north of the old courthouse (which served the County from 1906 to 1967). The building is 94 x 168 feet and is completely fireproof (including the jail). All County offices are located in the Courthouse, including the County Attorney, Sheriff Department, and the Jail. There are 39 employees housed in this facility. The facility is in good condition and is adequate for the future needs of the County offices. There is space to expand, yet there are no plans for expansion at this point. This building is ADA compliant.

County Road Department/Maintenance Shop(s)

Hitchcock County has maintenance buildings located in Stratton, Trenton and Culbertson. The maintenance facility in Stratton is located on Route 1, Trenton's is located at 201 East G Street, and Culbertson's facility is located at 510 Railroad Street. Both Trenton and Stratton's shops were constructed in 1978 and Culbertson's facility was constructed in 1982. The only type of activities at these facilities is the storage of fuel. There is space to expand at any of the facilities.

COUNTY HISTORICAL SITES AND BUILDINGS

Rural Areas

Massacre Canyon Battlefield and Woodland Site [25-HK-13]

This site is near Trenton in the narrow canyon, which feeds the Republican River Valley. This site remains important because it is a prehistoric archaeological site. The archaeological site is a notable example of the Woodland Tradition, which flourished along the Republican and its tributaries from approximately A.D. 500-1000. The site appears to be the remains of a small village containing hearths, storage or refuse pits, and a burial area.

St. Paul's Methodist Protestant Church [HK00-001]

This site is located near Culbertson and was completed in 1900. This church discontinued regular services in 1951. In 1975, the Stone Church Community Association was formed to restore and preserve the building as a memorial to area pioneers.

Bridge [HK00-078]

Located along a county road (old US Highway 34), between Stratton and the western shore of Swanson Reservoir, this bridge crosses an unnamed stream just south of modern US Highway 34. The structure is a twenty-foot, single-span concrete slab. The Ideal Cement Company constructed the bridge in 1908. The bridge was incorporated into US Highway 34 and carried relatively heavy interstate traffic until the highway was rerouted further north. It now carries intermittent local traffic in unaltered condition. Its 1908 construction date distinguishes it as the earliest documented example of concrete bridge construction in the state.

Hitchcock County Museum

The museum building was built in 1886 in Trenton. It has served as a bank and offices before it was turned into the museum in 1966. The building was deeded over to the Historical Society as a gift in 1981. Then, a building that was built in 1889 for a dry goods store was converted into part of the museum due to the lack of space of the other building. The east side of this building was opened in the summer of 1969 and the west part of the building was opened in the spring of 1972. In 1977, Trenton's Business and Professional Women's Club had a special fund drive to help the museum acquire the first filling station of Trenton. This building was then opened in 1978 to the public.

There are three more buildings on the site of the museum's property. One building built in 1981, now houses the office and reception area of the Hitchcock County Museum and Historical Society. This building is a fireproof steel building. In 1982, the Historical Society added another building. The building was originally the Pioneer Drugstore, built in 1887. In 1986 it was decided to replace this building with another metal building. This building now houses many of the late Senator Arthur Carmody's memorabilia and is also a repair and restoration center. The last addition to the historical museum is the rural schoolhouse known as the Hidy School. All of these facilities are supported by tax dollars of the County, but it is not run by the County.

Hitchcock County Senior Center

Hitchcock County Senior Center, also known as Grandview Manor Retirement Village and Medical Center is located at 903 Bailey Street in Stratton. The building was constructed in 1968 and was a hospital before it turned into the senior center. There is room for expansion and at the point of the plan they are in the process of planning to build duplexes on the site. The building is ADA compliant and houses the senior center, apartments for seniors and the Hitch and Hayes Transportation program for seniors. There are eight apartments at the site that house senior citizens. The retirement village is connected to a clinic, which is for all citizens of Hitchcock County. Services that are offered at the Center are a home meal program, senior meals at the center, several activities for seniors (i.e. Bingo, crafts) and transportation.

Hitchcock County Fairgrounds

The Hitchcock County Fairgrounds are located in Culbertson.

STRATTON COMMUNITY FACILITIES

Village Hall is located at 311 Bailey Street and was built in the 1950s. The building houses one full-time employee, which is the Village Clerk. The building is in fair physical condition and is adequate for the future needs of the community and there is room to expand if necessary. The building is not ada compliant. At this point of the plan there are preliminary plans to build a new building for the Hall, the Library, Village Shop, and ambulance. Funding was not found and the project is currently on hold. The present building is used for the clerk's office, monthly board meetings and meeting place for non-profit organizations.

Stratton Public Library is located in the Veteran's Memorial Hall. The Stratton's Women's Club started the library as a traveling library in 1923 and then found a permanent home for the library at the Veteran's Memorial Hall in 1925. The Women's Club then transferred the ownership of the library to the Village in 1930. There are 8,275 volumes in the facility and is open three days a week for a total of 12 hours per week.

Village Maintenance Facilities are located at 409 Bailey Street. The shop is used for storage of vehicles and equipment. It is also used to repair and maintain accessories and equipment used in the water, sewer, electric, street, pool and park departments. It is used for record storage and a maintenance office as well. Because the building is over 60 years old, the building should be replaced instead of expanded when necessary.

US Post Office facility is located at 310 Bailey Street. The building was constructed in 1961. The building is GSA leased and is in good condition. There is space to expand the facility if necessary and there is adequate space for operation at this point in time.

Senior Center (See Hitchcock Senior Center information above)

TRANSPORTATION FACILITIES

Truck Line Service

Currently, there are two interstate carriers serving Hitchcock County, as well as the Village of Stratton.

Railroad Service

Hitchcock County and Stratton are served by the Burlington Northern Santa Fe Railroad. The nearest passenger services are located in McCook with AMTRAK.

Bus Service

There is presently bus service in Stratton to serve Hitchcock County. The next closest bus service is located in McCook.

Airports

Trenton Municipal Airport is the only public airport in Hitchcock County. The runway is 6,000 feet long and has a grass surface. The runway is lighted and private aircraft storage and maintenance is available at the facility. The closest airport that serves passengers daily is the McCook Municipal Airport. United Express is the airline and the airport has approximately 4 flights daily.

COMMUNICATION FACILITIES

Telephone Services

Local telephone services, in Hitchcock County and Stratton, are provided by Great Plains Communication. There are various long distance carriers serving Hitchcock County and the Village of Stratton, primary companies being AT&T, MCI, Excel, Sprint, US West, and LCI. At present both the local and long distance services are adequate.

Radio and Television

Presently, there are no radio stations located in Hitchcock County or Stratton. Hitchcock County residents and Stratton residents are able to receive radio transmissions from three radio stations in McCook and seven stations in North Platte.

Presently, there are no television stations located or licensed in Hitchcock County. There are several television stations that serve the County that are in close proximity to Hitchcock County. The television stations are McCook's Channel 8 (NBC), Hayes Center's Channel 6 (ABC), and North Platte's Channel 2 (NBC) and Channel 44 (PBS-satellite out of Lincoln).

The residents of Hitchcock County do have access to Cable Television through several different cable companies. Culbertson has access through Classic Cable, Palisade has access through Scope CATV of Nebraska, Stratton has access through Post Cablevision, and Trenton has access through Custom Cable Systems.

Newspapers

There is a County Newspaper called the Hitchcock County News, which serves the County and the communities and has approximately 1,300 subscribers. The Wauneta Breeze is circulated throughout the county, as well as a monthly newsletter called New Beginnings out of Stratton. The McCook Daily Gazette is another newspaper serving the area with approximately 7,700 newspapers. The other paper that serves the County is the Benkelman Post and that is a weekly paper with approximately 1,500 subscribers.

PUBLIC UTILITIES

County Utilities

Water

There is no rural water district in Hitchcock County, all rural residents have private well systems.

Sewer

All rural residents in Hitchcock County must supply their own septic tanks.

Stratton Utilities

Water Supply and Distribution System

The municipal water system in Stratton has three groundwater supply wells located south of the railroad tracks. Two wells are located north of the river and one well south of the river. The present combined pumping capacity of the three wells is 510 gallons per minute (gpm) or 734,400 gallons per day (gpd). Pumping capacity is supplemented by a 60,000 gallon elevated storage tank located on Bailey Street. The storage facility was erected in 1976. Present average annual consumption in the summer and winter is approximately 153,000 gpd and 63,000 gpd respectively. The highest peak consumption required a pumping rate of 417,000 gpd.

The water distribution system consists of pipe sizes ranging from 2 to 12 inches in diameter. Distribution mains are located in a grid system throughout the Village. A water system improvement project was completed in 1999. Approximately 4,900 feet of water distribution main was replaced at that time. Present water main sizings are large enough to maintain adequate distribution of water during peak periods such as when large quantities are required in a specific area to fight fire. The Village was given an ISO fire rating of 7 in 1994. Fire hydrants are tested annually during the routine maintenance-flushing program. Pressure throughout the system usually ranges from 30 to 70 pounds per square inch (psi).

Based upon the water use data, the future system requirements can be forecasted by considering population decreases, estimated per capita water consumption decreases and fire flow requirements. The population is forecasted to decline to 373 by the year 2010 using a –14.4% change in the population trends from 1980 to 1990. A population of 427 persons was used as the base figure for population calculations. Peak flow

requirements can be expected to be below current rates of 734,400 gpd, which is the present maximum pumping capacity of the system. The pumping and distribution capacities of the present water system exceed the estimated average and peak daily demands through the planning period.

Sanitary Sewerage System

The sanitary sewer system in Stratton consists of gravity flow sewers ranging in size from 6 to 10 inches in diameter. The collection system was constructed in the 1930s. The collection system was designed and constructed to provide adequate flow capacities through the system to a lift station where it is pumped to a treated lagoon. Due to the age of the collection system, close observation and examination of the system should continue. There are no anticipated problems regarding the capacities of the existing collection system relative to future land use types, locations and densities. It should prove adequate through planning period. There is one lift station constructed in 1975 that pumps wastewater into the lagoon system. Monitoring of the lift station and pump is recommended due to usage and age of the system.

Wastewater treatment is provided by a two-cell full retention lagoon system constructed in 1975. Each cell has a surface area of 2.41 acres for a total of 4.82 acres. Transfer piping and valves are located between the lagoons. Currently wastewater is transferred between the primary and secondary cell about once a month, dropping levels about 6 inches in the primary cell. Present average wastewater flow rates are 28,000 gpd. Design domestic flows of the system are 29,400 gpd.

Stratton currently performs an annual main flushing program to clean and maintain the collection system. An estimated future population of 374 would generate an average sewage flow of less than the current average 28,000 gpd.

Storm Drainage Facilities

The storm drainage in Stratton consists of both surface drainage and storm sewers. The storm drains are located south of US Highway 34. Various collection boxes drain primarily one-block areas. The rest of the Village is drained by surface flow.

Solid Waste Disposal Facilities

Once a week, refuse and trash generated by the residents, businesses, and industries within Stratton and the surrounding County is hauled by Jerry's Trash Hauling to a transfer station in McCook, Nebraska. The Village of Stratton collects a residential trash collection fee of $10.65/household and the hauler collects fees from commercial users. Recycling is implemented sparingly. Residents participating in recycling can haul materials to McCook. Yard waste is accepted and composted at the old landfill in Stratton. Stratton has a permit to burn brush from the Nebraska Department of Environmental Quality.

Electricity

Southwest Public Power of Palisade, Nebraska and Nebraska Public Power District of McCook provide electricity. At this point of the plan, provision of electricity is adequate for the needs of the residents and for future residents of Hitchcock County, thus Stratton.

HEALTH FACILITIES

Medical Clinics

Trenton Regional Medical Clinic is located at 406 East 1st Street in Trenton. This facility is a satellite clinic of the Community Hospital in McCook, Nebraska. The building was constructed in 1995 and is in excellent condition. This facility is has one full-time physician's assistant and one medical doctor who works once a month at the facility. There are two other employees that work at the clinic; one secretary and a RT x-ray technician/nurse. These two employees are full-time. There are no special programs offered and if a patient needs special care, the clinic refers them to the hospital in McCook. The facility does have an EKG machine and does x-rays as well. The building is adequate for the present and future needs of the community. There are no plans to expand the facility or services in the near future.

Stratton Medical Center is located at 903 Bailey Street in Stratton and constructed in 1968. This facility is connected to the Grandview Manor Retirement Village. At the clinic, there is one physician, one physician's assistant, one RN, one LPN and one helper that works with the physician's assistant. The facility is in very good condition and there is room for expansion. There is an Every Woman Matters program at this clinic, but all other programs are out of the hospital in Benkelman. There are no specialists that are in Stratton, they are referred over to Dundy County Hospital in Benkelman or Community Hospital in McCook. The clinic does have an EKG machine at the facility, but any other special equipment is located in Benkelman. There are special arrangements with the hospital in Benkelman and all of the employees that work in Stratton also work at the Dundy County Hospital. The physician's assistant handles Mondays and Thursdays, while the physician handles Tuesdays and Wednesday mornings.

Hospitals

Presently, there are no hospitals located in Hitchcock County. There are two hospitals that serve the Hitchcock County and Stratton area.

Dundy County Hospital is located in Benkelman, Nebraska. This is a 14 bed acute facility. At this point the facilities are not large enough and expansion is taking place. This hospital serves Benkelman, Haigler, Max, Parks and Stratton in Nebraska, as well as Bird City and McDonald in Kansas. The building was constructed in 1968 and financed through bonds. Medical services are available 24 hours a day through the hospital's emergency room. The Hospital has the following specialty services available: anesthesiology,

cardiology, ENT, general surgery, oncologist, ophthalmology, orthopedics, pediatrics, pharmacology, podiatry and pulmonology. There is a full-service laboratory, radiology department, respiratory and physical therapy supports the nursing staff.

In addition, the hospital has a computerized coronary monitoring system, ICU, labor and delivery suites, surgical suite, isolation and combination telemedicine/endoscopy suite. The nursing staff consists of all classifications of nurses and the number is adequate for the facility. There are several specialists who come into the facility to assist the staff. In addition to the hospital services, the hospital now offers a **Quality HealthCare Services Medical Clinic.** The clinic was established in 1992 and is served by two full-time medical doctors, one part-time doctor, one full-time physician's assistant and a support staff of nurses. Quality HealthCare also has a clinic in Stratton.

Community Hospital is a 44-bed, not-for-profit hospital located in McCook that was constructed in 1974. In 1989, there was a large remodeling of the facility and in 1996, another building was added to expand services in CT scanning, cardiac and pulmonary rehabilitation and administrative offices. There are five family practice physicians, a general surgeon, an anesthesiologist and two general orthopedic surgeons. A pediatrician/internist and an additional anesthesiologist joined the medical staff in 1996. In addition to the regular staff, nearly 30 medical specialists travel to McCook to provide specialists clinics for area residents. Full ranges of diagnostic and rehabilitative services are offered including cardiac rehabilitation, pulmonary rehabilitation, physical rehabilitation, respiratory care and home health care. Emergency services, an outpatient surgery department, and community and patient education services are also offered at the hospital.

Chase County Community Hospital, is a 26-bed hospital located at 600 W. 12th Street in Imperial, Nebraska. The building was constructed in 1975 and is in good physical condition. There are four full-time physicians and over 80 employees at the hospital. There are 25-30 specialists that come in from Colorado and surrounding communities in Nebraska. There are 15 RN's, 10 LPN's and 15 aids for their nursing staff. There is an emergency room at the facility, as well as operating rooms and an outpatient facility. The hospital has the basic equipment needed for a general hospital. The hospital puts on a Community Health Fair once a year for those interested in participating.

Public Transit

Hitchcock County and Hayes County work jointly together to provide public transportation. "The Hitch & Hay" Public Transit system offers transportation to all residents, regardless of their age or abilities. Reservations need to be made at least one day in advance in order to route the van in the most efficient manner. The van will pick up rural residents at designated spots and urban residents will be picked up at

their homes. Stops are made in each of the Hitchcock and Hayes communities. Medical needs of residents are given first priority. There are two different fee systems; one is a rate schedule for those in lower income levels and one is for the general public.

GOALS/OBJECTIVES & POLICIES

GOALS/OBJECTIVES & POLICIES

Planning for the future development of a County and its communities is an ongoing process of goal setting and problem solving aimed at encouraging and enhancing better communities and higher quality of life. Planning focuses upon ways of solving existing problems within the County, and providing a management tool enabling Hitchcock County citizens achieve their vision for the future.

Visioning is a process of evaluating present conditions, identifying problem areas, and bringing about consensus on how to overcome existing problems and manage change. By determining Hitchcock County's strengths and weaknesses, the community can decide what it wants to be, and then develop a "roadmap" guiding decisions and ultimately fulfilling the vision Hitchcock County has developed.

Because change is continuous, Hitchcock County must decide the specific criteria they will use to judge and manage change. Instead of reacting to development pressures after the fact, the community along with their strategic vision can better reinforce the changes they desire, and discourage the negative impacts that will undermine the vision. A shared vision permits Hitchcock County to focus its diverse energies and avoid conflicts in the present, and in the future.

A key component of a Comprehensive Development Plan, are the goals and objectives. Citizen's issues and concerns are developed into a vision. The vision statement can then be further delineated and translated into action statements, used to guide, direct, and base decisions regarding future growth, development and change within Hitchcock County. Consensus on "what is good development?" and "how to manage change in order to provide the greatest benefit to the county and its residents?" is formed. Hitchcock County's goals and objectives attempt to address various issues, regarding the questions of "how" we plan for the future.

Goals are desires, necessities and issues to be attained in the future. A goal should be established in a manner that allows it to be accomplished. Goals are the end-state of a desired outcome. Goals also play a factor in the establishment of policies by a county. In order to attain certain goals, objectives and/or policies within the county government may need to be modified or changed from time to time.

Objectives are the steps or actions performed in order to attain specific goals. Objectives should be measurable through both specific levels of achievement and in terms of time. Objectives can be established in a way that assigns specific activities to specific individuals and/or governing body. Policies can also be a derivative of objectives where regulations are implemented. Objectives are steps that are performed to attain specific goals.

The goals and objectives assure the Comprehensive Development Plan accomplishes the desires of the residents in Hitchcock County. For this reason, this section of the Comprehensive Development Plan is a compilation of local attitudes generated through public meetings and workshops. When followed, development proposals in the County will be evaluated as to their relationship with the citizens' stated desires. Therefore, "goals and objectives" should be referred to as diligently as the Future Land Use Map or any other part of the Comprehensive Development Plan, when reviewing and making planning decisions. Likewise, the goals and objectives should be kept current to reflect the attitudes of the County and its residents.

It is important for Counties to establish their goals and objectives in a manner that will allow for both long-term accomplishments and short-term accomplishments. The short-term goals and objectives serve several functions:

- Allows for immediate feedback and success, which fuels the desire to achieve additional goals and objectives.
- Allows for the distribution of resources over time thus assuring a balanced use of public investment.
- Establishes certain policies that need to take place before long-term goals can be accomplished.

Hitchcock County Town Hall Meeting

On Tuesday, February 8, 2000, a town hall meeting was held at the Hitchcock County Courthouse in order to gather input on issues (both positive and negative) facing Hitchcock County. The group in attendance was asked to identify negative and positive aspects of Hitchcock County. The group was asked to identify different issues needing to be addressed throughout the County. Finally, the group was asked to identify specific projects they desired to see completed in the next 5, 10, or 20 years. The attendees were then asked to prioritize the top three answers for each question. The following information summarizes the results of each question and the corresponding rank (i.e. importance) residents of Hitchcock County indicated for each question.

Negatives

Identified negative aspects of Hitchcock County are listed below. Lack of opportunities for people (15.9%) were indicated as the most negative item from the residents of the County. Other concerns ranking high with residents include "lack of industry" and that the "roads need improvement." In all, the residents of Hitchcock County identified 24 negative aspects of the area. The answers are ranked in order of the number of points they received by the participants of the meeting. Not all items received points, but are included in the list because they are concerns of the residents at the meeting.

Identified Negative Aspects of Hitchcock County	Corresponding Points/Rating
Lack of opportunities for the people	17
Lack of industry	16
Road Improvements	15
Lack of Work Force	12
Population decline	11
Taxes-level and equity	10
Lack of business incentives	9
Issues relating to oil production (oil, salt water)	4
Job opportunities for existing residents	3
Trash accumulation on roads	3
Farm Economy	2
Lack of diversity in economy	2
Lack of arts and entertainment	1
Housing Quality	1
Retail trade opportunities	1
Dead deer on roads	0
Minorities	0
Deteriorated wood bridges	0
People don't care attitude	0
Land from production to recreation	0
Access to Swanson Reservoir	0
Housing location-limited choices	0
Weakness in local government coordination	0
Total	**107**

Source: Hitchcock County Town Hall Meeting, February 8, 2000

Positives

Next, area residents were asked to identify the positive aspects of Hitchcock County. The item receiving the highest ranking were identified as "quality and quantity of the water" for the residents (23.4%). Other positive items receiving special mention include "good area to raise children" and "good churches." Overall, residents of the County identified 32 positive items from their area. The answers were ranked in order of the number of points they received by the participants of the meeting. Not all items received points, but were included in the list because they were concerns of the residents at the meeting.

Identified Positive Aspects of Hitchcock County	Corresponding Points/Rating
Water Quality & Quantity	30
Good community to raise children	28
Good churches	6
Good air quality	6
Good work ethic	6
Abundance choice of farmland	5
Good highways in county	5
Public Power District	5
Good Farmers	4
Fire/Rescue	4
Recreation	4
Petroleum production	4
Consortium/RC & D (towards community efforts)	4
Abundance of housing	3
Small town mentality	2
Community spirit	2
Young people	2
Proximity to McCook trade area	2
Law enforcement	2
Fall out of industry from Red Willow County	2
Outside of State hunters	2
People	0
Retirement opportunities-housing & service	0
Air and rail in McCook	0
Medical Services	0
Local air field	0
Good business people	0
Swimming pools in every town	0
Canal	0
Road names and signs	0
School and tradition	0
Total	**128**

Source: Hitchcock County Town Hall Meeting, February 8, 2000

Issues

The next exercise undertaken at the Town Hall Meeting was an identification of issues that are important to Hitchcock County residents. These issues can consist of past experiences, present ventures and overall concerns about specific problems that the residents are dealing with. Hitchcock County residents (25%) indicated that "population loss of young" was the dominant issue facing the community. Other important issues were the "water pollution" and "government regulations; both state and federal." In all, residents of Hitchcock County identified 25 issues that require attention. Not all issues received points or a rank, but were still included because the residents of Hitchcock County stated them.

Identified Issues for Hitchcock County	Corresponding Points/Rating
Population- loss of younger people	22
Water pollution	21
Government Regulations- State and Federal	14
EPA- Safe Drinking Water Act (Cooper)	8
Unfunded mandates	5
Condition of roads	4
Stronger Paid School Administration	4
Zoning	4
Teacher salary negotiation	4
Out of State Hunters- buying lands for preserves	4
Irrigation Regulations	3
Confined livestock feeding	3
Wages	3
Noxious weeds enforcement	3
Trash along roads	2
Schools-population base	2
Rural non-farm residential	2
More deer than people	1
Loss of local control	0
Regional County Organizations-Interlocal Cooperation Act	0
Republican River-Use & Rights; hunting preserves	0
Scenic River Protection	0
Multi-use of water at Reservoir	0
Out of area hunter numbers versus places to stay	0
Bridge Replacements	0
Total	**88**

Source: Hitchcock County Town Hall Meeting, February 8, 2000

Projects

The last exercise undertaken at the Town Hall Meeting was the identification of projects that were important to the residents of Hitchcock County. The residents indicated that "zoning" was the number one project (24.2%) that was important to them. Additionally, "small business development" and "better markets for grain" were cited as important to the residents. Overall, residents of Hitchcock County identified 16 different projects that they were interested in. Not all of the projects received points but still remain on the list because the residents of the County stated them.

Identified Projects for Hitchcock County	Corresponding Points/Rating
Zoning	32
Small Business Development	21
Better Markets for grain	14
Maintain water supply	13
Recruitment of Livestock Feeding Operations	11
Start-up Business support	8
Single Parent Child Care- turn around	7
Stock Reservoir with fish	7
Industrial Development	6
More school reorganization	6
Housing Rehabilitation	4
More promotion of tourism	1
Schools- sued by NSEA on salaries D2 status to C2 status, travel time	1
Retirement Housing	1
Bridges converted to box culverts	0
Emergency 911- finish	0
Total	**132**

Source: Hitchcock County Town Hall Meeting, February 8, 2000

This exercise is important because it allows the public an opportunity to express specific concerns about their county. The data from the exercise are organized into general categories with goals and objectives for each area.

GOALS AND OBJECTIVES FOR HITCHCOCK COUNTY

For Hitchcock County, goals and objectives are formulated under generalized categories or issues. These issues include:

Population
Land Use/Environment
Education
Parks and Recreation
Housing
Economy and Economic Development
Transportation

Population

Goal

Hitchcock County must address the primary factor impacting their declining population, that is, persons migrating or leaving the County.

Objectives

1. Maintain the number of existing residents through developing and marketing programs or policies that encourage persons to remain, relocate and establish in Hitchcock County.

2. Develop and partner with area businesses and educational providers to identify and provide greater employment opportunities to retain the young persons of Hitchcock County.

Land Use

Goal

Hitchcock County is to develop a set of land use and zoning regulations, which is sensitive to their agricultural heritage, while, protecting the natural resources of the county. The land use goals of Hitchcock County are to utilize a combination of development policies and regulations to manage future development in the most efficient and cost effective manner.

Objectives

1. Consult specialized agencies in designation and approval of land use issues.
2. Establish land use development districts that will identify areas of the county best suited for specific uses.
3. Develop a set of regulations sensitive to the environmental conditions of Hitchcock County. These include soil types and suitability, groundwater, surface water, watershed areas, and air pollution.
4. Develop a policy requiring the coordination and review of all planning and zoning activities as they relate to extraterritorial jurisdictions and the unincorporated portions of the County. This policy would require a joint review and comment on the proposed activity by the adjacent communities and/or county before the activity proceeds to the next step in the process.

Agriculture Objectives

1. Protect prime agricultural land and maintain the quality of groundwater.
2. Support livestock production and related agricultural businesses designed, operated and located consistent with maintaining the health, safety and welfare of all county residents.
3. Regulate large confined livestock operations throughout the county in order to assure proper construction, management and compatible location.
5. Provide separation between livestock and urban/community development. Avoid locating new livestock operations next to incorporated or unincorporated settlements within the County.
6. Work with Livestock Producers on continual basis in evaluating regulations.

Residential Objectives

1. Encourage residential development in and around the perimeter of the Villages of Stratton, Trenton, Culbertson, and Palisade of Hitchcock County.
2. Promote low to zero non-farm densities in agricultural districts by providing proper distances between residential and agricultural uses.

3. Consider soils, floodplain, road and bridge development or maintenance when identifying areas for development.

Environment

Goal

The natural resources (soils, groundwater, surface water and air) and environment of Hitchcock County shall be protected and managed to insure long term quality, availability and sustainability for the current and future residents and industries of Hitchcock County. The goal of Hitchcock County is to guide development in a manner that conserves and protects the natural resources; minimizes potential conflicts between rural/urban residents; promotes compatible land uses; encourages compact development and an efficient provision of services.

Objectives

1. Establish zoning standards that support conservation and protection of Hitchcock County's natural resources.
2. Protect all water supplies and aquifers, including the Republican River from development activities that may pollute and/or affect the quality or quantity of water. This can be achieved by forcing development to demonstrate a positive or, at least, a neutral impact on ground water supplies. Discourage development over or adjacent to water generating aquifers that could have a negative impact on water quality and/or quantity.
3. Identify with NRCS[2], FSA[3], NRDs[4] and NDEQ[5] possible sediment control regulations to minimize potential soil loss and/or contamination problems due to over irrigation in specific areas of Hitchcock County.
4. Encourage preservation and conservation of the natural range and canyon areas of the county.
5. Develop zoning regulations and environmental regulations that will aid in maintaining the existing clean air of Hitchcock County.
6. Clean up trash accumulation along major arterials and highways.

Education

Goal

Quality education is a vital component of a community and/or county. Although the county's role is limited, policies will be followed to retain the countywide school system. Above all, the main goal is to encourage

[2] Nebraska Resource Commission Service
[3] Farm Service Agency, United State Department of Agriculture
[4] Natural Resource Districts
[5] Nebraska Department of Environmental Quality

and maintain a viable school and distance learning system, excellence in the public school curriculum and quality of school facilities to further the educational opportunities for all residents of Hitchcock County.

Objectives

1. Cooperate with the school systems in expanding public uses of educational facilities.
2. Establish entrepreneurship training and mentoring program in Hitchcock County Schools to encourage and promote business development opportunities for area students and residents, specifically targeting youth.
3. Utilize schools in Hitchcock County as a community learning center for all age groups.
4. Set development standards that coordinate reservation of land for future educational needs.

Parks and Recreation

Goal

Provide for a wide variety of recreational opportunities for all age groups for residents of Hitchcock County.

Objectives

1. Promote recreation as a continuing economic development tool for Hitchcock County.
2. Set standards that require or promote dedication of parks and open space.
3. Encourage recreational amenities offering year round enjoyment.

Housing

Goal

A primary goal of Hitchcock County is to ensure the provision of safe, decent, sanitary and affordable housing opportunities for every family and individual. Preserve and maintain the quality of existing housing units and residential neighborhoods in Hitchcock County, and encourage new construction in established communities so as to provide housing for current and future residents.

Objectives

1. Encourage the establishment of a rehabilitation program to maintain and improve the existing housing stock.
2. Develop relationships and partnerships with housing professions in the public and private sector to establish a range of affordable housing options, ranging from a First Time Homebuyer program to rental assistance.
3. Establish zoning standards that support housing options for all incomes and physical capabilities of Hitchcock County's residents.

4. Enforce regulations and ordinances protecting the rights of Hitchcock County's residents.

Economic Development

Goal

Strive to promote and balance the needs of the retail, wholesale, agricultural, commercial and manufacturing industries, necessary to support County residents now and in the future, thereby promoting sustainable economic stability throughout Hitchcock County.

Objectives

1. Expand and promote agriculture and agricultural employment opportunities in the County. These might include value-added agricultural industries and/or livestock feed operations.
2. Support area historical, cultural and recreational activities. Hitchcock County should continue to build upon the historical structures, cultural heritage and recreational assets located throughout the County and within the incorporated and unincorporated settlements to encourage a sense of community through tourism based endeavors.
3. Promote economic development projects that will encourage area youth to remain in the County upon completion of their secondary education.
4. Encourage and promote the development of home-based businesses and telecommuting based upon high technology communication infrastructure, such as the Internet.
5. Encourage, promote and develop economic development partnerships between local entities and private companies to assist existing and expanding business enterprises.
6. Expand tax base with diversified industries.

Transportation

Goal

Development in Hitchcock County shall be guided to safely utilize existing public investment in roads, and programs to reduce road development or maintenance. The Transportation Goal of Hitchcock County is to develop, maintain and upgrade an efficient road system to serve current and future circulation and access needs.

Objectives

1. Continue updating county equipment and road programs as needed.
2. Encourage the formation of a Regional Transportation Planning concept.
3. Improve, develop, and maintain well-traveled roads with hard surfacing as identified in the County's One- and Six-Year Plan.
4. Encourage the on-going replacement of older, dilapidating bridges throughout the County.

Stratton Town Hall Meeting

On Monday, March 20, 2000, a town hall meeting was held at the Village Clerk's Office in Stratton in order to gather input on issues (both positive and negative) facing Stratton as a community. The group in attendance was asked to identify negative and positive aspects of their community. The group was asked to identify issues and projects that they would like to see completed in the next 5, 10, or 20 years. The participants were then asked to prioritize their top three concerns of each question discussed above. The following information summarizes the results and the corresponding rank (i.e. importance) residents of Stratton indicated for each question.

Negatives

Identified negative aspects for Stratton are listed below. The biggest negative for the village of Stratton is the lack of businesses and/or businesses closing as the most important agenda item to change. These two negatives represented 59.9% of the points that were tallied. The other big negative, with 8.4% of the points were the vacant industrial buildings that are in Stratton. In all, the residents of Stratton identified 13 negative aspects of the area. Not all items received points, but were included in the list because they were concerns of the residents at the meeting.

Identified Negative Aspects of Stratton	Corresponding Points	Percentage of Total Points
Lack of Jobs	7	7.3%
Lack of Workforce	0	0.0%
Lack of Businesses	45	**47.3%**
Businesses Closing	12	**12.6%**
Job Diversification	5	5.2%
Lack of Paved Streets	3	3.1%
Building Code Enforcement	1	1.0%
Conditions of Pool	2	2.1%
Use of Rodeo Arena	3	3.1%
Lack of Rental Housing	5	5.2%
Older Population	4	4.2%
Vacant Industrial Buildings	8	**8.4%**
Lack of EMT Volunteers	0	0.0%
Total	95	100%

Source: Stratton Town Hall Meeting, March 20, 2000

Positives

Next, area residents were asked to identify the positive aspects of Stratton. The item receiving the highest ranking was an item that was identified as the third highest negative aspect of Stratton, vacant industrial buildings. This aspect received 15.5% of the points. Other positive items receiving special mention include "good youth activity support" and "Swanson Reservoir/outdoor recreation." Overall, residents of Stratton identified 19 positive items from their area. Not all items received points, but were included in the list because they were concerns of the residents at the meeting.

Identified Positive Aspects of Stratton	Corresponding Points	Percentage of Total Points
Vacant Industrial Buildings	25	**15.5%**
Campgrounds	1	1.0%
Ready Subdivision Lots	8	4.9%
Senior Center	5	3.1%
Community Pride	8	4.9%
Youth	15	9.3%
Grocery and Lumber Stores	4	2.5%
Organized Community Development Efforts	1	1.0%
Swanson Reservoir/Outdoor Recreation	16	**9.9%**
Quality of Life	11	6.8%
Proximity to Good Health Care	0	0.0%
Good Churches	4	2.5%
Good Schools	5	3.1%
Nice Community Park	11	6.8%
Good Youth Activity Support	17	**10.5%**
Lakeview Lodge	11	6.8%
Hitch and Hay Transit System	2	1.2%
New Beginnings Newsletter	6	3.7%
Hansen Foundation Endowment (Hitchcock and Dundee Counties eligible)	11	6.8%
Total	161	100%

Source: Hitchcock County Town Hall Meeting, February 8, 2000

Issues/Projects

The last exercise that was undertaken was an identification of issues and projects that were important to Stratton residents. These issues can consist of past experiences, present ventures and overall concerns about specific problems that the residents are dealing with. Stratton residents (48.3%) indicated that "new small industry" was the dominant issue facing the community. Other important issues/projects were a "larger library" and "solid waste management." In all, residents of Stratton identified 7 issues/projects that require attention.

Identified Issues and Projects of Stratton	Corresponding Points	Percentage of Total Points
New Small Industry	44	**48.3%**
New Maintenance Shop	3	3.3%
Larger Library (better technology as well)	10	**11.0%**
Trash Blowing/Solid Waste Management	15	**16.5%**
Pave Streets	9	9.9%
Repair Sidewalks- lack thereof in areas	8	8.8%
Upkeep of Highway Median	2	2.2%
Total	91	100%

Source: Hitchcock County Town Hall Meeting, February 8, 2000

GOALS AND OBJECTIVES FOR STRATTON

For Stratton, goals and objectives were formulated under generalized categories or issues. These issues include:

- Land Use
- Education
- Parks and Recreation
- Economic Development
- Transportation
- Public Health and Safety
- Conservation and Environment

Land Use

Goal

Stratton is to develop a set of land use and zoning regulations, which are sensitive to their agricultural heritage, while, protecting the natural resources of the community.

Objectives

1. Utilize development policies and regulations to manage future development in the most efficient and cost-effective manner.
2. Consult specialized agencies in designation and approval of land use issues.
3. Establish land use development districts that will identify areas of the community best suited for specific uses.
4. Develop a set of regulations sensitive to the environmental conditions of Stratton. These include soil types and suitability, groundwater, surface water, watershed areas, and air pollution.
5. Maintain and improve necessary amenities in order to attract and keep residents in Stratton.

Residential Objectives

1. Maintain or improve the residential character of existing areas.
2. Encourage the development of a wide range of housing options, including the development of low- and moderate-income housing for the elderly.
3. New residential developments should be accompanied by covenants, which provide for the maintenance of common areas, easements and drainage.
4. Residential and other uses should be buffered from each other by placing them back-to-back rather than face-to-face.
5. Phase out nonconforming commercial and/or industrial uses in residential areas.
6. Encourage the elimination of housing that is in a substandard condition through either restoration or demolition.

Commercial Objectives

1. Encourage the development of a downtown business district.
2. Provide areas away from downtown for clustered and coordinated commercial development.
3. Discourage the expansion of strip development along the major streets of the Village.
4. Provide the provision of pedestrian and vehicular access to all parts of Stratton.
5. Actively pursue new professional, commercial and service businesses to locate in Stratton.

Industrial Development Objectives

1. Pursue industrial businesses to relocate in vacant industrial buildings in Stratton.
2. Broaden the ty0pe and number of industries located in the Village.
3. Industrial development shall be located so as to minimize the negative impact on the environment and on other less intensive uses, as well as to minimize the costs of development.

Education

Goal

Encourage and maintain a viable school and distance learning center in Stratton.

Objectives

1. Cooperate with the school system in expanding public uses of educational facilities.
2. Establish entrepreneurship training and mentoring program in Stratton for area students and residents, particularly targeting youth.
3. Utilize school as a community learning center for all groups.
4. Set development standards that coordinate reservation of land for future educational needs.

Parks and Recreation

Goal

Continue to provide adequate recreational opportunities for all sectors of Stratton.

Objectives

1. Provide safe and unobstructed pedestrian and bicycle access to parks.
2. Provide adequate parks and recreational facilities that are accessible to all residents of Stratton.
3. Work with developers in the future to create more parks in and around new developments.
4. Continue to promote the strong recreational activities taking place currently. As needed, increase/upgrade the facilities for these activities.
5. Create a trail system in and around Stratton.

Economic Development

Goal

Strive to promote and balance the needs of the retail, wholesale, agricultural, commercial and manufacturing industries, necessary to support Stratton residents now and in the future, thereby promoting sustainable economic stability throughout Stratton.

Objectives

1. Expand and promote agricultural employment opportunities in Stratton. This might include value-added agricultural industries.
2. Support area historical, cultural and recreational activities. Stratton should continue to build upon the historical structures, cultural heritage and recreational assets located in and around Stratton to encourage a sense of community through tourism based endeavors.
3. Expand tax base with diversified industries.
4. Market the Village to potential investors inside and outside the community to establish more commercial and industrial development.
5. Explore options on constructing "Community Entrances" east and west of the Village.
6. Encourage and promote the development of home-based businesses and telecommuting based upon high technology communication infrastructure, such as the Internet.

Transportation

Goal

Develop, maintain and upgrade an efficient road system to serve current and future circulation and access needs.

Objectives

1. Continue updating Village equipment and road programs as needed.
2. Improve, develop, and maintain well-traveled roads with hard surfacing as identified in the Village's One- and Six- Year Plan.
3. Continue to pave well-used roads.
4. Develop a sidewalk system that encompasses all of Stratton.
5. Minimize commercial signing along arterials.

Public Health and Safety

Goal

Work with specific issues facing Stratton regarding both Public Health and Safety concerns in the Village of Stratton.

Objectives

1. When the time is appropriate, the Village of Stratton should look at the possibility of creating a local law enforcement entity.
2. Expand medical services for both short-term and long-term care.
3. Expand the volunteer-based department, as well as continue to train personnel and update equipment as needed.

Conservation and Environment

Goal

Allow development in and around Stratton while practicing good conservation and environmental sense.

Objectives

1. Develop Zoning Regulations that reward developers for developments that work with the lay of the land and other environmental concerns.
2. Work with outside public entities to ensure sound environmental quality when new development occurs.
3. Discourage development over or adjacent to water generating aquifers that could have a negative impact on water quality and/or quantity.

ENVIRONMENT, NATURAL AND MAN-MADE RESOURCES

ENVIRONMENT, NATURAL AND MAN-MADE RESOURCES

In order to formulate a truly valid and "comprehensive" plan for the future development of Hitchcock County, it is first necessary to evaluate the environment and man-made conditions which currently exist to determine the impacts that these factors may have on limiting future land uses in the County. This component of the Plan provides a general summary of the environmental and man-made conditions, which are present in the County, and identifies and qualifies the characteristics of each which will directly or indirectly impact future land uses in the County. For clarity, the evaluations are presented in two separate analyses.

NATURAL ENVIRONMENTAL CONDITIONS

- Geology
- Soils
- Water Supply and Quality
- Topography

MAN-MADE CONDITIONS

- Transportation System Impacts
- Public Facility Impacts

NATURAL ENVIRONMENTAL CONDITIONS

GEOLOGY

In Hitchcock County silt loam loess, dune sand, sand and gravel cover the bedrock underlying the County. The loess and dune sand was deposited by wind, while streams deposited the coarse sand and gravel. Over the years erosion has eaten through the mantle and has exposed portions of bedrock. Exposed bedrock within Hitchcock County consists of bedrock of the Ogallala Formation and Pierre Shale.

The Ogallala Formation, which nearer to the surface, is part of the Tertiary system. It is made up of limy sandstone and siltstone and is locally called "magnesia rock" because of its content of magnesium. Outcrops can be found in the valley of the Republican River and its tributaries.

Pierre Shale is just beneath the Ogallala Formation and underlies the entire County. The shale is dark gray to black. Exposures of it occur on the north bluffs of the Republican River valley about one mile west of Trenton and also at the base of the Trenton Dam on the Republican River. Other rocks found throughout the County include, in order of depth, the Niobrara Formation, Carlile Shale, Greenhorn Limestone, Graneros Shale, Dakota Sandstone, Fuson Shale and Lakota Sandstone. None of these are exposed anywhere within the County.

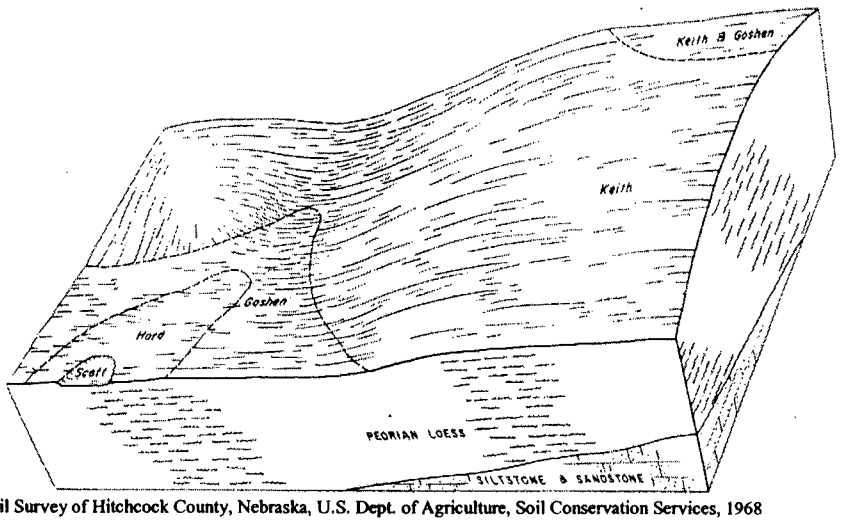
SOILS

Soils in Hitchcock County consist of five different soils associations. A soil association is a landscape that has distinctive proportional patterns of soil and typically consists of one or more major soils and at least one minor soil. The associations are named for the major soil(s) that occur. The locations of the soil associations within Hitchcock County are indicated on Figure 7 and described as follows:

KEITH-GOSHEN ASSOCIATION

This association consists of nearly level to gently sloping soils on upland areas. It covers an area of approximately 200,000 acres and makes up approximately 43% of the County. Keith soils in this association comprise 82% of all soils, while 17% are Goshen soils and 1% is a combination of Hord and Scott soils. Keith soils occur as nearly level to gently sloping throughout the uplands. Goshen soils occur as nearly level areas, generally at the base of very gentle slopes. Hord soils occur as nearly level areas in swales or drainageways and Scott soils are in basinlike depressions. With the exception of Scott soils, all land within this association is cultivated and utilized for crop production. Figure 8 details the typical pattern of soils and underlying material in the Keith-Goshen association.

FIGURE 8: TYPICAL PATTERN OF SOILS AND UNDERLYING MATERIAL IN THE KEITH-GOSHEN ASSOCIATION



Source: Soil Survey of Hitchcock County, Nebraska, U.S. Dept. of Agriculture, Soil Conservation Services, 1968

SOIL CHARACTERISTICS AND ANALYSIS

An examination of the soils within this association reveals several important characteristics with respect to future land uses within the County. An analysis of each soil within this association is documented below.

Keith soils, which are the most extensive within the County, have moderate water-holding capacities and high natural fertility and thus are highly productive cropland soils. However, erosion by wind and water is

a major hazard on these soils and thus proper cultivation techniques should be practiced. Limitations of these soils for non-agricultural development are minimal. Keith soils are adequate for construction purposes and have only minimal limitations for septic tank and filter beds and thus serve to be suitable soils for non-agricultural development projects including residential, commercial and industrial uses.

Moderate to severe limitations for sewage lagoons exist on Keith soils due to the soils permeability and resulting potential of groundwater contamination. This situation creates the need to regulate the placement of confined livestock operations using lagoon treatment systems to areas where potential groundwater contamination would be minimized. Keith soils are considered prime cropland soils and should be retained in most instances since Hitchcock County's economy is primarily based on agricultural production. However, development on these soils can occur in situations where the long-term outcome would outweigh the loss of the cropland. Keith soils comprise a total of 156,178 acres within Hitchcock County, Nebraska.

Goshen soils are commonly found in the northwestern and the eastern portions of the County and, similar to Keith soils, have high potential for crop production. Goshen soils are suitable for non-agricultural development including residential, commercial and industrial structures and only have minor limitations for septic tanks and filter beds. Moderates to severe limitations do; however, exist for the construction of sewage lagoons. Goshen soils have moderate permeability and thus allow the potential for groundwater contamination if not closely monitored. This characteristic limits the potential of developing confined livestock operations and the County should regulate construction of such uses to areas where the potential for groundwater contamination would be minimal. Goshen soils are considered to be prime cropland soils and thus should be retained in most instances since agricultural production is the base of the economy in Hitchcock County. Loss of this prime cropland to other uses should only occur in situations where the long-term gain would necessitate the loss of the land. Goshen soils comprise a total of 9,200 acres within Hitchcock County, Nebraska.

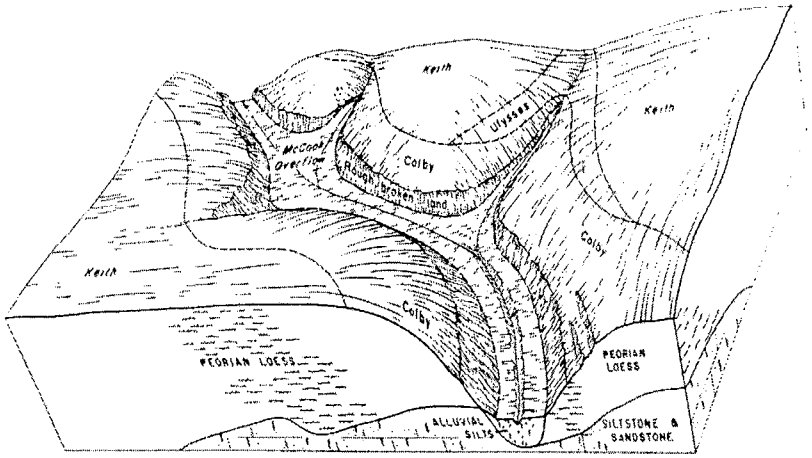
Hord soils are found in upland swales throughout the County. These soils absorb water readily and have a moderate water-holding capacity and have high potential for crop production. Hord soils are not suitable for non-agricultural development projects primarily due their location in the lower elevations from the upland areas. In addition, moderate limitations for septic tanks and filter beds exist due to the soils permeability. Moderate to severe limitations also exist for sewage lagoons due to the soils permeability, and resulting potential for groundwater contamination, thus significantly limiting the ability to construct confined livestock operations utilizing lagoons in areas of these soils. Hord soils are considered to be prime cropland soils and should be retained in most instances. Again, the loss of these soils should only occur when the long-term gain would outweigh the loss of this land. Hord soils comprise a total of 1,005 acres within Hitchcock County, Nebraska.

Scott soils occur on upland areas throughout the County but are most extensive in the northwestern corner. Scott soils have poor to fair potential for crop production due to their potential of flooding. The potential of flooding on these soils also substantially restricts the development of non-agricultural uses, including residential, commercial and industrial structures. These soils do, however, exhibit very low permeability qualities thus allowing suitable areas for sewage lagoons. Confined livestock feeding operations utilizing lagoon treatment systems would benefit from being located in areas of these soils due to the minimal potential of groundwater contamination; however, flooding commonly occurs in areas of these soils that could potentially contaminate surface water if such operations are located in areas where drainage occurs into local rivers, streams or drainageways. It is important to regulate confined livestock operations to areas of Scott soils that are set back some distance away from any of the major rivers, streams and drainageways within the County. Scott soils comprise a total of 394 acres within Hitchcock County, Nebraska.

COLBY ASSOCIATION

This association consists of gently sloping to steep soils in canyons and on hills along drainageways. It covers an area of approximately 193,000 acres or approximately 42% of the entire County. Colby soils comprise about 74% of this association, Ulysses soils comprise 14% and Rough broken land comprises the remaining 12%. Colby soils are steep and occupy the slightly broken canyon slopes. Ulysses soils have gentle to moderate slopes and occupy smooth hillsides. Rough broken land is steep and occurs on the canyon walls where soil slipping is evident. Because of the slopes in this association, these soils are better suited to native pasture than to other uses. The smoother areas of this association are cultivated and used for crop production but erosion is a continual hazard in these areas. Figure 9 details the typical pattern of soils and underlying material in the Colby Association, as well as, details how they connect to the adjoining areas of Keith and McCook soils.

FIGURE 9: TYPICAL PATTERN OF SOILS AND UNDERLYING MATERIAL IN THE COLBY ASSOCIATION AND ADJOINING AREAS OF KEITH AND MCCOOK SOILS



Source: Soil Survey of Hitchcock County, Nebraska, U.S. Dept. of Agriculture, Soil Conservation Services, 1968

SOIL CHARACTERISTICS AND ANALYSIS

An examination of the soils within this association reveals several important characteristics with respect to future land uses within the County. An analysis of each soil within this association is documented below. Colby soils have rapid run-off traits and moderate permeability. Their capacity to hold water is also moderate. They are low in organic-matter content and low in natural fertility, but can become productive with proper fertilization and management techniques; however, cultivation of this soil creates situations where the soil is highly susceptible to water erosion. Therefore, careful soil management techniques must be practiced. Colby soils are not suitable areas for construction of non-agricultural uses, which includes residential, commercial and/or industrial structures due to the sloping topography. Rapid water run-off traits create situations that are hazardous to non-agricultural uses due to the potential of causing property and structural damage.

Colby soils also have moderate to severe limitations for septic tanks and filter beds and for sewage lagoons. These limitations include the high degrees of slope in some areas of these soils and the overall permeability of the Colby soils that could potentially cause groundwater contamination. Location of confined livestock feeding operations in areas of these soils would not be appropriate due to the overall sloping character of these soils that could result in surface water contamination due to rapid run-off, as well as, the fact that groundwater contamination is possible due to the soils permeability. Colby soils currently being utilized for crop production, the soils located on slopes between 7 and 9% should continue to be used for crop

production provided proper management techniques are practiced. Development of other uses on such soils should be avoided to prevent the loss of the limited amount of Colby soils that can, in fact, be used for crop production. Colby soils comprise a total of 143,387 acres within Hitchcock County, Nebraska.

Ulysses soils are located in all parts of the County and are utilized for crop production in areas where the landscape ranges from smooth to gently sloping. Steeper slopes have been cultivated in the past, but have since ceased due to the potential for water erosion in such areas. Ulysses soils have moderate permeability and their natural fertility is fair. Ulysses soils with minor slopes, less than 7%, serve to be suitable areas for non-agricultural development. Slopes greater than 7% create situations that are less than desirable for such uses and thus should be avoided. Ulysses soils only have slight limitations regarding septic tank and filter bed construction increasing the suitability of these soils for any uses utilizing such sewage system.

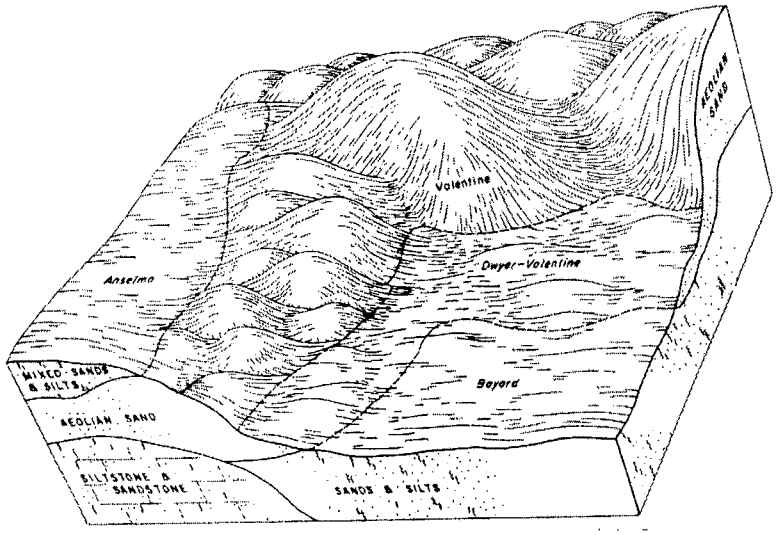
Moderate to severe limitations do, however, exist for use of these soils as areas for sewage lagoons. The soils permeability results in situations where groundwater contamination is possible and areas of steeper slopes create potentially hazardous situations where surface water contamination could occur. Due to these limitations confined livestock feeding operations should avoid being constructed on areas of Ulysses soils or be regulated to areas where slopes are minimal to avoid surface water contamination and areas of Ulysses soils where the potential for groundwater contamination is minimized. Ulysses soils being utilized for crop production should be retained in most situations and development of other uses should be minimized to protect these areas; however, development of these soils where the long term economic gain would outweigh the loss of crop land should be allowed. Ulysses soils comprise of total of 27,049 acres within Hitchcock County, Nebraska.

Rough broken land, in most instances, have such high degrees of slope that use of the land for either crop production or any other uses becomes substantially difficult. The soil areas have a slope of about 30 – 45%. Water run-off in these areas is very rapid and drainage is very excessive. The landscape of this area is an interesting and distinctive feature within Hitchcock County. This type of land provides some winter protection to livestock and wildlife, but is so steep that it has only limited value for permanent grazing. For all types of non-agricultural development, for septic tanks and filter beds, for confined livestock operations and for sewage lagoons the limitations of Rough broken land are severe due to the high degree of slope and potential for surface water contamination. Rough broken land comprises a total of 21,983 acres within Hitchcock County, Nebraska.

VALENTINE-ANSELMO ASSOCIATION

This association is made up of undulating soils that are located, for the most part, in the west-central portion of the County south of the Republican River. The total acreage is only 3% of the entire County. Valentine soils make up approximately 48% of this association, Anselmo soils comprise 41% and Dwyer soils comprise the remaining 11%. The very sandy Valentine soils are dunelike. The moderately sandy Anselmo soils have smoother slopes and are deep. Dwyer soils occur in lower areas surrounding Valentine soils but have a thicker, finer texture than the Valentine soils. Anselmo soils are used for crop production while Valentine and Dwyer soils are mainly native pasturelands. Wind erosion is a serious hazard on these sandy soils and many areas are difficult to manage under cultivation. Figure 10 details the typical pattern of soils and underlying material in the Valentine-Anselmo association.

FIGURE 10: TYPICAL PATTERN OF SOILS AND UNDERLYING MATERIAL IN THE VALENTINE –ANSELMO ASSOCIATION



Source: Soil Survey of Hitchcock County, Nebraska, U.S. Dept. of Agriculture, Soil Conservation Services, 1968

SOIL CHARACTERISTICS AND ANALYSIS

An examination of the soils within this association reveals several important characteristics with respect to future land uses within the County. An analysis of each soil within this association is documented below. Valentine soils have formed in sand that was blown from the nearby riverbed. They are along the south side of the Republican River valley in the western portion of the County and also on the southern edge of the Frenchman River valley southeast of the Village of Palisade. These soils are low in natural fertility, internal drainage is rapid and permeability is rapid and there is no run-off. Development of non-

agricultural uses, including residential, commercial and industrial uses, on areas of these soils is possible without any substantial problems in areas where the slopes are not steep and only slight limitations exist for the construction of septic tanks and filter beds. Severe limitations do exist for the construction of sewage lagoons in areas of these soils due to the very rapid permeability of the sandy soil. Confined livestock operations utilizing lagoon treatment systems should not be allowed to be constructed in areas of these soils due to the strong potential of contaminating groundwater. Valentine soils comprise a total of 5,970 acres within Hitchcock County, Nebraska.

Anselmo soils are located on the uplands just south of the Republican River. These soils formed in windblown sand in these areas. Characteristics of Anselmo soils include moderately rapid permeability rates and moderate overall fertility. They are productive, but special management techniques are needed to control wind erosion and to conserve moisture. Development of non-agricultural uses in areas of these soils where slope is minimal is possible, as there are only slight limitations for construction site suitability and for septic tanks and filter beds.

Severe limitations, again, exist for the construction of sewage lagoons due to the moderately rapid permeability of the sandy soil. Confined livestock feeding operations should not be located in areas of Anselmo soils due to this limitation and the resulting possibility of groundwater contamination. Since many of the Anselmo soils can be utilized for crop production, development that would cause the loss of these soils for crop production should be minimized. It is important to retain all productive crop land soils within the County since the County's economy is mainly based on agricultural production. Anselmo soils comprise a total of 5,164 acres within Hitchcock County, Nebraska.

Dwyer soils have also formed in windblown sand and are located in areas surrounding the sandier Valentine soils. Dwyer soils have rapid internal drainage, rapid permeability and slow run-off. They have low water-holding capacity and are somewhat droughty. Wind erosion is a serious hazard on these soils if these soils are tilled and the overall fertility of these soils is low. These soils are better suited to native grasses than to crop production. Dwyer soils have only minimal limitations for non-agricultural developments, including residential, commercial and industrial uses, and for septic tank and filter bed construction. Development of such uses should only occur in areas that are not steep in slope due to the potential problems associated with higher degrees of slope with regard to the development of structures, including proper sewage disposal.

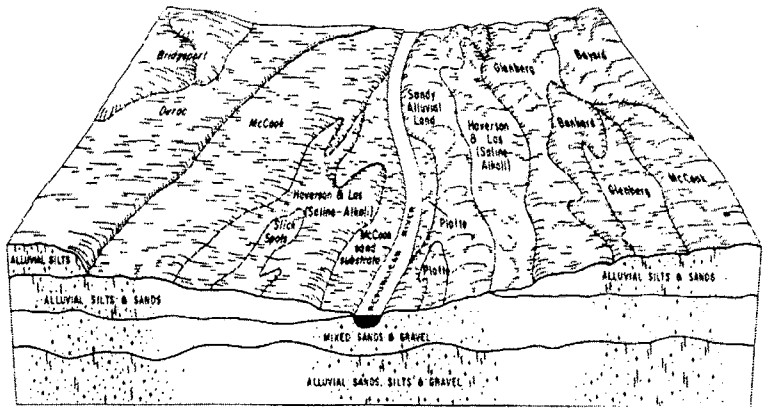
Severe limitations, again, exist for sewage lagoons due to the sandy character of the soil. Rapid permeability creates the potential for groundwater contamination if sewage lagoons, including lagoons utilized by confined feeding operations, are constructed in areas of these soils. Therefore the construction

of confined livestock feeding operations in areas of these soils should be prohibited. Dwyer soils comprise a total of 1,360 acres within Hitchcock County, Nebraska.

BRIDGEPORT-MCCOOK-DUROC ASSOCIATION

Nearly level to gently sloping soils on slopes, stream terraces and on well-drained bottom lands make up this association. This association comprises approximately 8% of the entire County. Bridgeport soils make up about 54% of this association, McCook soils comprise approximately 22%, Duroc soils comprise approximately 11% while Bayard and Glenberg soils comprise the remaining 13%. Bridgeport soils are located at the base of slopes in this association. McCook soils are well-drained soils located on bottomlands and have a moderately sandy surface layer. Duroc soils are on terraces in the eastern portion of the County, mainly along the Republican River. These soils are well suited to cultivation and crop production. In addition, most of this association can be irrigated cropland due to the abundance of water available from the Upper Meeker and Culbertson Canals and from many local wells. Figure 11 details the typical pattern of soils and underlying material for the Bridgeport-McCook-Duroc association, as well as, for the Sandy alluvial land – Haverson-Las association documented later in this analysis.

FIGURE 11: TYPICAL PATTERN OF SOILS AND UNDERLYING MATERIAL IN THE BRIDGEPORT-MCCOOK-DUROC ASSOCIATION



Source: Soil Survey of Hitchcock County, Nebraska, U.S. Dept. of Agriculture, Soil Conservation Services, 1968

SOIL CHARACTERISTICS AND ANALYSIS

An examination of the soils within this association reveals several important characteristics with respect to future land uses within the County. An analysis of each soil within this association is documented below.

Bridgeport soils are characterized by slow to moderate surface run-off, medium internal drainage and moderate permeability. Bridgeport soils also have medium water holding capacity and have adequate fertility. Control of water erosion is a problem in some unprotected areas that receive run-off from higher elevations. Wind erosion is also a hazard in unprotected areas. These soils are well suited for irrigation and suited for all crops grown in the County. The use of these soils for non-agricultural purposes, including residential, commercial and industrial development, is possible in areas of these soils as only slight limitations exist for construction site suitability and for septic tank and filter bed construction.

However, development on these soils would cause a loss of quality cropland within the County and should be avoided in most all instances in order to retain this productive land. Moderate limitations exist on Bridgeport soils for the purposes of constructing sewage lagoons. The moderate permeability of the soil creates situations where groundwater contamination is possible. As a result confined livestock feeding operations utilizing lagoon treatment systems should be located to areas where possibilities of groundwater contamination is minimized. However, due to this soils close located to the Republican and Frenchman Rivers, it is very important that these operations are not located in areas that drain directly into the Rivers and create surface water contamination. Again, since these soils are conducive to crop production, development of other uses should be minimized. Bridgeport soils comprise a total of 18,720 acres within Hitchcock County, Nebraska.

McCook soils are located on bottomlands along all of the major streams in the County and are the most extensive bottomland soils within the County. McCook soils have moderate permeability and moderate water holding capacity and erosion is the only hazard. Most of these soils are utilized for crop production and are irrigated from water from either local wells or irrigation channels. McCook soils are suitable for non-agricultural development and have only slight limitations for septic tanks and filter beds. However, McCook soils are considered prime crop land soils and should be retained in most instances, thus development on these soils should be restricted or at least examined to determine if the development project would be more economically beneficial than the retention of the crop land.

Moderate limitations exist for the construction of sewage lagoons due to the moderate permeability of the soil and the resulting potential of groundwater contamination. In addition, the majorities of McCook soils are located in very close proximity to the Republican and Frenchman Rivers and thus create potentials of surface water contamination during periods of high water. Confined livestock feeding operations should avoid being constructed on these soils due to these limitations. Again, retaining these prime crop land soils are vitally important to the economy of the County. McCook soils comprise a total of 7,620 acres within Hitchcock County, Nebraska.

Breakdown of the remaining soils within Hitchcock County, Nebraska (including slickspots, water areas and gravel pits)	Acreage of Hitchcock County, Nebraska
BANKARD SOILS	*787*
BROKEN ALLUVIAL LAND	*3,890*
HAVERSON & LAS SOILS	*2,500*
PLATTE SOILS	*1,070*
SANDY ALLUVIAL LAND	*5,413*
SLICKSPOTS	*135*
WATER AREA	*8,605*
GRAVEL PITS	*77*

BREAKDOWN OF PRIME CROP LAND SOILS WITHIN HITCHCOCK COUNTY, NEBRASKA

The preservation of soils that are most productive in terms of crop production is an important issue in any County planning effort. In Nebraska, and other states, where the major component in the economy is agricultural production, the issue of preserving prime cropland for future generations is a key component in planning for the future of any rural area.

In Hitchcock County approximately 122,780 acres are utilized for crop production; this total comprises over 25% of the County. The analysis of the soils within the County, as described in this analysis, revealed that many soils within the County exhibit characteristics that are conducive to agricultural crop production. In the majority of instances such soils are located in areas that are level or flat, as well as, the soils have some ability to retain water for purposes of irrigation. Water retention characteristics are needed because of the fact that many of these soils require irrigation, due to periods of inadequate rainfall that commonly occurs throughout the growing season, to be productive. Soils that exhibit prime crop land characteristics include: Keith, Goshen, Hord, Bridgeport, McCook, Duroc, Bayard and Gleberg soils, as well as, Colby and Ulysses soils in areas where the slopes do not exceed 10%. Figure 12 details the location of prime cropland soils within Hitchcock County, Nebraska.

If these soils are to be preserved for agricultural production, it would indicate that loss of such prime productive areas through development of non-agricultural uses; including industrial, commercial and other non-agricultural developments; must be avoided by providing other more appropriate locations for such uses.

Development of large scale confined livestock feeding operations in areas where these prime soils occur would also result in the loss of notable quantities of this productive crop land and should be permitted to occur only when the long-term economic gain is determined to be greater than the long-term economic loss of the prime crop lands.

SUMMARY OF ENVIRONMENTAL LIMITATIONS FOR CONFINED LIVESTOCK FEEDING OPERATIONS SEPTIC TANKS AND SEWAGE LAGOONS WITHIN HITCHCOCK COUNTY, NEBRASKA

The examination of the soils, documented above, included an examination of the soils suitability for confined livestock feeding operations, septic tanks and sewage lagoons with respect to potentials of groundwater contamination. The following is a summary of the findings of that examination.

limitations of such soils of a selected construction area should be referenced in the Soil Survey of Hitchcock County prior to any development in the rural areas of the County.

HYDROLOGY, WATER SUPPLY AND WATER QUALITY

The upland region of Hitchcock County has an adequate supply of water for domestic use and for livestock irrigation, but only a limited supply for pump irrigation. Deposits of sand and gravel over the Ogallala Formation are not dependable sources of water. The Ogallala Formation is relatively permeable; it has sand and gravel in the lower part. Most of the water that could be used for irrigation is obtained from this formation. Pierre Shale, which underlies the Ogallala Formation, is nearly impervious and yields water to wells only where it is jointed or fractured. Water from this formation generally contains large amounts of sodium and potassium salts and sulfates. Because of the excessive depth and the possibility of finding water of poor quality, further search for water in the Pierre Shale is not practical.

The bottom land region of the County has a good supply of ground water for pump irrigation. Under the valleys of the Republican River and the Frenchman River there are deposits of water-bearing sand and gravel. Also, conditions are favorable for infiltration of precipitation and for direct recharge from streamflow. The bottomland along Driftwood Creek is similar hydrologically to that of the Republican River, but in a much smaller scale.

There are many springs along the sides of the Republican River valley and along some of the major drainageways. The springs develop as a result of natural leakage from the Ogallala Formation.

It is important to note that, due to the location of Hitchcock County near the States of Colorado and Kansas, that supplies of groundwater are required to be shared between these areas. This limits the quantity of water available for use within Hitchcock County and should be noted in local farming irrigation practices and in non-agricultural rural development projects, which may require larger amounts of water.

TOPOGRAPHY AND SLOPES

As indicated on Figure 15, the topography within Hitchcock County ranges from nearly level areas containing less than 1% slope to severely sloped areas containing slopes greater than 30%. Generally slopes with less than 9% are suitable for crop production and land use development, while slopes greater than 9% present limitations to both crop production and land use development.

The nearly level to gently sloping landscape within Hitchcock County is located in areas adjacent to the Republican and Frenchman Rivers, as well as, throughout the County in the north-central and south-central sections of the County. These areas are the location for the majority of crop land production within the County, as well as, the locations of the majority of prime crop land soils within the County. Comparing the prime crop land soils (Figure 12) with the topography within the County (Figure 15) it can be seen that the majority of prime crop land soils are located within these areas.

Slopes of greater than 9% are also located throughout the County. In general, these slopes are located in areas away from the Republican and Frenchman Rivers, as well as, are located in the southeastern portion of the County. These areas present the largest limitations to agricultural production, specifically crop production, and future land use development. For the most part, development in these areas should be avoided unless proper design techniques are utilized that includes proper development of disposal systems. Crop production in these areas can occur but must carefully monitor chemical applications due to the higher runoff potentials in these areas that could lead to the contamination of lower lying waterways.

By noting the general topography within the County proper land use planning can occur. As stated above, the development of potential hazardous land uses, including confined livestock feeding operations, should be limited, if not restricted, in higher sloped areas. The nearly level to gently sloping areas within the County, although areas most suitable for land use development, are the areas where the prime crop land soils within the County are located and thus should be preserved in most instances. Therefore, future development within the County must weigh many factors, including the topography of the County, prior to making a decision on such development.

Future development in the County may be affected by the presence of man-made features such as the geographic locations of the urban communities in the County, the location of roads, recreational facilities and farmsteads.

The rural areas of the County have had limited development beyond the cropland, rangeland and livestock production uses currently in place, indicating that there is not a strong market demand for rural non-agricultural housing, commercial or industrial uses in areas other than those in and around the urban centers within the County.

Due to the geographic location of the County in the southwestern portion of the State, its limited population and corresponding limited development over past decades, there are only four urban communities of limited size within the County. The Village of Trenton, the County Seat, is located in the center of the County and has a population of 656 persons. The Village of Culbertson is located in the central-northeastern portion of the County and has a population of 795 persons. The Village of Stratton is located in the central-southwestern portion of the County and has a population of 427 persons. The Village of Palisade is located in the northern portion of the County and is only partially located within the County (the remainder of the Village is within Hayes County) and has a total population of 367 within the Hitchcock County portion of the Village.

All of these Villages, except the Village of Palisade, which is located along US Highway 6, are located near the Republican River and along US Highway 34. The location of these urban areas indicates that future development, including additional non-agricultural residential uses and commercial and industrial uses will probably tend to locate along the US Highway 34 corridor near one of the Villages or, to a lesser extent, along US Highway 6 near the Village of Palisade.

TRANSPORTATION SYSTEM IMPACTS

The major transportation facilities within the County consists of US Highway 34, which extends in and east-west direction through the central portion of the County, US Highway 6, which extends in north-south direction in the northern portion of the County, State Highway 25, which runs in a north-south direction in the central and south-central portion of the County, and State Highway 17 which runs in a north-south direction in the east-central and southeast-central portions of the County. The vast majority of commercial, industrial and highway related uses are situated along these highways in areas in close proximity to the urban areas of the County. It is reasonable to project that the limited number of future commercial and industrial uses which may develop in the County will desire a location along these highways probably in close proximity to the urban areas.

PUBLIC FACILITY IMPACTS

Swanson Reservoir State Wildlife Management Area and Swanson Reservoir State Recreational Area are the major public facilities that serve to draw volumes of non-local traffic within the County. The Republican River, although not a public facility but instead a public resource, and Swanson Reservoir will continue to impact the future development of the County. Due to the environmental sensitivity of the River corridor, the development of confined livestock feeding operations or other uses which have the potential to degrade the River environment or scenic quality should be avoided. The Republican River and Swanson Reservoir will also encourage the development of additional recreational and tourist oriented uses as more and more persons outside of the County come to recognize the scenic quality of Hitchcock County, Nebraska.

THE VILLAGE OF STRATTON, NEBRASKA

The Village of Stratton, located in the east-central portion of the County, requires additional analysis of the environmental conditions in and around the Village with regard to the appropriateness of future development. Although many characteristics of the geology, water supply and water quality are significantly similar to that of the County, the Village has many individual characteristics regarding soils, slope and local waterways that should be further examined.

SOILS

When examining whether a proposed land use is appropriate for areas in and around the Village of Stratton, it is still of vital importance to note the environmental limitations that may exist. The soils located in and around the urban area of Stratton exhibit certain qualities that should be noted to either restrict, limit or properly locate future development projects. The following is a detailed analysis of the use limitations of the soils in and around the Village of Stratton, Nebraska.

Figure 16 details the specific soil types located in and around the Village of Stratton. It is important to note the soils located in and around the community, and the limitations of such soils, as these sites have the highest potential of future development. The majority of the development that will occur in and around the community is non-agricultural development consisting of non-farm residential, commercial and industrial type. Therefore, the analysis deals with the limitations the soils have for such uses and should be used as a general guide by the local Planning Commission and Village Officials in noting whether or not a use should be permitted based on the limitations of the soil.

The soil types located in and around the Village of Stratton include Bayard, Bridgeport, Colby, Dwyer-Valentine, Glenberg, Haverson-Las, Keith, Keith-Goshen, McCook, Platte, Ulysses, Ulysses –Colby and Valentine soils, as well as, areas of Sandy alluvial land and Rough broken land. As indicated in the County portion of the environmental analysis, each of the above mentioned soils have various limitations regarding future development projects. A summary of these limitations for the Village of Stratton is provided below:

TABLE 35: SOIL LIMITATIONS IN AND AROUND THE VILLAGE OF STRATTON

SOIL TYPE	LIMITATIONS FOR NON-AGRICULTURAL DEVELOPMENT PROJECTS	LIMITATIONS FOR SEPTIC TANK AND FILTER BEDS	LIMITATIONS FOR SEWAGE LAGOONS	PRIME CROP LAND
Bayard	MINIMAL	MINIMAL	SEVERE (possible groundwater contamination)	YES
Bridgeport	MINIMAL	MINIMAL	MODERATE (possible groundwater contamination)	YES
Colby	MODERATE-SEVERE (high degree of slope)	MODERATE-SEVERE (possible groundwater contamination) (high degree of slope)	MODERATE-SEVERE (possible groundwater contamination) (high degree of slope)	YES (in low slope areas)
Dwyer	MINIMAL	MINIMAL	SEVERE (possible groundwater contamination)	NO
Glenberg	MODERATE (flooding)	MODERATE (flooding)	SEVERE (flooding) (possible surface water contamination) (possible groundwater contamination)	YES
Goshen	MINIMAL	MINIMAL	MODERATE-SEVERE (possible groundwater contamination)	YES
Haverson-Las	SEVERE (flooding)	SEVERE (flooding)	SEVERE (flooding) (possible surface water contamination) (possible groundwater contamination)	NO
Keith	MINIMAL	MINIMAL	MODERATE-SEVERE (possible groundwater contamination)	YES
McCook	MINIMAL	MINIMAL	MODERATE-SEVERE (possible groundwater contamination) (close proximity to rivers)	YES
Platte	SEVERE (flooding)	SEVERE (flooding)	SEVERE (flooding) (possible surface water contamination) (possible groundwater contamination)	NO
Rough broken land	SEVERE (high degree of slope)	SEVERE (high degree of slope)	SEVERE (high degree of slope) (possible surface water contamination)	NO
Sandy alluvial land	SEVERE (flooding)	SEVERE (flooding)	SEVERE (flooding) (possible surface water contamination) (possible groundwater contamination)	NO
Ulysses	MINIMAL	MINIMAL	MODERATE-SEVERE (possible groundwater contamination)	YES

Source: Soil Survey of Hitchcock County, Nebraska, Stahr & Associates, Inc. & J E O, 2000

SLOPE HAZARDS

It is important to note that many areas surrounding the Village of Stratton have high degrees of slope that limit both agricultural production methods and non-agricultural development. High degrees of slope are a characteristic of the Colby soils, which have slopes ranging between 9 to 30%, which are located in the northwest portion of the Village, as well as, in areas further west, north and east of the Village within its one mile jurisdiction. High degrees of slope are also found on the Dwyer-Valentine soils located south of the Village and south of the Republican River. High degrees of slope create potential situations where run-off can cause property damage to structures located on lower elevations due to the velocity of the water running off. In addition, fertilizer, herbicides and other potential contaminants used in agricultural production can run off from the upland areas creating situations that could possibly contaminate nearby surface water areas including the Republican River. Therefore, it is key that development and farming methods be closely monitored on areas with high degrees of slope to minimize, if not eliminate, potential hazards in and around the Village of Stratton.

THE REPUBLICAN RIVER

The location of the Republican River south of the Village of Stratton limits expansion of the Village to areas north, east and west of the existing urban area. Flooding, as well as, other environmental limitations significantly limit the types of development that can occur south of the Village and any development proposed in the area should acknowledge such limitations and use special design techniques to limit potentials of both property and environmental damage or locate to another area.

EXISTING LAND USE

EXISTING LAND USE

INTRODUCTION

An evaluation of the land uses that presently exist within Hitchcock County, Nebraska is critical to the formulation of its Comprehensive Development Plan. It is the type and location of the existing land uses, which provides the starting point for this 'Plan' and the basis for the formulation of workable zoning regulations to protect such existing uses. In addition, the identification and examination of the existing land uses and corresponding development of zoning regulations also serves to encourage additional economic expansion within the County through development of future land uses which are compatible with such regulations.

PHYSICAL CHARACTER OF HITCHCOCK COUNTY, NEBRASKA

In order to properly understand the impact of the existing land uses within the County and the overall trends in the location and extent of the existing land uses it is important to review to physical character of the County. An examination of the physical character of the County unveils why certain land use trends have occurred and, in turn, details limitations of why development has not occurred in select areas. The following is a brief synopsis of the physical character of Hitchcock County.

Hitchcock County is in the southwestern portion of the State of Nebraska. The State of Kansas borders Hitchcock County to the south with Red Willow County, Nebraska to the east; Frontier County, Nebraska to the northeast; Hayes County, Nebraska to the north; and Dundy County to the west. Hitchcock County is a rectangular area of 462,080 acres, measuring 30 miles from east to west and 24 miles from north to south.

Urban development within the County has occurred in many locations throughout the County, however, the size and extent of this urban development has been minimal with regard to total population base. The largest urban area within the County is the Village of Culbertson, located in the east-central portion of the County. Other communities; including Trenton, Stratton and Palisade; are also located within the County. These urban areas, for the most part, are located in the central portion of the County, with the exception of the Village of Palisade, which is located in the northern portion of the County.

The most significant factor that influenced the location of the urban areas within the County was the presence of a nearby water source. In the instance of Hitchcock County the location of the Republican River and its tributaries influenced the location of the communities. The settlement of the urban areas was then further impacted by the development of the railroad and finally, by the development of the highways serving the County.

The goods and services provided and produced in Hitchcock County revolves around the industry of agriculture. Nearly 90% of the County is utilized for agricultural production, mainly a combination of livestock and crop production. As can be seen, agriculture is vital to the economy of the County and will continue to be throughout the planning period. Nearly 90% of the County being utilized for agricultural purposes reveals that a total of approximately 434,000 acres of the County are involved in agriculture. The remaining 10%, or approximately 28,080 acres, are divided between non-agricultural uses, urban areas, local roads and highways and public / recreational facilities within the County.

Development within the rural areas of Hitchcock County has mainly been that that is agricultural in character, including development of farmsteads. The only exception within the County is the limited expansion of urban development that has occurred in close proximity to the urban areas within the County. Although not as extensive as urban sprawl in larger communities, such as in the cities of Lincoln and Omaha, development has occurred in areas in and around the communities within the County. This trend is very common across the State of Nebraska and will continue to be a land use trend throughout the planning period.

The major transportation routes within the County are significantly important in both existing land use and future land use development within the County. Aside from the fact that these major highways provide intra-county access to the urban areas, as well as, provide further access to larger transportation routes and urban areas outside of the County, they provide ideal locations for commercial business and industry within the County. Existing commercial and industrial development has been primarily located in close proximity to the major highways within the County generally in or near an urban area within the County. This trend will continue to occur throughout the planning period and will be significantly influenced by any improvements made to the major transportation routes within the County. The major highways within Hitchcock County include U.S. Highways 6 and 34, as well as, State Highways 17 and 25.

It is important to note these characteristics of the County to gain a better understanding of why land use has development the way it has. In understanding these trends it paves the way for proper planning for the future. Such planning should continue upon the land use trends that have been positive in nature and stray away from such trends that may have had a negative impact in the County. In order to more fully understanding land use development within Hitchcock County a breakdown of land use development within the rural portions of the County is as follows:

RURAL RESIDENTIAL DEVELOPMENT

Figure 17 details the existing land uses present within Hitchcock County. From Figure 17 it can be seen that rural farmstead development is one of the largest land uses within the County.

Farmsteads are located throughout the County and in most instances the location of farms within the County has occurred on or near to where the soils are the most conducive to crop production. In addition, the existing farms are located away from areas that are prone to flooding and ponding, as well as, away from areas with high degrees of slope. Further, the most dense farmstead development has occurred surrounding the Village of Culbertson and, to a lesser extent, surrounding the Village of Trenton; see Figure 17.

In 1997 the total number of operational farms within Hitchcock County was 339. This number has significantly decreased over the past decades. From a statewide perspective, Hitchcock County has approximately 0.66% of all farms located within the State. Out of all 93 counties within the State of Nebraska, Hitchcock County ranks 73rd in total number of farms.

The average size of farms, in terms of acres, within Hitchcock County totals 1,198 acres per farm. The average size of farms within the State of Nebraska totals 885 acres per farm, some 300 acres less per farm. This ranks Hitchcock County 30th in the State in overall farm size. In Hitchcock County farmsteads are developed at an average of 0.44 farmsteads per square mile.

Non-farm rural residential development has also occurred within the County. As can be seen on Figure 17, this type of development is somewhat limited throughout the County, with the majority such development being located in areas surrounding Culbertson and Trenton. This type of development is common across the State of Nebraska, as well as, nationwide due to the overall market trend in which home buyers are actively searching for larger parcels of land on which to develop larger scale homes. In most instances, larger parcels of land for such development are not located within the urban framework of the urban areas, as a result, the only available land for such development is located in the rural areas.

In order to determine the number of non-farm rural residential dwellings within the rural portions of the County an overall analysis of the total number of structures within the County was referenced in the 1990 Census. In 1990, there were a total of 1,873 housing units within Hitchcock County. Of this total, 1,133 housing units were located in the urban areas of the County. This leaves a remainder of 740 housing units, which are located in the rural portions of the County. From the information regarding operational farmsteads, detailed above, it is known that there were 339 operational farms in 1997. From this information it can be approximated that there were a total of 401 rural non-farm housing units within the rural portions of the County in 1997. This total includes existing housing units that used to be farmsteads but have since ceased to operate as a farm and have crossed over into the category of rural non-farm residential housing units.

In 1990, there were a total of 406 vacant housing units within Hitchcock County and 140 housing units being utilized for seasonal, recreational or otherwise occasional use. Of this total, 178 vacant housing units were located in the urban areas of the County, as well as, 7 housing units located in the urban areas of the County being utilized for seasonal, recreational or otherwise occasional use purposes. This leaves a remainder of 228 vacant housing units in the rural portions of the County and a total of 133 seasonal, recreational or occasional use housing units within the rural portions of the County. Since it is known that there were 339 operational farms in the County in 1997, the vacant rural housing units are subtracted from the number rural non-farm housing units. This creates a total of approximately 173 occupied non-farm rural housing units within Hitchcock County, Nebraska in 1997, with 133 of such rural housing units being utilized for seasonal, recreational or occasional use.

Although the number of rural non-farm housing units is an approximated number, it still reflects the overall trend of non-farm development occurring in the rural portions of the County. These numbers are approximated because they do not include any removal or construction of rural housing units since 1990. Although rural non-agricultural development within the County is somewhat limited compared to other counties within the State of Nebraska, the continued development of rural non-agricultural land uses can lead to conflicts between agricultural producers and the non-farm dwellers. It is the agricultural – non-agricultural conflict which is one of the major reasons for preparation of this Comprehensive Development Plan and corresponding zoning regulations, as there is and will continue to be a need to minimize these conflicts during the planning period.

It is important to note that the majority of these non-farm rural residences are located in the jurisdictional areas of the municipalities of the County and thus not included as part of the County's jurisdiction, except where municipal zoning is not enforced, in which the County's jurisdiction extends up to the corporate limits of that municipality. Those non-farm rural residences that are located in other areas of the County

are, however, within County jurisdiction and additional development in such jurisdiction should be carefully monitored and regulated by County Officials.

RURAL COMMERCIAL DEVELOPMENT INCLUDING COMMERCIAL AGRICULTURAL FACILITIES

Rural commercial development within Hitchcock County is quite minimal. As indicated on Figure 17, commercial development is primarily located within the urban areas of the County and, again, is under the jurisdiction of such urban areas. Only in urban areas that do not enforce zoning or have zoning but fail to utilize their jurisdictional powers does the County have authority over commercial development in close proximity to the urban areas. Overall, commercial development within the strongly rural areas of the County is minimal.

This indicates that the majority of commercial businesses and services are located within the urban areas within the County. This trend is very common throughout Nebraska and primarily occurs in these areas due to the higher volumes of local consumer traffic in the urban areas and due to the close location of additional goods and services offered by other local businesses.

It is important to note that this trend may slightly shift with the proposal of any improvements to the major highways located within the County. Commercial development, specifically those businesses oriented towards the highway traveler, may spawn in areas along these major thoroughfares. Acknowledging the impacts and potentials for development along the major transportation routes will be covered in the Future Land Use component of this Comprehensive Development Plan.

Livestock production operations are located across portions of Hitchcock County. These operations range from independently owned livestock feedlots, not indicated on Figure 17, to larger scale confined livestock feeding operations, indicated as commercial agriculture on Figure 17. When examining the existing land uses surrounding these commercial agricultural facilities, it can be seen that these uses are located in areas where many rural occupied dwellings exist. This is unfortunate because these types of uses typically produce odor, dust, flies and potential environmental hazards for adjoining land uses resulting in land use conflicts that are difficult to resolve.

However, the development of these livestock operations in areas in and around the many farmsteads in the County has occurred for the same reasons that the original farmsteads were constructed, that is the availability of adequate water supplies, higher crop production potentials and the desire on the part of these producers to have their livestock located near their farming or ranching operations.

By acknowledging the location of these facilities in Hitchcock County, proper planning can occur and valid zoning regulations can be developed to limit the negative effects of such uses, as well as, prevent development near such uses that would potentially be detrimental to the land owner and/or home buyer. In addition, by noting the location of farmsteads and other non-agricultural developments within the rural portions of the County, sites can be identified for the future location of such larger livestock operations. By properly locating such uses the negative effects commonly associated with larger livestock operations would not strongly effect or damage any neighboring property owner.

RURAL INDUSTRIAL DEVELOPMENT

Industrial development, aside from that that is agricultural in character, is significantly minimal in the rural portions of Hitchcock County. However; there are, as indicated on Figure 17, several oil rigging industrial operations located throughout the rural portions of the County. Oil production in Hitchcock County was at its peak in 1961 but has since declined and leveled off, and exploration has been limited. The existing operations are only limited in size and do not create any substantial land use conflicts within the County.

Aside from these facilities there are no other major industrial operations within the rural portions of Hitchcock County. Again, this indicates that the majority of industrial development is located in and around the urban areas of the County.

RURAL PUBLIC/QUASI-PUBLIC/RECREATIONAL DEVELOPMENT

A variety of public/quasi-public/recreational uses ranging from land owned by the State of Nebraska to local churches, cemeteries, rural schools and historical markers occur in the rural areas of the County. An examination of the location of these public, quasi-public and related uses reveals that, for the most part, these uses are situated near the major highways in the County and in somewhat of a close proximity to an urban area within the County (see Figure 17). In many instances throughout the County these uses were developed during the settlement of the County and have since become significantly aged and, in some cases, obsolete.

One of the largest public use areas within the County is the Swanson Reservoir State Wildlife Management and Recreation Area located in the west-central portion of the County, between the Villages of Stratton and Trenton. Aside from the recreational areas and facilities located within the urban areas within the County, the Swanson Reservoir State Wildlife Management and Recreation Area is the only major recreational use within the rural portions of the County. Additional recreational facilities include hunting and fishing that occurs along the Republican River and its tributaries. Hunting and fishing also occurs in and around the many farm ponds and small lakes located throughout the County.

EXISTING LAND USES WITHIN THE RURAL PORTIONS HITCHCOCK COUNTY, NEBRASKA

The existing rural development density pattern within the County is subject to expected change during the planning period, primarily due to continuing pressure for rural non-agricultural development, as well as, larger scale agricultural enterprise. The objective of this Comprehensive Development Plan and the associated zoning regulations should thus be to prevent land use conflicts and provide liability protection for those uses which now exist by avoiding the placement of new land uses, including larger livestock operations, in areas where land use conflicts would result.

The existing land use pattern in the rural portions of the County will have implications with regard to development of future land use development, including confined livestock feeding operations, as is noted in the Environment, Natural and Man-Made Resources component of this Comprehensive Development Plan. If Hitchcock County is to encourage development within the rural areas of the County, it will be imperative to formulate a Future Land Use Plan and zoning standards which can overcome or at least minimize the land use conflicts which can result, as well as, minimize or eliminate the potential of environmental degradation from the construction of new land uses.

The existing land use pattern in the rural portions of the County has and should continue to be influenced by the location of soil types which are the most productive with regard to agricultural production. The fact that over 90% of all land located within Hitchcock County was utilized for agricultural purposes shows how significantly important retention of quality agricultural ground is to the County's economy. If quality agricultural lands are to be preserved in order to maintain and maximize overall crop and livestock production in the County, a critical component of the local agricultural based economy, the issue of how to avoid the use of the quality agricultural land for other uses will need to be effectively addressed in the Future Land Use Plan and the corresponding zoning regulations.

The overall existing land use pattern in Hitchcock County is one of limited to moderate density, which is, for the most part, consistent with the environmental capacities of the land. A primary objective of the Future Land Use Plan and zoning regulations should thus be to assure that new land uses, which may be developed, be located and constructed in a manner which is compatible, not only with adjoining land uses, but with the environmental capacity of the soils and geologic characteristics of the land.

EXISTING LAND USE FOR STRATTON

INTRODUCTION

Essential to the preparation of the Future Land Use Plan for the Village of Stratton, Nebraska is an analysis of the existing land use patterns, past land use trends and other significant factors. An understanding of the way the land is used provides information on the physical setting of the economic activity and the population of the community. This involves not only an understanding of what the existing land use pattern is, but why the pattern has developed the way it has and what factors control land use development. Typically, the following items are necessary in examining the existing land uses, as well as, instrumental in the preparation of a Future Land Use Plan for the community. These include:

- An understanding of the capabilities of the land for development use;
- Knowledge of factors that limit certain types of land uses;
- Examining the amount of land that is undeveloped within the existing urban area;
- Identifying the special features of aesthetic or recreational interests;
- Examining the relationship of the value of land to its current use.

Objectives

This Existing Land Use analysis of Stratton, Nebraska will attempt to accomplish the following issues:

- Define the areas of general land use;
- Define the areas of expansion in the various categories of land use;
- Provide background information for future land use planning efforts.

EXISTING LAND USE ANALYSIS

A field survey and mapping of all land uses in and around the Village of Stratton was conducted as part of the development of this Comprehensive Development Plan. This was done in order to provide a basis for a qualitative and quantitative analysis of the existing land use pattern. The following is a brief qualitative analysis of the existing land use patterns and trends within Stratton, Nebraska.

Qualitative Land Use Analysis

As depicted on Figure 18, the existing land use pattern and the areas of concentration of the various types of land uses are quite well defined. For example, the industrial land uses are all concentrated in the southern portion of the urban area near U.S. Highway 34. These industrial uses, in most instances, are located away from strongly residential areas and thus reduce land use conflicts between these two incompatible uses. Additional industrial development has occurred along U.S. Highway 34 in the eastern portion of the Village.

Commercial uses, although mostly concentrated in the central business area and along U.S. Highway 34, are commonly located abutting or in close proximity to residential areas resulting in some land use conflicts. In many instances the lack of adequate separation between commercial and residential uses has created negative effects for the residential property owners. In addition, the lack of adequate buffers or screens between these uses further diminishes the overall "image" of the community. This identifiable trend is one that should not continue throughout the planning period.

The majority of residential uses are located in areas with minimal land use conflicts. As can be seen in Figure 19, the majority of all residential development has occurred north of U.S. Highway 34 with higher concentrations of residential development located in the central portions of the community. Residential development density decreases as it expands out to the corporate limits. Single-family residential dwellings and manufactured homes comprise all residential dwellings within Stratton.

Agricultural/vacant/undeveloped land within Stratton is quite extensive. This is mainly due to the fact that the Village's corporate limits have been expanded to areas where minimal development has occurred. This allows ample room within the corporate limits where future development can occur, including the potential for development of larger scale industrial operations or businesses. However, the significantly high percentage of agricultural/vacant/undeveloped land within Stratton indicates the overall lack of economic demand and marketability for developing the area.

Public and semi-public uses are located throughout the community and generally located in close proximity to the residential areas of the community. This makes these uses readily accessible by citizens of the community either by motor vehicle or by foot. Parks and recreational areas are also located within the community and serve to provide adequate areas for recreation for the citizens of the Village.

Quantitative Land Use Analysis

To further understand the land use development within the community, a quantitative analysis was also performed. A quantitative analysis of the existing land uses in Stratton was conducted to provide a comparison of the density of land uses between Stratton and other communities of similar size and population so that weaknesses or problematic areas within the existing land use pattern can be further identified and explored.

As indicated on Table 36, agricultural/vacant/undeveloped land is by far largest land use category located within the Village of Stratton. Agricultural/vacant/undeveloped land comprises nearly 240 acres, or over 50% of the entire land area located within the corporate limits of the Village. In comparison with other

similar size communities within Nebraska, Stratton has substantially higher total percentage of undeveloped land within its corporate limits.

TABLE 36: EXISTING LAND USE AND COMPARISON – STRATTON, NEBRASKA

LAND USE CATEGORY	STRATTON, NEBRASKA			OTHER COMMUNITIES *	
	Land Usage (acres)	% of Total Land Area	Acres per 100 Population	% of Total Land Area	Acres per 100 Population
Residential	46.12	9.79%	12.04	38.0%	9.0
Commercial	8.29	1.76%	2.16	4.0%	1.0
Industrial	4.03	.86%	1.05	8.0%	1.9
Public / Semi-Public / Recreational	13.34	2.83%	3.48	11.0%	2.8
Highway, Street, Alley Rights-of-Way	89.47	19.00%	23.36	39.0%	9.6
Agricultural / Vacant / Undeveloped Land	238.40	50.61%	63.91	22.2%	10.1
Totals	470.99	100.0%	122.96	100.0%**	34.4

Source: Stahr & Associates, Inc. & J E O Consulting Group, Inc.
* A compilation of existing land use statistics of 50 other Nebraska communities under 20,000 in population.
** Denotes that Agricultural / Vacant / Undeveloped Land is not computed in overall percent of total land area for comparison communities.

Residential development is the largest developed land use, aside from the land dedicated to rights-of-way, within the Village. For every 100 persons within the Village, a total of 12.04 acres is used for residential purposes. In comparison to other communities of similar population in Nebraska, the density of the residential areas in Stratton is noticeably less and is indicative of the predominance of single-family detached dwellings and the lack of multi-family housing facilities or other more dense housing units. Residential development within the Village of Stratton comprises a total of 46.12 acres, or 9.79% of the total land within the corporate limits.

Highway, street and alley rights-of-way occupy 89.47 acres of land within the corporate limits of the Village and constitute the largest developed land use category. In comparison with other communities, this level of public usage is substantially higher in terms of total acres of such land use per 100 persons. This is an indication of the low density of overall development within the Village and the fact that the street system in the Village is a grid system. Grid street systems are relatively inefficient systems and utilize larger amounts of land to provide access to abutting properties. This relatively high amount of land committed to public rights-of-way also indicates a relatively high amount of streets and water and sewer lines per property and thus higher overall maintenance and repair costs in comparison to other communities within the State.

Commercial land uses occupy a total of 8.29 acres, or less than 2% of the total land area within the corporate limits. In comparison with other communities, the total percentage of commercial uses is relatively low and is indicative of the minimal population base of the community in relation to the overall size of the community. However, the total acreage of commercial activity compared to acres per 100 persons within the community is higher than the comparison communities indicating that the goods and services provided within the Village better serve overall population.

Industrial land uses occupy only 4.03 total acres, or only .86% of the total land located within the corporate limits of the community. Minimal industrial development is common for communities similar in size to Stratton within the State of Nebraska. However, the total acreage of land devoted to such uses is significant smaller than that of the comparison communities, approximately 7% less. This is mainly due to the lack of diversity in industrial development within the Village and thus the lack of industrial activity aside from that that is agricultural in character.

Public/semi-public/recreational land uses occupy a total of over 13 acres of land within the Village and account for nearly 3% of the total land usage. These uses account for 3.48 acres for every 100 persons residing in the Village. This ratio is higher than the typical community and indicates the land area for public/semi-public/recreational uses is extensive and has the capacity to serve the overall population within the Village.

EXISTING LAND USE WITHIN THE JURISDICTIONAL AREA

Land uses outside of the existing corporate limits of the Village which are within one mile of the Village consist of agricultural lands, farmstead development, public and recreational lands, limited commercial activity and a commercial agricultural operation located south of the Village. The existing land uses, aside from the commercial agricultural operation, do not present any potential for conflict with the future physical expansion of the Village.

The location of a moderately sized livestock feeding operation south of the Village presents some potential negative influences to future development to the south of the Village. As can be seen on Figure 18, limited development has occurred near this operation and thus existing negative influences are limited. Future development should avoid locating south of the existing corporate limits to avoid potential negative influences that are generally associated with larger confined livestock uses. In addition, the location of the Republican River south of the Village also limits southward expansion of the Village. For these reasons the major development directions within the jurisdictional area of the Village of Stratton will be to the north, east and west.

LAND USE CHALLENGES

As in any community, there are many aspects of the land use pattern, which must be examined in advance of preparation of the Future Land Use Plan. In the Village of Stratton these aspects include the need to make use of the substantial percentage of land within the corporate limits that has remained vacant or undeveloped. Priority should be placed upon developing upon the existing vacancies in areas where public infrastructure is already in place to avoid the costs associated with expanding such facilities. Secondary to the aforementioned development will be the continued development of the existing vacancies located near the periphery of the corporate limits of the Village; areas where new or improved infrastructure may need to be constructed.

In order to maintain a positive economy within Stratton new development and renewal of existing development is needed. It is important that the Village retain the existing commercial businesses and work to enhance these businesses. It is also important that the Village work to recruit additional commercial activity in the future by identifying locations for such uses and by providing additional incentives for locating in the Village.

Additional industrial development should also be encouraged within the Village. U.S. Highway 34 provides adequate transportation to and from many major market areas located in the region. It is important then, that areas for the location of future industrial development be identified in close proximity to U.S. Highway 34 and potentially the railroad.

Residential development within the Village is in varying conditions. In some areas, the residential dwellings have experienced major deterioration and are in need of some major repairs and improvements. In some dwellings, the continued deterioration of the structure has created situations where rehabilitation would probably not be economically feasible and thus the eventual removal of the structure would be required. It is important that the housing units located within the Village be actively maintained and renovated, as needed, to maintain an adequate housing stock and to maintain an overall quality "image" within the Village.

EXISTING LAND USE SUMMARY

The existing land use pattern in the Village of Stratton is, for the most part, void of major land use conflicts. The major problems areas within the existing land use pattern is surrounding the commercial development where there is a mixture of residential and commercial uses and the lack of overall development of the vacant land located within the corporate limits. The Future Land Use Plan will work to remedy these situations by identifying proper locations for future development. The Plan will acknowledge the need to develop upon the many vacancies within the corporate limits of the Village.

FUTURE LAND USE PLAN

FUTURE LAND USE PLAN

In any planning area, be it a large urban area which is expanding in population or a small rural county which is declining in population, there will be changes in land uses through time. The purpose of a Future Land Use Plan is to provide a general guide for these changes in land use so that the resulting land uses can coexist with a minimum number of conflicts. A Future Land Use Plan for any planning area must reflect the land uses which already exist and must be considered flexible in nature in order to meet the changing needs of its citizens and to encourage expansion of the local economy whenever possible.

A Future Land Use Plan also provides the legal basis for the formulation of land use (zoning) regulations and the application of zoning districts. For this reason it is imperative to formulate a Future Land Use Plan that is tailored to the needs, desires and environmental limitations of each planning area.

In order to accomplish these purposes, the Future Land Use Plan for Hitchcock County is based upon the land uses already existing in the rural areas of the County and the citizen's desire and need to protect these land uses, the environment, local property values and their lifestyles and customs while, at the same time, promoting improvements in all components of the local economy with particular emphasis on agricultural growth, as the predominant component of the local economy The following common principles and land use concepts for strongly agricultural areas have thus been selected to guide the development of the Hitchcock County Future Land Use Plan.

PRINCIPLES AND CONCEPTS OF THE HITCHCOCK COUNTY, NEBRASKA FUTURE LAND USE PLAN

- Private ownership of land is essential to the freedom of individuals, families and communities and to the economic interest of the citizens of the County.

- Existing agricultural uses, methods of agricultural production, property values and the lifestyle and quality of life of the citizens of the County should be protected and preserved while allowing for changes in methods and scale of agricultural production in a manner and in locations which will not be incompatible with such existing uses, which will not damage the environment, which will not negatively impact the infrastructure of the County and which will not negatively impact property values or the quality of life in the rural areas of the County.

- Land use regulations, which are to be used to implement this Future Land Use Plan, should be minimized to preserve the freedoms and property rights enjoyed by the citizens of the County while effectively addressing the needs to basic protection of the existing land uses, property values, the local

environment and quality of life from development of future land uses which would be inconsistent with these needs.

LAND USE COMPONENT CONCEPTS

AGRICULTURAL USES

In order to abide by the principles and general land use planning concepts presented above, the future land uses in the rural areas of Hitchcock County should continue to be dominated by agricultural production. The use of land for crop production should be encouraged as a means of strengthening the local economy, but such development should be limited to those soil types which have crop production capacities. In addition, the use of land for livestock production should also be encouraged as a means of enhancing the economy, but such development should be limited to soil types and landscapes that have reduced risks of environmental degradation, including surface and groundwater contamination.

Residential uses associated with such agricultural production uses should continue to be supported as accessory uses to such agricultural production through continuation in improvements in roadway systems and public and quasi-public facilities and services.

Confined livestock feeding operations and commercial agricultural product processing uses, which are not customary and typical agricultural uses, should be encouraged in the County, but their development should be closely monitored due to the potential for environmental contamination (see Figure 14 for limitations on locations for confined livestock feeding uses). Where such uses are developed, they should be carefully sited in order to avoid the potential for incompatibilities between land uses due to the production of odor, dust, or other characteristics of these uses which can negatively affect the value and marketability of neighboring properties, and to avoid the potential for degradation of natural resources including groundwater, surface water, air quality and soil productivity.

River and wetland protection and maintenance are critical to protecting and preserving the wildlife and water quality in the County. Confined livestock feeding and development of other commercial or industrial uses in these environmentally sensitive areas, as well as, crop production and livestock grazing should be closely monitored, if not prohibited in these areas, to substantially decrease the potential risk of contaminating surface water and these wetland areas.

NON-AGRICULTURAL RESIDENTIAL USES

Development of residential uses, not associated with farmstead operations, should be permitted as a method of encouraging economic and population growth and to provide expanded choices for existing and future

citizens regarding where they may wish to live. However, such development should avoid impeding upon prime agricultural lands and be located in areas where proper access is allowed and where disposal systems can function properly without the risk of potential environmental degradation.

Non-agricultural rural residential uses can be developed either as individual housing sites or as residential subdivisions. Such development, when and if proposed, should be weighed against environmental limitations of the land, potential loss of prime crop land areas, marketability, land use compatibility and be addressed by the proper governing body. Such uses, whether they occur as individual housing sites or as residential subdivisions, in the highly rural areas of the County, should generally be limited to locations on or near one of the major highways within the County. Non-agricultural rural residential development should also be located along the County road corridors which are in close proximity to the urban areas within the County (development in such areas, in most cases, would not be under the jurisdiction of the County).

As stated in the Existing Land Use Analysis component of this Comprehensive Plan if the communities enforce municipal zoning, as well as, jurisdictional zoning, such decisions shall be dealt with by the community itself. In the instances where such communities do not enforce zoning, or have zoning but choose not to utilize their extraterritorial jurisdiction, decisions regarding land use shall be made by County Officials in areas up to the corporate limits of such urban area.

These policies regarding non-agricultural rural development will avoid the need for unnecessary demands for expansion of the County road and services infrastructure while enhancing the populations and local economies within the County. An exception to this location limitation would be the potential for development of non-agricultural housing around scenic areas in the County where major roadway access already exists.

Rural Commercial and Industrial Uses

Future additional commercial and industrial uses, not desiring a location within or near the urban areas of the County, should be encouraged to locate in the rural portions of the County, but siting of these types of uses should be carefully considered. Those uses which would generate or attract substantial amounts of vehicular traffic, particularly heavy truck traffic, should be encouraged to locate along the major highway corridors in the County as opposed to more rural locations which would require extensive use and higher maintenance levels on County roads.

In addition, such uses that produce potentially hazardous materials or otherwise undesirable materials need to be carefully monitored within the rural areas of the County. It is vitally important to properly locate

such uses, when and if they are proposed, to limit the risk of potential damage to the environmental, as well as, potential negative influences on adjoining or nearby property owners.

RURAL RECREATIONAL DEVELOPMENT

Future recreational use within throughout the County should be not only encouraged, but actively pursued. Although there is a large State owned and operated wildlife management area within the County, it is important to add upon this existing recreational area, as well as, potentially create additional recreational areas to increase the overall "image" of the County and, as a result, work to enhance the quality of life for the citizens of the County and to increase the potential for tourists within the County.

Development of, as well as, improvements upon the recreational areas within the County should be an active land use goal throughout the planning period. It is important, however, to acknowledge the need to attract people, both Hitchcock County citizens and out-of-county citizens, to such recreational areas. Future development of recreational uses should take into consideration the need for proper access to such areas, as well as, proper advertisement to ensure such areas are utilized frequently.

THE FUTURE LAND USE PLAN

Based upon the above noted land use concepts, the Future Land Use Plan for Hitchcock County, Nebraska envisions three primary land use categories for the expansion or future development of various land uses. As described below, these land use areas are:

- Preservation of the majority of the land in the unincorporated areas of the County for farming which is now exercised, and typical throughout the County.

- Delineation of land near the urban areas of the County as transitional agricultural areas which would encourage continued agricultural and commercial activities, but which would also serve to protect the communities and its citizens from development of land uses in close proximity which would be incompatible with this area.

- Delineation of land near Swanson Reservoir and the Republican River, which have good fish production capacity as surface water protection areas. These areas would encourage continued agricultural activities, but would also serve to limit development of agri-business uses and other uses which may have the potential for contamination of these waters. In addition, recreational improvements or future construction of recreational uses in this area should be actively encouraged.

The basic premise for this Plan is the preservation and protection of existing land uses and environment in the County, including the protection of the urban areas, while encouraging economic expansion in the

agricultural and non-agricultural sectors of the local economy through development of new or expanded land uses which are compatible with existing uses; are environmentally acceptable; and which respect and support quality of life of the citizens of Hitchcock County.

General Agricultural Use

As depicted on Figure 19, the plan for the majority of land in the rural portions of the County is that of continuation of, protection for and enhancement of general production agriculture represented by the farm activities that now exist in the area.

As stated in the Environmental Characteristics and Man-Made Conditions component of this Comprehensive Plan, there are many areas within Hitchcock County where the characteristics of the geology, hydrology, topography and soils are more sensitive to high intensity uses such as confined feeding of livestock and where contamination of the local environment could occur even with good quality livestock management practices. The best way of avoiding environmental degradation problems is to carefully monitor the development of uses, which present such potential problems.

In Hitchcock County there are only limited areas which are reasonably suited to confined livestock feeding uses because the concentrations of livestock waste and/or the establishment of livestock waste holding basins or lagoons could easily result in environmental contamination. The use of land for open lot feeding of cattle also has the potential for environmental degradation due to wind and water erosion of soils in the lots, unless effectively controlled. Application of the manure to crop land should also be carefully managed to avoid potentials of both surface water and groundwater contamination.

Transitional Development

Throughout the planning period there will be additional non-farm residential uses and additional commercial uses, which may be added to the land use pattern in the County. These non-agricultural uses can be best situated in the transitional area around the urban areas of the County so that the occupants of these uses can have easy access to the goods and services provided within the communities and so that the public services such as fire protection, police protection and rescue service can be provided at minimum expense.

As noted in this Future Land Use Plan, the urban areas within the County should be protected from development of uses which could be incompatible with urban land uses in the community through delineation of a transitional use area which extends from one mile (east-west) and two miles (north-south) beyond the corporate limits of the urban areas. This is in addition to the extra-territorial jurisdiction exercised by the communities and is created to properly protect development both within such jurisdictional area, as well as, within the community itself from negative influences created from more intensive agricultural uses.

SURFACE WATER PROTECTION AREAS

As noted on Figure 19, select areas within the County have been set aside for the purposes of surface water protection. These two areas include the Republican River and Swanson Reservoir State Wildlife Management and Recreation Area. These two surface water areas are the predominant surface water sources within the County and are the most predominant, scenic and aesthetic environmental features within the County. Degradation of these areas; through either improper land use development, uncontrolled chemical applications to nearby crop land areas, unmonitored livestock production in close proximity and through improper maintenance of public uses areas; should be disallowed. This will require adherence to the regulations established for these areas, as well as, cooperation between the citizens of the County to keep such areas free of contamination and other potential hazards.

It is important to note that many of the smaller waterways within the County serve to be tributaries of the Republican River. Therefore, careful consideration in maintaining these smaller waterways must occur. Development of larger livestock feeding facilities and related agri-business operations in areas of these smaller creeks must be closely monitored to assure that environmental degradation does not occur. Non-agricultural development with potentials for environmental degradation should also be closely monitored within the rural portions of the County, especially near the many local waterways.

FUTURE LAND USE SUMMARY

Utilization of this Future Land Use Plan as a guide to future land development in the County will result in protection of the existing land uses in the rural areas, as well as, protection for the community citizens in and around the urban areas of the County. Adherence to the land use areas depicted on the Future Land Use Plan will also assist the County in avoiding development of land uses in areas where it is not environmentally sound to do so and adherence to the concept of limiting the impact on the public infrastructure in the County, particularly the impact on the County road system, will assist in preserving the financial capacity of the County for years to come.

It is important to note that the Future Land Use Plan represents a generalized "County-wide" view of where future development should be. It is important to utilize the graphic information provided in the Environmental Characteristics and Man-Made Conditions component of this Comprehensive Development Plan (Figure 7 through 16) in conjunction with this Future Land Use Plan to properly locate future land uses. Further, in many instances the need for on-site investigation will be necessary, especially when larger land use developments are scheduled for the rural areas of the County.

The information provided within this Comprehensive Development Plan, including this Future Land Use Plan, is meant to be a guide for the future development of the County, not a static document that serves to hinder development within the County. It is important, however, that reference be made to the information provided within this document prior to decisions being made about any future land use within Hitchcock County, Nebraska.

LAND USE PLAN FOR STRATTON

INTRODUCTION

The physical form of most Nebraska communities is the result of development in response to economic opportunities and corresponding population growth. This type of development was typically single-use oriented to minimize development cost and maximize return on investment. Very seldom were the impacts of each individual development evaluated with regard to impacts on the community in terms of land use, traffic, the cost of public services and facilities and other socio-economic factors considered. The resulting problems created the need and, quite often, a public demand for development of regulations to avoid a variety of negative impacts. To avoid shortsightedness in applying such land use regulations, the concept of a long range Future Land Use Plan has evolved as the predominant physical planning tool for urban communities, large and small.

A Land Use Plan is intended to be a general guide to future land use that will balance private sector development, the critical growth element in any community, with the concerns, interests and demands of the overall local economy.

Determining the desirable pattern and distribution of future land uses is a structured process consisting of:

- An analysis of existing land use patterns and physical and environmental land use limitations;
- A study of past directions of growth, and the reasons for these growth directions, as well as, alternatives thereto;
- The application of recognized planning principles to maximize community efficiency and minimize capital and on-going public goods;
- The development of land use policies to guide growth in a manner consistent with overall community development goals.

These patterns, limitations, principles and policies, when combined, established a "local determinant process" by which local public officials can evaluate proposed plans uses using local community standards. The advantages of utilizing this process are several:

- It results in a Future Land Use Plan for the community, which permits the community to know it's upcoming land use needs, thus allowing local elected officials to forecast the demands for expanded public services, facilities and utilities and budget efficiently for such services.
- It provides a community statement regarding land use expansion that industry, commerce and other private sector investors/developers can quickly comprehend and utilize in determining feasibility of potential land development projects.

- This process provides the local planning commission and elected officials with a method of logically and fairly making subsequent land use decisions, thus permitting the same determinants to be used in selecting the location of future industrial sites, commercial activity, residential development and public/recreational development, as well as, permitting the drafting and enforcement of zoning regulations.

REVIEW OF PAST GROWTH DIRECTIONS

Historical physical growth trends in Stratton have been to the north, east, west and somewhat to the south. This growth trend is primarily the result of the naturally occurring flood plains located south of the Village near the Republican River. The impacts of this trend on the overall community have been both positive and negative. The continued growth north has helped minimize development of incompatible land uses and has served to promote compact (non-leapfrog) development that is more characteristic of multi-directional development.

The primary impact of this trend is that the majority of residential development has occurred in the northern ¾ of the Village, with the southern ¼ divided between commercial and industrial uses located near or along U.S. Highway 34.

DIRECTIONAL ALTERNATIVES

Given the existence of U.S. Highway 34, the Republican River to the south and the location of larger commercial livestock operation further south of the River, the choices for alternative directions of growth are limited to the north, east and west. Future land use development to the south of the Village can occur but should be land uses that are not substantially effected by the negative effects generated by the larger livestock operation, such land uses may include industrial or heavy commercial operations. Residential development should avoid being constructed south of the highway within the Village.

It is important to note that, although the primary growth directions for the Village have been established as north, east and west of the existing urban development, these same growth areas are not without some limitations. The soil conditions, topography and drainage patterns located within the Village's jurisdiction present select limitations for residential, commercial and industrial development and should be carefully studied prior the development to detail any negative effects such proposed development may have on surrounding land uses.

PLANNING PRINCIPLES

Like pieces of a puzzle, the various land uses join together to form the "community". These uses must be properly situated within the planned urban frame to achieve the most desirable environment in which to

live, work and recreate. To accomplish this end, the following principles should be applied when developing a Future Land Use Plan.

RESIDENTIAL

From a land use planning standpoint, communities under 4,000 population are typically considered as being composed of a single neighborhood, thus is commonly referred to as the "entire community". Given this assumption, the planning principles applicable to residential neighborhoods in larger cities are also applicable to the total residential are of Stratton. These principles are as follows:

- Residential uses should be centered around shopping and services centers, or in the instance of Stratton, located surrounding the central business district.
- Residential uses should be centered around school facilities; in particular, elementary schools, while avoiding encroaching too closely to such facilities and thus, limiting their expansion potentials.
- Where possible, residential areas should not be located directly on high-volume arterial roadways, such as U.S. Highway 34. If such locations are necessary, such streets shall maintain proper signage to manage motor vehicle traffic, provide adequate pedestrian access and maintain proper provisions for buffer landscape between the street and such residential uses.
- Proposed new residential areas should be so located as to be free from encroachment by incompatible land uses, either existing or proposed.
- Where feasible, proposed residential areas should be located within easy reach to playgrounds and with walking distance of parks and other recreational facilities. Access to such facilities from the residential areas should be safe and avoid arterial street crossings.
- Residential areas should provide for a full range of housing types, ranging from manufactured homes to single-family detached to midrise apartments, and densities ranging from 2 to 15 units per acre or higher.
- Higher density residential uses, such as single-wide manufactured home parks, should be located in close proximity to collector or arterial streets to maintain adequate traffic flow while avoiding introduction of heavier than necessary traffic volumes into lower density residential areas.
- Areas for development of single wide manufactured home parks and subdivisions within the existing and proposed residential areas should be provided with a minimum site of two (2) acres.
- Qualified modular housing and double wide manufactured homes should be permitted in residential areas provided such housing meets all requirements for lot area setbacks, as well as, any other legal regulations applicable to the area.

COMMERCIAL USES

Commercial uses in villages are generally divided into two categories. These include the convenience/comparison goods retail center (the "downtown" area) and what are commonly referred to as "highway commercial" uses, which are uses that typically require a location along a major highway because they serve both local and traveling public or are those uses that require a considerable land area and would thus not be compatible with pedestrian oriented density of the "downtown" area.

Planning for commercial uses in Stratton should include provisions for maintaining and strengthening the existing commercial uses and for providing highway-oriented land area for additional or expanded highway commercial or related light industrial uses. The following policies should be applied when considering such future uses:

- The "downtown" area should remain the only dominant public service and retail center for the local population as larger commercial uses focused on both local and traveling consumers typically require larger tracts of land that are difficult to acquire in the "downtown" area.
- Future highway commercial uses should be located along U.S. Highway 34 towards the eastern and western peripheries of the Village. These areas should be established to create attractive entrances into the Village that serve to draw outside consumers into the Village.

INDUSTRIAL USES

Since the ideal industrial development site is seldom found and industry requirements are variable, the task of identifying future sites that do have industrial potential is difficult. There are some minimum requirements, however, that can be used as planning principles. These are as follows:

- An individual industrial site should contain at least two (2) acres.
- The site(s) should have level to gently sloping topography and be free of flooding potential.
- Municipal water and sewer utilities, as well as, electrical power must be capable of delivering adequate fire and police protection.
- The location of industrial uses should be in close proximity to the major transportation routes within the urban area, including close location railroads. There should also be the opportunity for additional industrial/commercial development to the east of the Village north of U.S. Highway 34.

The application of these principles to Stratton suggests expansion of industrial growth to the south of U.S. Highway 34 and along the Burlington Northern Railroad and to the east of the present developed area north of U.S. Highway 34.

THE LAND USE PLAN

The Land Use Plan for the future development of Stratton consists of two elements – (1) a land use plan map and (2) a set of land use policies. The land use map is established to provide a general guide to the community's future growth. It is intended to identify the overall land use pattern and the direction of desirable growth and future annexation. The land use policies are structured to allow the local governing officials to evaluate the desirability and acceptability of proposed land use changes over time.

LAND USE PLAN MAP

The characteristics, determinants and principles previously discussed set the basis for the configuration of the Land Use Plan Map indicated on Figure 20. The following is a brief review of the future land use recommendations by category:

RESIDENTIAL

In addition to infilling of vacant lots in the present urban area, future residential growth should be encouraged to the north and east of the existing urban area. In many instance future growth in these directions will require construction of new or improved infrastructure. This growth pattern will create a more use defined pattern as can be seen on Figure 20.

Multi-family development and other higher density residential developments should be encouraged on the larger vacant tracts within the present urban area, particularly along the Highway to provide land use buffers for lower density residential uses located to the north. Larger residential uses should also be located in areas near to the recreational facilities provided within the Village.

COMMERCIAL

Future commercial uses should be given a choice of three locations. (1) A location within the existing central business district (downtown area). (2) A location abutting U.S. Highway 34 near the eastern entrance into the Village or (3) a located near U.S. Highway 34 near the western entrance into the Village. Determining the location of commercial uses should be a cooperative effort between local officials and potential developers.

INDUSTRIAL

The philosophy of preserving the land suitable for industrial development and protecting it from encroachment by incompatible land uses is recommended. Future industrial development should be located in areas with easy access to U.S. Highway 34 and be phased in areas to permit short term and long term expansion of public utilities.

PUBLIC AND SEMI-PUBLIC

Little additional land is proposed to be reserved for public/semi-public uses as little expansion of public buildings or facilities are anticipated to be needed though the planning period. Although not indicated on the Future Land Use Map, future public/semi-public uses are commonly allowed throughout the residential portions of any urban area and thus the same holds true for any future expansion or development of such uses within the Village.

PARKS AND RECREATION

All major parks or recreational areas within the Village should be properly maintained and remain in good working condition throughout the planning period. Additional recreational/open space development is proposed on Figure 20 to link two of the larger recreational areas within or near the Village and to create a river walkway which would link the recreational uses to the Republican River and the downtown area. This development would link the existing ball diamond to the recreational park located in the western portion of the Village and would serve to be an attractive addition to the community.

LAND USE POLICIES

The following is a listing of land use policies structured to reinforce the Land Use Plan Map, as well as, to guide specific land use decisions in years to come:

Policy 1 -- Encourage infilling of all vacant parcels within the existing urban area: A public philosophy of encouraging use of the vacant lots within the Village through appropriate incentives and attention to problems associated with development of such lots is appropriate.

Policy 2 -- Encourage new development to locate in areas served by existing utilities and services or where such utilities and services can be extended at minimal cost: This policy will avoid leap-frog development or sprawl while permitting maximum land development location choices.

Policy 3 -- Require proper and adequate surface drainage for all developments: This policy will assure problems are resolved prior to development rather than after. It should also be required that all developments make provisions for the drainage of any additional land beyond that which has development potential.

Policy 4 -- High activity uses should be located on arterial streets: Commercial, industrial and traffic generating public facilities should be located on major traffic arterials to permit easy access and avoid introduction of traffic through strongly residential areas.

Policy 5 -- Prohibit urban development in any floodplain and permit development in ponded or other wetland areas that is filled above the 100-year elevation: Flood prone areas are best suited for natural or recreational uses and structural development should be avoided. In instances where filling of flood prone land is feasible and will not negatively impact other land or developments such may be acceptable, if deemed desirable in the overall land use scheme.

Policy 6 -- Promote buffers between high and low activity use areas: Use of open space, landscape screening and street plantings serve to reduce the impact of high activity uses on residential and other low activity uses and where these uses are situated on arterial streets.

Policy 7 -- Permit only highway commercial uses in areas designated for such use: Allowing other uses into these areas, including heavy industrial uses, recreational areas, or residential uses, will serve to use up needed and appropriately located highway commercial sites, as well as, create strong potentials of future land use conflicts doing more the lessen the overall quality of the Village than enhancing it.

Policy 8 -- Develop industrial areas consistent with availability of land and with respect to cost of extending utilities and services: A larger industrial park site is preferable over a series of smaller sites and permits more efficient use of municipal services.

Policy 9 -- Residential areas should be developed as integrated areas, including a full range of housing types and densities including mobile home parks: Higher density residential uses, including mobile home subdivisions, should be located on arterial streets or on collector streets near arterial streets.

SUMMARY

In the years to come, the Planning Commission and the Village Board should refer to the Future Land Use Plan Map when a land use question arises. If a change of land use appears desirable, it should be evaluated in relation to the land use policies set forth herein.

TRANSPORTATION PLAN

TRANSPORTATION PLAN FOR HITCHCOCK COUNTY

The Transportation Plan identifies the future transportation system for Hitchcock County. Primary emphasis is given to the improvement and development of motor vehicular traffic systems in the County. The implementation of this plan during the planning period will result in the continued safe movement of people and vehicles within Hitchcock County.

The primary sources of information utilized in the development of the Transportation Plan were (1) Hitchcock County's "One and Six Year Plan", and (2) State of Nebraska Highway Program "One and Five Year Plan."

The "One and Six Year Plan" for Hitchcock County is reviewed and adopted by the County Board of Commissioners to address the issues of proposed road and street system improvements and development. Upon approval of these plans by the Board of Public Road Classifications and Standards, the governmental units are eligible to receive highway-user revenue from the State Highway Department.

The One and Five Year Plan, developed by the Nebraska Department of Roads, establishes present and future programs for development and improvement of state highways. The one-year plan includes highway projects scheduled for immediate implementation, while the five-year plan identifies highway projects to be implemented within five years or possibly sooner if scheduled bids and work for one-year projects cannot be awarded and constructed.

STREET AND ROAD CLASSIFICATION

Nebraska Highway Law (Chapter 39, Article 21, Revised Reissue Statutes of Nebraska 1943) proposes the functional classification of both rural and municipal roads and streets and public highways, see Figure 21. Chapter 39, Article 21.03 lists rural highway classifications as:

1. Interstate: federally-designed National System of Interstate and defense highways;
2. Expressway: second in importance to Interstate. Consists of a group of highways following major traffic desires in Nebraska and ultimately should be developed to multiple divided highway standards;
3. Major Arterial: consists of the balance of routes that serve major statewide interests for highway transportation in Nebraska. Characterized by high speed, relatively long distances, travel patterns;
4. Other Arterial: consists of a group of highways of less importance as through-travel routes. Serve places of smaller population and smaller recreation areas not served by the higher systems;

5. Collector: consists of a group of highways that pick up traffic from the local or land-service roads and transport county centers or to the arterial systems. Main school bus routes, mail routes, and farm-to-market routes;
6. Local: consists of all remaining rural roads, generally described as land-access roads providing service to adjacent land and dwellings; and
7. Bridges: structures crossing a stream twenty feet or more in width or channels of such a stream having a combined width of three hundred feet or more.

It is noted in Section 39-2103, the combined rural highways classified under subdivisions (1) and (3), should serve every incorporated municipality having a minimum population of at least one hundred inhabitants or sufficient commerce; or in part by stubs or spurs, and the major recreational areas of the State.

FUTURE STREET AND HIGHWAY PROJECTS

Hitchcock County Road Improvement Plan

Based upon Hitchcock County's one- and six-year plan, year ending in December 31, 2005, the County intends to complete the following projects and/or works in the coming six-year period (See Figure 21). The numbers in parentheses coincide with where they are located on Figure 21. The following projects are slated to be completed by December 31, 2000:

- Resurfacing 3.5 miles of Highway 34, as well as working on the drainage structure of the area. The estimated cost for this project is $450,000. (1)
- Replacing a bridge with a new bridge at N1/4 corner of Section 5-1-31. The estimated cost for this project is $150,000. (2)
- Major grading and drainage work at the southeast corner of Section 8-3-31 going north for two miles. The estimated cost for this project is $200,000. (3)
- Grading at the southwest corner of Section 18-3-31 along the Section line for approximately 1.5 miles. The estimated cost for this project is $20,000. (4)
- Armor coating beginning at the east corporate limits of Trenton, going northeast in direction through Sections 36 and 31-3-22 for approximately 2 miles. The estimated cost for this project is $20,000. (5)

The following projects are slated to be completed in the following six years:

- Asphalting 4.5 miles of the southeastern Section of 3-2-32 going north for approximately 2.25 miles, then east 2.25 miles. This project is estimated to cost $600,000. (6)
- Asphalting 3.5 miles of the northeastern corner of Section 10-3-32. This project is estimated to cost $420,000. (7)
- Replacing bridge with corrugated metal pipe for 0.1 mile 1,000 feet west of northeast corner of Section 32-4-31. The estimated cost of this project is $3,000. (8)
- Replacing bridge with triple concrete box culvert near the southeast corner of Section 15-2-34 for 0.5 mile. This project is estimated to cost $100,000. (9)
- Replacing bridge with concrete box culvert at the northeast corner of Section 9-4-33 for 0.3 miles. The estimated cost is $40,000 for this project. (10)
- Replacing deficient bridge at the W1/4 corner of Section 12-1-32 for 0.2 mile. The cost of this project is estimated at $100,000. (11)
- Replacing deficient bridge with concrete box culvert at E1/4 corner of Section 21-1-32 for 0.2 mile. This bridge crosses the north fork of Driftwood Creek. The estimated cost of this project is $60,000. (12)

- Replacing deficient bridge with concrete box culvert at the center 1/16 corner of the SW1/4 of Section 18-1-35. The bridge has been temporarily replaced with corrugated metal pipe. The estimated cost of this project is $40,000. (13)
- Asphalting and grading near the east 1/16 corner of the NE1/4 of Section 2-4-24, going 0.5 miles south, then 0.5 miles west. The estimated cost of this project is $150,000. (14)
- Grading and new asphalt at approximately the southwestern corner of Section 7-3-31, then northwesterly to the southwestern corner of Section 1-3-31, then north to the northwestern corner of Section 1-3-31 for a total length of 2.0 miles. The estimated cost of this project is $250,000. (15)
- Replacing a timber bridge with a new bridge near the southwestern corner of Section 10-4-33. This bridge crosses Frenchman Creek. The approximate cost to this project is $150,000. (16)
- A proposed triple box culvert approximately 305m east of the northwestern corner of Section 18-1-34. The estimated cost of this project is $125,000. (17)
- Grading and drainage structures beginning near the E1/4 corner of Section 9-1-32 for approximately 0.5 miles. The estimated cost of this project is $180,000. (18)
- Asphalting, grading, and placements of culverts as required near the center of Section 13-4-34. The estimated cost for this project is $335,000. (19)

Nebraska Department of Roads' Improvement Plan

The Nebraska Department of Roads (NDOR) publishes an annual list of proposed projects for the current fiscal year, for fiscal years one to five years from the present, and twenty years and beyond. The Nebraska Department of Roads' one-and five-year plan lists one project in the one to five fiscal programming.

Three projects are listed in the "Nebraska Highway Program, 2000-2005 and Beyond", road improvement plan for Hitchcock County and one improvement project planned for fiscal year 2006 and beyond. There are no NDOR road projects to be undertaken during 2000. The projects are as follows (See Figure 24):

- Between Fiscal Year 2000 and 2005, the State of Nebraska plans to resurface 7.4 miles of US Highway 6 and place a bridge within the 7.4 miles. This project is estimated at $2,044,000. (20)
- In Fiscal Year 2006 and beyond, the State of Nebraska plans to grade, resurface, surface the shoulders, and place culverts in 11.5 miles of US Highway 6 from Culbertson going west. The estimated cost of the project is $3,363,000. (21)
- In Fiscal Year 2006 and beyond, the State of Nebraska plans to resurface 17.8 miles of State Highway 17 along the Kansas/Nebraska line going north. The estimated cost of this project is $3,607,000. (22)

TRANSPORTATION PLAN FOR STRATTON

The Transportation Plan identifies the future transportation systems for the Village of Stratton. Primary emphasis is given to the improvement and development of motor vehicular traffic systems in the Village. The implementation of this plan during the planning period will result in the continued safe movement of people and vehicles within Stratton.

The primary sources of information utilized in the development of the Transportation Plan were (1) Stratton's "One and Six Year Plan" and (2) The Nebraska Department of Roads "One and Five Year Plans."

The "One and Six Year Plans" for the Village of Stratton are reviewed and adopted by the Village Board of Trustees of Stratton to address the issues of proposed road and street system improvements and development. Upon approval of these plans by the Board of Public Road Classifications and Standards, the governmental units are eligible to receive highway-user revenue from the State Highway Department.

The One and Five Year Plan, developed by the Nebraska Department of Roads, establishes present and future programs for development and improvement of state highways. The one-year plan includes highway projects scheduled for immediate implementation, while the five-year plan identifies highway projects to be implemented within five years or possibly sooner if scheduled bids and work for one-year projects cannot be awarded and constructed.

STREET AND ROAD CLASSIFICATION

Nebraska Highway Law (Chapter 39, Article 21, Revised Reissue Statutes of Nebraska 1943) proposes the functional classification of both rural and municipal roads and streets and public highways, see Figure 22. Chapter 39, Article 21.03 lists rural highway classifications as:

1. Interstate: federally-designed National System of Interstate and defense highways;
2. Expressway: second in importance to Interstate. Consists of a group of highways following major traffic desires in Nebraska and ultimately should be developed to multiple divided highway standards;
3. Major Arterial: consists of the balance of routes that serve major statewide interests for highway transportation in Nebraska. Characterized by high speed, relatively long distances, travel patterns;
4. Other Arterial: consists of a group of highways of less importance as through-travel routes. Serve places of smaller population and smaller recreation areas not served by the higher systems;

5. Collector: consists of a group of highways that pick up traffic from the local or land-service roads and transport county centers or to the arterial systems. Main school bus routes, mail routes, and farm-to-market routes;
6. Local: consists of all remaining rural roads, generally described as land-access roads providing service to adjacent land and dwellings; and
7. Bridges: structures crossing a stream twenty feet or more in width or channels of such a stream having a combined width of three hundred feet or more.

It is noted in Section 39-2103, the combined rural highways classified under subdivisions (1) and (3), should serve every incorporated municipality having a minimum population of at least one hundred inhabitants or sufficient commerce; or in part by stubs or spurs, and the major recreational areas of the State.

Stratton Roads' Improvement Plan

Based upon Stratton's one- and six-year plan, year ending in December 31, 2005 Stratton intends to complete the following projects and/or works in the coming six-year period. See Figure 22 for road classification and future transportation projects. On Figure 22, numbers identify the projects and their order. The following project is slated to be complete by December 31, 2000:

- Asphalt 1.0 miles of Beaver Avenue, from the South City limits to the North City limits. The estimated cost of the project is $20,000.

The following projects are slated to be complete in the following six years:

- Asphalt 0.2 miles of Nebraska Avenue, from US Highway 34 north to Howland Street. The estimated cost for this project is $30,000.
- Asphalt 0.2 miles of Boyle Avenue, from Railway Street north to Hartford Street (omit US Highway 34). The cost for this project is estimated at $20,000.
- Asphalt 0.1 miles of Barton Street, from US Highway 34 north to Hamilton Street. The estimated cost of this project is $20,000.
- Asphalt 0.2 miles of Baxter Street, from US Highway 34 north to Hamilton Street. The cost for this project is estimated at $20,000.
- Asphalt 0.2 miles of Hartford Street, from Bayard Street east to Road P11. The estimated cost for this project is $20,000.
- Asphalt 0.1 miles of Pierce Drive, from Hamilton Street north for approximately 400 feet. The estimated cost of this project is $12,000.
- Asphalt 0.1 miles of Hamilton Street, from Bayard Street east to Pierce Street. The estimated cost for this project is $10,000.

- Asphalt 0.1 miles of Bristol Street, from Hamilton Street north for approximately 400 feet. The estimated cost for this project is $12,000.

PLAN IMPLEMENTATION

PLAN IMPLEMENTATION

ACHIEVING HITCHCOCK COUNTY AND STRATTON'S FUTURE PLAN

INTRODUCTION

Successful county plans have the same key ingredients: "2% inspiration and 98% perspiration." This section of the Comprehensive Plan contains the inspiration of the County and Village officials and residents who have participated in the planning process. However, the ultimate success of this Comprehensive Plan remains with the dedication of the current and future elected officials, employees and citizens of Hitchcock County as well as Stratton.

There are numerous goals and objectives contained in this Comprehensive Plan. We recommend the Planning Commission review Hitchcock County and Stratton's goals and objectives during their regular planning and budget sessions during their decision making process.

ACTION AGENDA

Hitchcock County and Stratton should identify and select three objectives of the Comprehensive Plan for immediate action and implementation; these may include projects to overcome negatives in the county; or projects that protect and enhance the positive aspects of the County and/or Village; or issues or barriers which prevent or limit the implementation of the Comprehensive Plan. The selection of these actions or strategies should follow a session on goal prioritization and need assessment. This is the Action Plan.

The Action Agenda is a combination of the following:

- Goals and Objectives
- Growth Policies
- Land Use Policies
- Support programs for the above items

It will be critical to earmark the specific funds to be used and the individuals responsible for implementing the goals and policies in Hitchcock County and Stratton.

Support Programs for the Action Agenda

Four programs will play a vital role in the success of Hitchcock County and Stratton's Comprehensive Plan.

These programs may include:

1. **Capital Improvements Financing**--an annual predictable investment plan that uses a six-year planning horizon to schedule and fund projects integral to the Plan's implementation.
2. **Zoning Regulations**--updated land use districts can allow the County and Village to provide direction for future growth.
3. **Subdivision Regulations**--establish criteria for dividing land into building areas, utility easements, and streets. Implementing the Transportation Plan is a primary function of subdivision regulations.
4. **Comprehensive Plan Maintenance**--an annual and five-year review program will permit flexibility in responding to County and Village growth or decline; development pressures and trends; through the continuous maintenance schedule to update the viability of Hitchcock County and Stratton Comprehensive Plan.

COMPREHENSIVE PLAN MAINTENANCE

Annual Review of the Comprehensive Plan

A Comprehensive Plan, which is current and relevant to the policies of Hitchcock County and Stratton, is critical to successful planning. To maintain the confidence of both public and private sector; enable the effectiveness of planning activities; and, most importantly, ensure appropriate use of land within the County and Village, the Comprehensive Plan must current. The Annual Review of the Comprehensive Plan should occur during the annual meeting of the Planning Commission during or in month of January.

After adoption of the Comprehensive Plan, an opportunity should be provided to identify any changes in conditions that would impact elements or policies of the Comprehensive Plan. At the beginning of each year a report should be prepared by the Planning Commission that provides information and recommendations on:

- Whether the plan is current in respect to population and economic changes.
- The Land – Use goals, objectives and policies are still valid for the County and Village to ensure appropriate long-term growth.

The Planning Commission should hold a public hearing and oversee the development of a report in order to:

1. Provide citizens or developers with an opportunity to identify and present possible changes to the Comprehensive Plan;

- the suitability of the property for the uses allowed under the current zoning designation;
- the type and extent of positive or detrimental impact that may affect adjacent properties, or the county at large, if the request is approved;
- the impact of the proposal on public utilities and facilities;
- the length of time that the subject and adjacent properties have been utilized for their current uses;
- the benefits of the proposal to the public health, safety, and welfare compared to the hardship imposed on the applicant if the request is not approved;
- comparison between the existing land use plan and the proposed change regarding the relative conformance to the goals and policies; and
- consideration of professional staff's recommendations.

ENERGY SUSTAINABILITY PLAN

INTRODUCTION

During the 2010 session of the Nebraska Unicameral, the State Senators approved and the Governor signed LB 997. This law requires that all counties and municipalities, except villages, in Nebraska when in the process of updating their comprehensive plans incorporate an energy element. This statute specifies that the energy element shall: *"Assess energy infrastructure and energy use by sector, including residential, commercial and industrial sectors, evaluate utilization of renewable energy sources and promote energy conservation measures that benefit the community."*

The later portion of the above statutory wording implies that municipalities and counties should develop plans which will have the effect of reducing energy use and costs as well as creating "sustainable" communities. A "sustainable" community in this sense is a community or county that works to develop the ability to provide for present energy needs without jeopardizing the ability of future generations to live in the same or improved manner as we do today.

The need for an energy element is prompted by a convergence of factors, including fluctuating but generally rising cost of energy and the negative impacts that such rising costs have on consumers and the local economic development, dependence on imported oil and gas in a setting of global political instability, environmental concerns regarding fossil fuel pollution and mining, vulnerability of our centralized energy systems to terrorist threats, and the relationship of our energy use to climate change.

In addition to the above noted factors, it is important to understand that the production and use of energy in the United States and thus Hitchcock County is a critical part of our quality of life and our national and local economy. Virtually every aspect of our national and local economies and quality of life is associated with the use of energy. We all use energy in some form to light and heat our homes, operate our businesses and industries, producing, preparing and preserving our food, transportation, law enforcement, fire protection, health care and even our recreational opportunities.

These factors and the reality of dwindling supplies of non-renewable fossil fuels world-wide has prompted the Federal Government and the State of Nebraska to adopt policies that are more insistent on curbing increased reliance on fossil fuels. For example, Federal policy has set a goal of 20% of electrical power generation in the United States by the year 2010 be from renewable sources such as wind, solar, nuclear, or other renewable sources.

Successful energy strategies will decrease our overall energy use through conservation and efficiency and the development of renewable forms of energy. The benefits of successful strategies include:

- Decreasing costs to taxpayers, energy utility rate payers, individual households, businesses and industries,
- Enhancing spendable incomes of local citizens and enhancing opportunities for future local economic development,
- Increasing comfort in a northern climate,
- Decreasing pollution,
- Diversifying and distributing our energy systems to increase energy security,
- Decreasing carbon and other emissions which many believe is contributing to global climate change.

Local citizens will question what a small county like Hitchcock County can do to make a better environment and enhance the "sustainability" of the County. The reality is that County leaders and every citizen can make a small, but positive, impact for a better environment now and for the future sustainability of the County for the next generation.

This energy element is structured to not only comply with the requirements of LB 997, as indicated above, but will also identify strategies that the County governing officials and citizens of the County can utilize to reduce energy use and costs now and in the foreseeable future, as well as enhance the present and future environment and local economic development opportunities.

ENERGY INFRASTRUCTURE AND USE

The energy infrastructure in Hitchcock County consists of publicly and privately owned and operated facilities and services to provide:

- electrical power,
- natural gas,
- petroleum products, and
- other energy sources such as combustion of wood, geothermal and solar energy for heat and/or cooling.

An analysis of energy use within this infrastructure in Hitchcock County has considerable variables resulting from anything from local annual changes in economic activity to year to year weather conditions. For these reasons and for lack of comparable data for some types of energy, it is more reasonable and most likely more accurate to utilize documented statewide statistics and averages regarding energy consumption to evaluate local energy use.

The following is a statistical analysis of energy use in the County which utilizes statewide data converted to the population and economic activity in Hitchcock County utilizing per capita statewide energy use data and population estimates for Hitchcock County in 2009. It is important to understand that this data includes Hitchcock County's population's share of energy use by energy providers to provide the energy at the local level. The data includes, for example, the energy used to produce electricity which is in turn used by customers in Hitchcock County.

The data presented is in the form of British Thermal Units (Btu's) which is a standard measure of heat energy. A British Thermal Unit is defined as the energy it takes to raise the temperature of water by one degree Fahrenheit at sea level. For example it takes approximately 2,000 Btu to brew a pot of coffee. A Btu is equivalent to 0.293 watthours.

Estimated energy consumption by sector in Hitchcock County for 2009, the last year with complete data, is indicated in Table 37. The estimated total energy use in Hitchcock County in 2009 was 1,202,000,000,000 (1.202 trillion) Btu's.

TABLE 37

TOTAL ESTIMATED ENERGY CONSUMPTION BY SECTOR - 2009

Hitchcock County, Nebraska

Use Sector	Estimated Energy Consumption (trillion Btu's)	% of Total Consumption
Commercial	0.215	17.9%
Industrial	0.470	39.1%
Residential	0.245	20.4%
Transportation	0.272	22.6%
TOTAL	**1.202**	**100.0%**

The industrial sector in Hitchcock County, which includes the agricultural sector, is the largest energy consumer utilizing nearly 40% of total energy consumption in the County.

The transportation sector is the second largest consumer of energy. This sector consists primarily of automobile and truck usage of energy. This sector used slightly nearly 23% of the total energy consumed in Hitchcock County in 2009.

The residential sector utilized 245,000,000,000 Btu's of energy in 2009, comprising 1/5th of total energy use and the third largest energy use in the County. Residential energy use consists of energy used for heating, cooling, heating of water, food preparation and preservation, lighting, ventilation and communications including television and computer use.

The smallest energy use sector in the County is the commercial sector. The sector utilized less than 18% of total energy consumption in the County in 2009.

In order to have a better understanding of energy consumption in the County and to provide information regarding which end use sectors have the most potential for energy conservation an analysis of the types of energy used by each sector is needed.

The data presented in Table 38 provides details regarding which sectors uses which forms of energy together with which sector utilized what portions of each type of energy.

TABLE 38

ESTIMATED ENERGY CONSUMPTION BY SECTOR & TYPE OF ENERGY - 2009

Hitchcock County, Nebraska

	Type of Energy Consumption (trillion Btu's)								Total
Use Sector	**Natural Gas**	**% of Total**	**Petroleum**	**% of Total**	**Electricity[1]**	**% of Total**	**Other[2]**	**% of Total**	
Commercial	0.051	19.7%	0.004	1.2%	0.158	32.8%	0.002	1.6%	0.215
Industrial[3]	0.131	51.2%	0.064	19.1%	0.161	33.4%	0.114	89.8%	0.470
Residential	0.065	25.2%	0.012	3.6%	0.163	33.8%	0.004	3.1%	0.245
Transportation	0.010	3.9%	0.255	76.1%	0.00	0.0%	0.007	5.5%	0.272
TOTAL	**0.257**	**100%**	**0.335**	**100%**	**0.482**	**100%**	**0.126**	**100%**	**1.202**

Source: Nebraska Department of Energy with conversion of statewide data by Stahr & Associates, Inc.

1. Electricity consumption includes transmission energy losses
2. Other energy consumption includes geothermal, wood, solar energy and losses and co-products associated with renewable energy production
3. Industrial consumption includes agricultural production consumption

ESTIMATED NATURAL GAS CONSUMPTION

As indicated in Table 38, in 2009 an estimated 257,000,000,000 Btu's of natural gas was consumed in the County. Of this total, the industrial sector, which includes agricultural production, utilized over 131,000,000,000 Btu's or over 51% of all natural gas consumed in the County.

The residential sector in the County consumes the second largest amount of natural gas. In 2009, residential uses consumed 65,000,000,000 Btu's or just over 25% of total natural gas consumption. In this sector natural gas is used primarily for heating of residential dwellings, heating of water and cooking and baking of food. This sector has considerable potential for energy conservation through enhancement of the energy efficiency of each residence. Even only a 10% reduction in consumption would result in a savings or some 6,500,000,000 Btu's of natural gas per year. At current prices for natural gas, this would result inn a savings of over $24,000 per year for local residents.

The commercial sector consumed just under 20% of the natural gas consumed in Hitchcock County in 2009. The estimated 51,000,000,000 Btu's consumed by the commercial sector was used for a variety of purposes including heating and food preparation. Like the residential sector, there is considerable potential for energy conservation through enhancement of the energy efficiency of commercial buildings and processes.

The transportation sector consumed a quite limited quantity of natural gas in 2009.

ESTIMATED PETROLEUM CONSUMPTION

In 2009 an estimated 335,000,000,000 Btu's of petroleum products were consumed in Hitchcock County. As would be expected the vast majority of petroleum product consumption was used for transportation of people and goods. Of the total petroleum products consumed 60% was motor gasoline and 36% was diesel fuel. Diesel fuel is used primarily in the production of crops and transportation of crops, livestock and goods while motor gasoline is used for transportation of people - our automobiles and pickup trucks.

There is considerable potential for reductions in both diesel fuel and motor gasoline consumption through either conversion to renewable sources or through reductions in usage. The use of bio-diesel can substantially reduce the use of petroleum based diesel fuel while the use of higher levels of ethanol enriched motor gasoline can substantially reduce the use of petroleum based gasoline. A change of only 5% in the type of diesel and motor gasoline could have considerable impact on the demand for oil based fuels. A 5% conversion of the type of diesel and motor gasoline would result in a reduction of 12,291,760,000 Btu's of consumption of oil based fuels.

ESTIMATED ELECTRICAL ENERGY CONSUMPTION

Consumption of electrical energy in Hitchcock County in 2009 is estimated to have been 482,000,000,000 Btu's. This consumption is comprised of two parts. The first part is the net consumption of electrical energy by all use sectors in the County. The second part is the energy loss in the electrical energy transmission system that represents the County's portion of the total energy delivery system loss on a per

capita basis. Approximately 31% of the electrical energy consumption, some 149,420,000,000 Btu's, consists of actual use by all sectors in the County. The balance of the total consumption (69%) or some 332,580,000,000 Btu's represents the electrical energy loss in the transmission system to get the electrical energy to the County.

Electrical energy consumption in Hitchcock County in 2009 was very evenly split between the residential, commercial and industrial sectors. There was no usage of electrical energy in the transportation sector.

Although the industrial sector consumption of electrical energy is primarily in the irrigation of crops and manufacturing processes, there is considerable potential for conservation of energy in this sector as well as the commercial and residential sectors. A large portion of electrical energy consumption is used for heating, cooling, food preparation, lighting, water heating and appliance use. The enhancement of these components in terms of energy efficiency would result in substantial electrical energy conservation in all use sectors.

ESTIMATED ENERGY CONSUMPTION FROM RENEWABLE SOURCES

It is estimated in 2009 all economic sectors consumed approximately 126,230,000,000 Btu's in energy derived from renewable sources. However, as indicated in Table 39, 84% of renewable energy consumption occurred as losses and co-products generated in the production of ethanol, thus the net consumption of energy from renewable sources in Hitchcock County is estimated to have been only 20,080,000,000 Btu's. This amounted to only 1.7% of total energy consumption in 2009.

TABLE 39

ESTIMATED ENERGY CONSUMPTION BY SECTOR FROM RENEWABLE ENERGY SOURCES - 2009

Hitchcock County, Nebraska

	Type of Energy Consumption (trillion Btu's)									
Use Sector	Ethanol	% of Total	Losses & Co-Products	% of Total	Wood & Waste	% of Total	Geo-Thermal	% of Total	Solar	% of Total
Commercial	.00004	0.53%	-	-	.00060	5.5%	.00121	73.8%	-	-
Industrial	.00018	2.38%	.10615	100.0%	.00656	60.6%	-	-	-	-
Residential	-	-	-	-	.00366	33.9%	.00043	26.2%	.00006	100.0%
Transportation	.00734	97.09%	-	-	-	-	-	-	-	-
TOTAL	**.00756**	**100%**	**.10615**	**100%**	**.01082**	**100%**	**.00164**	**100%**	**.00006**	**100%**

Source: Nebraska Department of Energy with conversion of statewide data by Stahr & Associates, Inc.
Note: Losses and co-products are from the production of ethanol.

Of the renewable energy resources consumed in Hitchcock County in 2009, 53% was use of wood and waste products. The second largest consumption of renewable energy was the estimated 7,560,000,000

Btu's of ethanol consumed primarily by the transportation sector. The smallest consumption category renewable energy was in the form of solar energy used primarily for heating of buildings.

It should also be understood that a portion of the electrical energy consumption in the County is derived from renewable resources. In 2009 approximately 2.3% of total electrical energy consumption in the State was generated through the use of renewable resources including hydroelectric power, wind power and combustion of wood and wood waste. Thus total consumption of energy from renewable energy sources in the County in 2009 is estimated to have been 2.4% of total energy consumption by all sectors.

ENERGY EFFICIENCY AND CONSERVATION STRATEGIES

Energy conservation is the wise use of energy and the avoidance of waste. Energy efficiency refers to achieving the same desired goal, such as powering a building while reducing the energy inputs or "doing more with less". Energy savings are often achieved by substituting technology more advanced equipment to produce the same level of end-use.

Conservation can be achieved on several levels, from walking or biking instead of use a car to adding more insulation to a building. Efficiency examples include using high efficiency Energy Star appliances and systems, substituting compact florescent (CFL) or light emitting diode (LED) light bulbs for less efficient incandescent lighting.

Energy conservation is the first priority in achieving energy efficiency in existing buildings. A stepwise approach using energy assessment, audit and weatherization is recommended. An assessment of energy intensity or general energy use of a residential, commercial, industrial or governmental building can be done using an online energy assessment calculator such as the EPA Home Energy Yardstick.

Where an energy use assessment indicates notable energy use inefficiencies, the assessment can be followed up by an energy audit which is usually performed by a building science professional and may employ technology such as infrared cameras and pressurizing equipment. Weatherization or energy retrofit is based on the results of the assessment and audit. Significant decreases in electric and thermal energy needs can be achieved by this approach and the cost of the energy audit and the work is offset by the energy cost savings and possible rebates from state or federal sources.

Using efficient building methods and efficient systems for new construction will reduce energy use and operating costs over time. Creating local requirements that new construction meet or exceed the State Energy Code is one approach worth considering in Hitchcock County.

ENERGY EFFICIENCY AND CONSERVATION GOALS AND STRATEGIES

The best way to achieve higher energy efficiencies in the short and near term in Hitchcock County is to encourage the implementation of energy conservation measures in all energy use sectors and implement programs and projects to improve energy efficiency in County buildings and operations.

The following goals and strategies are recommended to maximize the potential for energy conservation:

GOAL: Improve the energy efficiency of County Buildings and Operations

Hitchcock County should lead by example to show residents and businesses in the County how they can conserve energy, reduce their impact on climate change and reduce their dependence on fossil fuel energy. In order to accomplish this goal the following strategies are recommended:

- Assess and benchmark the energy efficiency of all County buildings,
- Audit and retrofit those County buildings where the assessment and audit indicates additional energy efficiency can be achieved.
- Evaluate the County's vehicle fleet, including automobiles, trucks and road maintenance equipment with regard to use of higher levels of ethanol fuel and biodiesel fuel. In the case of gasoline with higher levels of ethanol such as E-85 and biodiesel, the costs are slightly higher than standard oil based fuels. However, the benefits of generating higher demand for these renewable fuels will help reduce costs in the long term.
- Implement a purchasing strategy for future acquisitions of Energy Star equipment in all County facilities.
- Encourage all villages to analyze street lighting efficiencies and replacement of street lighting if energy efficiencies are sufficient to warrant a conversion.

GOAL: Promote conservation and energy efficiency in the private sectors of the local economy.

For the benefit of all of its citizens, Hitchcock County should take the lead in promoting energy efficiency and conservation in the private sectors of the local economy by implementing the following programs:

- Showcase County actions to educate the public on successes of energy conservation measures. Communicating the energy conservation actions and results can be

accomplished through newspaper coverage and having such information available in a County web site.

- Work with local newspapers and the Nebraska Energy Office to create an on-going communication program which promotes energy conservation by informing readers what they can do to conserve energy. Through an on-going series of articles, this program should address a number of energy conservation elements including:

    - How readers can access and utilize the EPA Home Energy Yardstick to provide a no-cost initial energy consumption assessment.

    - How to access energy audit expertise if a detailed energy audit is desired by any reader.

    - What specific energy conservation actions can be taken together with typical costs and pay periods. This component should address all aspects of energy conservation ranging from replacement of incandescent light bulbs with compact florescent bulbs, addition of installation, installation of programmable thermostats, installation of low -e windows and doors and installing Energy Star appliances, furnaces and air conditioning equipment.

    - What programs and incentives are available to help pay for the cost of energy conservation efforts and how to access these programs.

    - Consumer guides to the utilization of small wind energy systems, solar panels and geo-thermal equipment and the pay-back periods associated with each.

RENEWABLE ENERGY

General Characteristics

The U.S. Department of Energy defines renewable energy as "energy which comes from sources whose supplies are regenerative or virtually inexhaustible". Proponents recommend expansion of these sources to meet future energy demands, diversify energy sources and minimize environment impacts.

While there are a host of benefits to renewable energy projects including reduced emissions and decreased transmission losses in a decentralized energy grid, there are negative impacts. These include environmental impacts to wildlife habitat, visual changes to the landscape and economic constraints. Renewable energy sources are inexhaustible, although sometimes limited in the amount of energy available per unit of time.

A wind power generator may generate a lot of energy when the wind is blowing, but no energy when there is no wind. Both the positive and negative impacts need to be weighed against each other so an informed and educated decision can be made about their expanded role in Nebraska and Hitchcock County.

Renewable energy contributes to energy assurance by adding diversity and additional energy resources to meet the County's needs. It also provides energy security by using indigenous energy resources which are less subject to geopolitical influences. These sources provide environmental protection by reducing pollution and other negative impacts on air, water and land while meeting the energy demand in ways that can be maintained indefinitely. There are also opportunities to create economic stability and growth by using renewable energy technology to retain dollars in-state and in-county, create new jobs and stimulate the local economy.

Development of additional renewable energy sources is also important due to our increased use of energy. Since 1997 total energy consumption in Nebraska increased by over 138,000,000,000,000 Btu's representing an increase of over 21%. As non-renewable energy sources become more scarce and as prices for more scarce resources increase, the need for the development of renewable energy sources also increases.

Renewable Energy in Nebraska

In Nebraska there are an abundant renewable energy possibilities, especially wind, solar, wood, geothermal, biomass (ethanol), biodiesel, hydroelectric and methane gas. Currently some of these renewable energy resources (especially wind, geothermal and methane gas) are greatly underutilized. In Nebraska in 2007, only 3.2% of the gross energy use was from renewable sources.

The greatest progress in renewable energy technology has occurred within the wind power industry. In the early years of wind energy technology, electricity production cost was approximately 30 cents / kwh. By 2002, cost of electricity production from wind energy systems dropped dramatically to 3 to 5 cents / kwh. Although improvements in technology for small wind energy generators has improved, but energy production cost vary widely depending on the application. Energy production costs for these small systems range from 11 to 90 cents / kwh.

Geothermal technologies have not had such a dramatic advancement, however, these systems are among the cheapest renewable energy sources to produce electricity at 2 to 4 cents /kwh. This cost is the average for geothermal power plants. Another form of geothermal energy use in the use of geothermal heat pumps. These systems are becoming very popular for commercial and residential applications because they are 3 to 4 times more efficient than a typical high efficiency fossil fuel furnace for space heating.

The highest price for electricity from a renewable energy source is from photovoltaic panels which average about 38 cents / kwh.

For comparison, electricity produced from traditional fuel sources cost approximately:

- 3 - 5 cents / kwh for coal
- 10-12 cents / kwh for oil
- 6-8 cents /kwh for natural gas, and
- 10-14 cents / kwh for nuclear.

Therefore it can be said that properly sited renewable energy projects are price competitive with traditional fuel sources.

Renewable Energy in Hitchcock County

As a single governmental entity, Hitchcock County is somewhat limited in what it can do to encourage the development of renewable energy generation projects, but the County can and should implement several strategies and projects to encourage the use of renewable energy sources in the County. These can include:

- The County Board of Commissioners should evaluate the potential cost savings of retrofitting the courthouse and/or other County buildings with closed-loop geothermal heat pumps and, where there would be a notable savings, budget for and implement such projects.

- Adopt codes that require compliance with the Nebraska State Energy Code for all new and retrofitted buildings utilizing compliance certification by the Nebraska Energy Office and encourage green building design, geothermal and solar energy production systems.

- Evaluate the benefits of utilization of gasoline with a higher percentage of ethanol and bio-diesel in the County's automobile and road maintenance fleets.

- Similarly, as increased availability of electric and hybrid vehicles occurs, the County should evaluate such vehicles to determine if replacement of existing vehicles would be warranted.

It should also be noted that the local energy consumption sectors in Hitchcock County will now and in the future be utilizing electrical power generated by more renewable energy sources. The Nebraska Public Power District, which supplies electrical power to the County, has agreed that it will utilize renewable energy sources to produce 10% of its total electric energy by the year 2020. This will be a notable increase in electric power produced by the use of renewable sources in 2009 which amounted to only 2.3% of total electric power generated.