Comprehensive Development Plan

2009 to 2030

Buena Vista County

Iowa

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Location

Buena Vista County is located in northwest Iowa and is bordered by Clay County to the north, Cherokee County to the west, Pocahontas County to the east, and Sac County to the south. Buena Vista County is located approximately 80 miles west of Interstate 35, 50 miles east of Interstate 29, and 80 miles north of Interstate 80.

Residents of Buena Vista County are located less than two hours from Lake Okoboji to the north in Dickinson County, Iowa. As a result of this location and other intensive agricultural characteristics, Buena Vista County is considered to be a rural county. Storm Lake, a 3,200-acre natural lake located in the south central portion of the county, provides an abundance of recreational opportunities for local residents. The Little Sioux River, which passes through the northern portion of the county, provides camping, canoeing, fishing, and hunting opportunities.

The ten incorporated cities within Buena Vista County are Albert City, Alta, Lakeside, Linn Grove, Marathon, Newell, Rembrandt, Sioux Rapids, Storm Lake, and Truesdale. These communities range in population from as few as 91 persons (in Truesdale) to as many as 10,076 located in the county-seat, which is the city of Storm Lake (U.S. Bureau of the Census, 2000). Buena Vista County consists of 580 square miles, with 570 square miles being is unincorporated.

THE PURPOSE OF COMPREHENSIVE PLANNING

The Buena Vista 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 County.

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

The Comprehensive Development Plan will provide a guideline for the location of future developments within the planning jurisdiction of Buena Vista County. The Comprehensive Development Plan is intended to encourage a strong economic base for the County so the goals of the County are achieved.

The Plan will assist Buena Vista County in evaluating the impacts of development (i.e. economic, social, fiscal, service and amenity provision, health, safety and general 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 city or county, toward orderly growth and development. The Plan assists the County in balancing the physical, social, economic, and aesthetic features as it responds to private sector interests. Planned growth will make Buena Vista County 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 Comprehensive Planning Process

Comprehensive planning begins with the data collection phase. Data are collected that provides a snapshot of the past and present County conditions. Analysis of data provides the basis for developing forecasts for future land-use demands in the County. The second phase of the planning process is the development of general goals and policies, based upon the issues facing the County. These are practical guidelines for improving existing conditions and guiding future growth. The Comprehensive Development Plan is a vision presented in text, graphics and tables that represent the desires of the County for the future.

The Comprehensive Development 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 Development Plan contains recommendations that when implemented will be of value to the County 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 Development Plan. The Comprehensive Development Plan identifies the tools, programs, and methods necessary to carry out the recommendations. Nevertheless, the implementation of the development policies contained within the Comprehensive Development Plan are 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.

The Plan was prepared under the direction of the Buena Vista County Planning Commission and the zoning office, with the assistance and participation of the Buena Vista County Board of Supervisors, the Plan Review Committee and citizens of Buena Vista County. The planning time period for achieving goals, programs, and developments identified in the Buena Vista County Comprehensive Development Plan is 20 years. However, the County should review the Plan annually and update the document every ten to fifteen years, or when a pressing need is identified. Updating the Comprehensive Development Plan will allow the County to incorporate ideas and developments that were not known at the time of the present comprehensive planning process.

Comprehensive Plan Components

The Comprehensive Development Plan is a document consisting of both graphic and textual material. The Buena Vista County Comprehensive Development Plan is comprised of the following chapters and sections:

- Introduction to Buena Vista County
- Profile Buena Vista County
  - County Assessment – Conditions and Trend Analysis
  - County Facilities

- Existing Land Use
- Environmental Conditions
- Envision Buena Vista County
- Town Hall meeting results
- Goals and Policy Development
- Achieve Buena Vista County
- County Land Use Management Plan (CLUMP)
- Future Land Use Plan
- Transportation Plan
- Buena Vista County Plan Implementation

Analyzing both past and current demographic, housing, economic, and social trends permit the projection of likely conditions for the county. 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 Buena Vista County to closely monitor population, housing and economic conditions that may impact the County. By using periodic monitoring, the County can adapt and adjust to changes at the local level. Having the ability to adapt to socio-economic change allows the County to maintain an effective Comprehensive Development Plan for the future, to enhance the quality of life, and to raise the standard of living for all residents.

The Comprehensive Development Plan records where Buena Vista County has been, where it is now, and where it likely will be in the future. Having this record in the Comprehensive Development Plan will serve to inform County officials as much as possible. The Comprehensive Development Plan is an information and management tool for County leaders to use in their decision-making process when considering future developments. The Comprehensive Development Plan is not a static document; it should evolve as changes in the land-use, population or local economy occur during the planning period. This information is the basis for Buena Vista County's evolution as it achieves its physical, social, and economic goals.

Governmental and Jurisdictional Organization

The Buena Vista County Board of Supervisors, which is a board of elected officials, performs the governmental functions for the County. Each incorporated community in Buena Vista County also has elected officials and officers that oversee how their community is governed.

The planning and zoning jurisdiction of Buena Vista County, pursuant to the Code of Iowa, includes all of the unincorporated portions of the County. With certain communities having subdivision review within two-miles of their corporate limits.

PROFILE BUENA VISTA COUNTY

Demographic Profile

Population statistics aid decision-makers by developing a broad picture of Buena Vista County. It is important for Buena Vista County to understand where it has been, where it is and where it appears to be going. Population is the driving force behind housing, local employment, economic, and fiscal stability of the County. 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. Projections provide an estimate for the County to base future land-use and development decisions. However, population projections are only estimates and unforeseen factors may affect projections significantly.

Population Trends and Analysis

Table 1 indicates the population for the incorporated communities in Buena County, the unincorporated areas, and Buena Vista County as a whole, between 1980 and 2004. This information provides an understanding of the past and present population trends and changes. Buena Vista County's population in 2000 was 20,411 persons, which was an increase of 446 persons, or 2.2%, from 1990. The County's population in 2004 was estimated to be 20,156, a decrease of 255 persons, or -1.2%.

The table indicates Buena Vista County had a net decrease of 618 persons, or 3.0%, between 1980 and 2004. This was driven primarily by a decrease of Buena Vista County's unincorporated areas. The unincorporated areas had a total change of -1,214 people in the 24-year period. This decrease was offset by a total increase in the incorporated communities.

The greatest population increases, with regard to percentages, for the incorporated areas, occurred in Storm Lake. Buena Vista County saw only three of its communities (Storm Lake, Alta and Linn Grove) increase between 1980 and 2004. However, examining the changes in population between 1990 and 2000; there were only two communities that saw growth during that period.

TABLE 1: POPULATION TRENDS, BUENA VISTA COUNTY & COMMUNITIES, 1980 TO 2004

Community	1980	1990	% Change 1980 to 1990	2000	% Change 1990 to 2000	2004	% Change 2000 to 2004	% Change 1980 to 2004
Albert City	818	779	-4.8%	709	-9.0%	691	-2.5%	-15.5%
Alta	1,720	1,820	5.8%	1,865	2.5%	1,852	-0.7%	7.7%
Lakeside	589	522	-11.4%	484	-7.3%	496	2.5%	-15.8%
Linn Grove	205	194	-5.4%	211	8.8%	213	0.9%	3.9%
Marathon	442	320	-27.6%	302	-5.6%	297	-1.7%	-32.8%
Newell	913	1,089	19.3%	887	-18.5%	870	-1.9%	-4.7%
Rembrandt	291	229	-21.3%	228	-0.4%	222	-2.6%	-23.7%
Sioux Rapids	897	761	-15.2%	720	-5.4%	703	-2.4%	-21.6%
Storm Lake	8,814	8,769	-0.5%	10,076	14.9%	9,981	-0.9%	13.2%
Truesdale	128	132	3.1%	91	-31.1%	88	-3.3%	-31.3%
Incorporated Areas	14,817	14,615	-1.4%	15,573	6.6%	15,413	-1.0%	4.0%
Unincorporated Areas	5,957	5,350	-10.2%	4,838	-9.6%	4,743	-2.0%	-20.4%
Buena Vista County	**20,774**	**19,965**	**-3.9%**	**20,411**	**2.2%**	**20,156**	**-1.2%**	**-3.0%**

Source: U.S. Census Bureau, Census of Population and Housing, 1980 - 1990, 2000, 2004

Buena Vista County had its only population gain, both in terms of total number of persons and in percentage between 1990 and 2000, when it recorded an increase of 446 persons, or 2.2%. During this period, the unincorporated areas of Buena Vista County experienced a decrease in population of 512 persons, or -9.6%, while the incorporated areas increased by 958 persons, or 6.6%. Since 2000, the population estimates for Buena Vista County indicate a continued decrease in the population.

Migration Analysis

Migration Analysis allows a county to understand how specific dynamics are influencing population change. Migration indicates the population size that has migrated in or out of the County. The migration number is determined by subtracting the natural change in population (i.e. births minus deaths) from the total change in population. Table 2 shows the total change in population for Buena Vista County from 1980 to 2004. A negative number in the "Total Migration" column indicates the number of persons that have left the County, while a positive number indicates the number of persons that have moved into the County. Unfortunately, this analysis is primarily available for the County as a whole. This data has limited availability for communities.

Migration analysis is important to understand since it offers an explanation of what has affected the population changes over time. Through migration analysis, it can be determined how much of a population change was due to persons moving in or out of an area, and how much was due to births or deaths in the area. For example, assume an area had a total change of 100 persons during any given time period, but there were 15 more births than deaths during that same time period. Looking at the natural change only, the area should have grown by 15 persons. However, when the total change of 100 is taken into account, we need to subtract out the natural change (NC) in order to determine what caused the remaining change. If the total change of 100 was an increase, then 85 people

moved into the area (100 increase – 15 NC increase that occurred in area = 85 additional people in area). If, however, the total change of 100 represented a loss, then 115 people moved out of the area (100 decrease + NC in the area that did not increase the population = 115 people moved out of the area).

TABLE 2: MIGRATION ANALYSIS, BUENA VISTA COUNTY, 1980 TO 2004

Time Period	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1980-1990	(809)	643	(1,452)
1990-2000	446	374	72
2000-2004	(255)	289	(544)
Total	**(618)**	**1,306**	**(1,924)**

Source(s): U.S. Census Bureau, Census of Population and Housing, 1960-2000, 2004
Iowa Department of Public Health, Vital Statistics Report(s), 1960-2004

Table 2 indicates births exceeded deaths in Buena Vista County for each reporting period. Based upon this information and the migration analysis formula, the primary factor of Buena Vista County's decreasing population can be determined for any given period. From 1990 to 2000 it was in-migration. However, data for 1980-1990 and 2000-2004 indicate that there was an overall out-migration. These two periods of out-migration were responsible for the overall decrease during the 24-year period.

Age Structure Analysis

Age structure is an important component of population analysis. By analyzing age structure, one can determine which age groups (cohorts) within Buena Vista County are being affected by population shifts and changes. Each age cohort affects the population in a number of different ways. For example, the existence of larger young cohorts (20-44 years) means that there is a greater ability to sustain future population growth than larger older cohorts. On the other hand, if the large, young cohorts maintain their relative size, but do not increase the population as expected, they will, as a group, tend to strain the resources of an area as they age. Understanding what is happening within the age groups of the County's population is necessary to effectively plan for the future.

TABLE 3: AGE-SEX CHARACTERISTICS, BUENA VISTA COUNTY, 1990 TO 2000

Age	1990		2000		1990-2000		1990-2000	
	Male and Female	% of Total	Male and Female	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	1,416	7.1%	1,209	5.9%	-207	-14.6%	1,209	-
5-9	1,532	7.7%	1,431	7.0%	-101	-6.6%	1,431	-
10-14	1,465	7.3%	1,573	7.7%	108	7.4%	157	11.1%
15-19	1,479	7.4%	1,852	9.1%	373	25.2%	320	20.9%
20-24	1,558	7.8%	1,595	7.8%	37	2.4%	130	8.9%
25-29	1,347	6.7%	1,012	5.0%	-335	-24.9%	-467	-31.6%
30-34	1,529	7.7%	1,168	5.7%	-361	-23.6%	-390	-25.0%
35-44	2,565	12.8%	3,002	14.7%	437	17.0%	126	4.4%
45-54	1,606	8.0%	2,602	12.7%	996	62.0%	37	1.4%
55-64	1,893	9.5%	1,526	7.5%	-367	-19.4%	-80	-5.0%
65-74	1,861	9.3%	1,607	7.9%	-254	-13.6%	-286	-15.1%
75 &older	1,714	8.6%	1,834	9.0%	120	7.0%	-1,741	-48.7%
Total	**19,965**	**100.0%**	**20,411**	**100.0%**	**446**	**2.2%**	**446**	**2.2%**

Selected Characteristics	1990		2000		Total Change	
	Under 18 years of age	5,175	Under 18 years of age	5,179	18 and under	**4**
	%of total population	25.9%	%of total population	25.4%	%change	**0.1%**
	Total 65 yrs and older	3,575	Total 65 yrs and older	3,441	65 and older	**-134**
	%of total population	17.9%	%of total population	16.9%	%change	**-3.7%**
	Median Age	33.8	Median Age	36.4	Median Age	**2.6**
	Total Females	10,275	Total Females	10,186	Total Females	**-89**
	Total Males	9,690	Total Males	10,225	Total Males	**535**
	Total Population	**19,965**	**Total Population**	**20,411**	**Total Change**	**446**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1990; DP-1 2000

Table 3 exhibits the age cohort structure for Buena Vista County in 1990 and 2000. Population age structure may indicate significant changes that are affecting the different population segments within the County. Realizing how many persons are in each age cohort, and at what rate the age cohorts are changing in size, will allow for informed decision-making in order to maximize the future use of resources. As shown in Table 3, changes between 1990 and 2000 occurred within a number of different age group cohorts.

One method of analyzing cohort movement in a population involves comparing the number of persons aged between 0 and 4 years in 1990 with the number of persons in the same age cohort 10 years later, or aged between 10 and 14 years in 2000. For example, in Buena Vista County, there were 1,416 children between the ages of 0 and 4 in 1990, and in 2000 there were 1,573 children between the ages of 10 and 14, an increase of 157 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. The positive change in this cohort indicates in-migration.

Buena Vista County experienced growth in many of its age cohorts. The 0 to 4 and 5 to 9 cohorts always indicate an increase, since the persons, in that group, were not born when the previous census was completed. Note that the cohorts represented in Table 3 differ from those listed below due to the consolidation of the 25-29 and 30-34 cohorts

from 1990 into a 35-44 cohort in 2000. Increases in the cohorts occurred in five age groups between 1990 and 2000, these cohort shifts were:

1990 Age Cohort	Number	2000 Age Cohort	Number	Change
NA	NA	0-4 years	1,209 persons	+ 1,209 persons
NA	NA	5-9 years	1,431 persons	+ 1,431 persons
0-4 years	1,416 persons	10-14 years	1,573 persons	+ 157 persons
5-9 years	1,532 persons	15-19 years	1,852 persons	+ 320 persons
10-14 years	1,465 persons	20-24 years	1,595 persons	+ 130 persons
25-34 years	2,876 persons	35-44 years	3,002 persons	+ 126 persons
35-44 years	2,565 persons	45-54 years	2,602 persons	+ 37 persons
Total Change				**+ 3,410 persons**

Outside of the 2000 age groups of 0-4 and 5-9 years, the greatest increases included the 10-14 (2000) and 15-19 (2000) age groups. An important trend to note in Buena Vista County is the increase of the 2000 cohorts of 15-19 and 20-24. Typically, in the more rural Midwestern areas, these cohorts decrease due to the movement to secondary education locations. That movement to secondary educational institutions is the exact reason why Buena Vista County has seen an increase, since the County is home to Buena Vista University, located in Storm Lake. Some of this increase may be the county's proximity to other two- and four-year institutions in the region. In addition, the increases seen in the 2000 cohorts of 10-14 and 35-44 indicate in-migration of family populations between 1990 and 2000.

There were five of the age-cohorts existing in 1990 and 2000 that declined in number. While the County's population increased during this ten year span, an analysis of where the changes took place will lead to an understanding of what services will be needed in the future.

Decreases in the cohorts occurred in a number of age groups between 1990 and 2000, these cohort shifts were:

1990 Age Cohort	Number	2000 Age Cohort	Number	Change
15-19 years	1,479 persons	25-29 years	1,012 persons	- 467 persons
20-24 years	1,558 persons	30-34 years	1,168 persons	- 390 persons
45-54 years	1,606 persons	55-64 years	1,526 persons	- 80 persons
55-64 years	1,893 persons	65-74 years	1,607 persons	- 286 persons
65 years +	3,575 persons	75 years +	1,834 persons	-1,741 persons
Total Change				**- 2,964 persons**

The three age cohorts, from 2000, representing the most negative change, are the 25-29, 30-34 and 75 years and older age cohorts. The changes in the 75 years and older age cohort were most likely due to either deaths or people

moving into elderly care facilities located in other counties. The changes in the 25-29 age cohorts in 2000 is most likely related to persons completing their secondary education and moving onto new careers outside of the County. The change in the 25-29 and 30-34 age cohorts indicates that the County and communities need to focus on economic development strategies that attempt to capture a larger share of those age groups as they finish their college education.

The median age in Buena Vista County increased from 33.8 years in 1990 to 36.4 years in 2000. The proportion of persons less than 18 years of age increased very slightly in total population between 1990 and 2000, while those aged 65 years and older decreased by 3.7% overall. The 10-14 and 15-19 year old age groups of 2000 showed a total increase of 477 persons, which leads to the assumption that people with young families may be drawn to Buena Vista County because of its quality of life and proximity to the Des Moines, Sioux City and Omaha metropolitan areas.

The number of persons aged 55-74 decreased by 366 persons. In order to accommodate a growing number of elderly, whom tend to desire the ability to remain in place as they age, Buena Vista County, in cooperation with the communities, should be involved in developing facilities that can house those that need assistance and allow them to feel safe and comfortable. To encourage the return of the younger and middle age groups, the County should be involved in economic development activities, including housing options and the continued maintenance and improvement of infrastructure to accommodate new growth, making Buena Vista County an attractive place to live and work. Having commuters live in Buena Vista County is fine for increasing the population base, but the County needs a plan to also develop its economic base. With a larger, secure economic base, Buena Vista County would be better positioned to plan for and meet its future service needs.

Population Projections

Population Projections are estimates based upon past and present circumstances. Population projections allow Buena Vista County to estimate what the population will be in future years by looking at past trends. By analyzing population changes in this manner, the County will be able to develop a baseline of change from which they can create different future scenarios. 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 Buena Vista County has for predicting future population changes. There are many methods to project the future population trends; the four projections used below are intended to give Buena Vista County a broad overview of the possible population changes that could occur in the future.

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 Buena Vista County, three different trend lines were reviewed: 1940 to 2004, 1990 to 2004,

and 2000 to 2004. A review of these trend lines indicates the County is likely to experience a decrease in population through 2030. The following projections summarize the decennial population for Buena Vista County through 2030.

Year	Trend: 1940 to 2004	Trend: 1990 to 2004	Trend: 2000 to 2004
2010	20,259 persons	20,509 persons	19,965 persons
2020	20,008 persons	20,649 persons	19,341 persons
2030	19,760 persons	20,790 persons	18,737 persons

Cohort Survival Analysis

Cohort Survival Analysis reviews the 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 but not migration factors.

The Cohort Survival Model projection indicates Buena Vista County's population will decrease slightly through year 2010, followed by increases during the two decades through 2030. The increase is being impacted by the younger age groups that are currently in the County. This increase also assumes that a certain number will continue to live in Buena Vista County in the future. A major factor that has been influencing Buena Vista County's population in the past decade has been the outflow of people; this issue will need to be resolved in order for this model to become reality.

Year	Cohort Survival Model
2010	19,899 persons
2020	21,497 persons
2030	23,068 persons

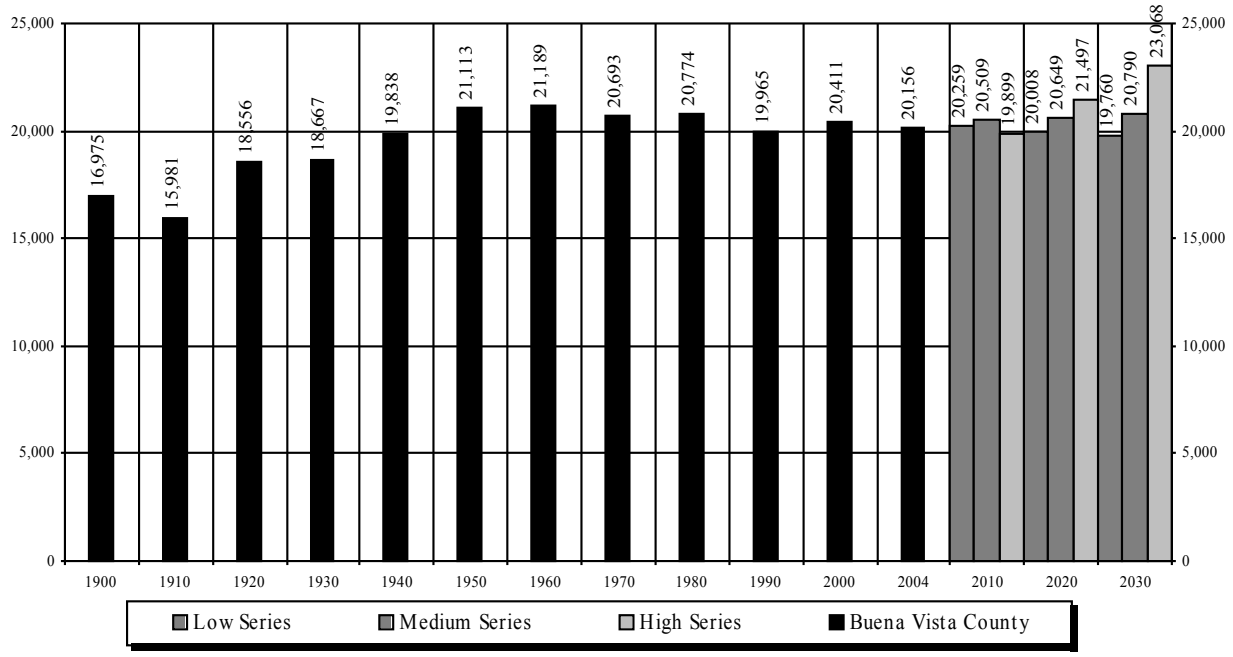
Summary of Population Projections

Using the modeling techniques discussed in the previous paragraphs, a summary of the six population projections for Buena Vista County through the year 2030 is 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. Two of three projections forecast an increase in County population through the year 2030. The following population projections indicate the different scenarios that may be encountered by Buena Vista County through the year 2030.

Year	Low Series = *1940-2004*	Medium Series = *1990-2004*	High Series = *Cohort*
2010	20,259 persons	20,509 persons	19,899 persons
2020	20,008 persons	20,649 persons	21,497 persons
2030	19,760 persons	20,790 persons	23,068 persons

Figure 1 reviews the population history of Buena Vista County between 1900 and 2004, and identifies the three population projection scenarios into the years 2010, 2020, and 2030. Figure 1 indicates the peak population for Buena Vista County occurred in 1960 with 21,189 people. Beginning in 1940, Buena Vista County has had an overall steady population.

FIGURE 1: POPULATION TRENDS AND PROJECTIONS, BUENA VISTA COUNTY, 1900 TO 2030



Source: U.S. Census Bureau, Census of Population and Housing, 1900-2000, 2004

As stated previously, the projections have been developed from data and past trends, as well as present conditions. A number of external and internal demographic, economic and social factors may affect these population forecasts. Buena Vista County should monitor population trends, size and composition periodically in order to understand in what direction their community is heading. Buena Vista County's greatest population threat continues to be out-migration, and strategies should be developed to further examine and reverse this trend.

TABLE 4: POPULATION PROJECTION SERIES, BUENA VISTA COUNTY AND COMMUNITIES, 2000 TO 2030

Community	2000 Census	Low Series			Medium Series			High Series		
		2010	2020	2030	2010	2020	2030	2010	2020	2030
Albert City	709	704	695	686	712	717	722	691	747	801
Alta	1,865	1,851	1,828	1,806	1,874	1,887	1,900	1,818	1,964	2,108
Lakeside	484	480	474	469	486	490	493	472	510	547
Linn Grove	211	209	207	204	212	213	215	206	222	238
Marathon	302	300	296	292	303	306	308	294	318	341
Newell	887	880	869	859	891	897	903	865	934	1,002
Rembrandt	228	226	223	221	229	231	232	222	240	258
Sioux Rapids	703	698	689	681	706	711	716	685	740	795
Storm Lake	9,981	9,907	9,784	9,663	10,029	10,097	10,166	9,731	10,512	11,280
Truesdale	88	87	86	85	88	89	90	86	93	99
Incorporated Areas	15,458	15,343	15,153	14,965	15,532	15,638	15,745	15,070	16,280	17,470
Unincorporated Areas	4,953	4,916	4,855	4,795	4,977	5,011	5,045	4,829	5,217	5,598
Buena Vista County	**20,411**	**20,259**	**20,008**	**19,760**	**20,509**	**20,649**	**20,790**	**19,899**	**21,497**	**23,068**

Source: Population projections, JEO Consulting Group, 2005

Table 4 shows the population projection by series for each of the communities and the unincorporated areas within Buena Vista County. The population projections for the communities were found by determining the proportion of the total population that each community had in 2000 and calculating that percentage for each series. This method of projection is helpful and gives an idea of where people are likely to live. This method does not consider the social issues that people use when choosing a place to live, which have the potential to alter population projections in any direction.

HOUSING PROFILE

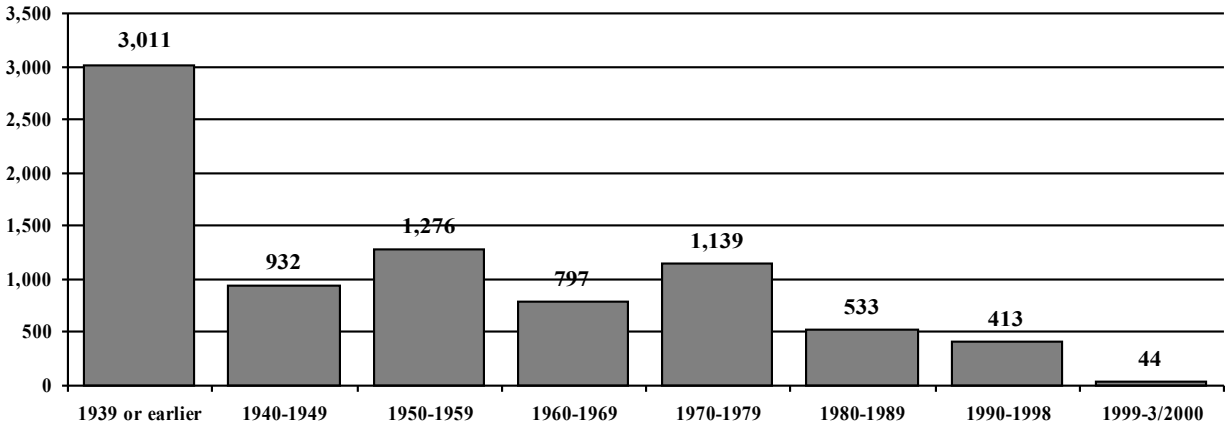
The Housing Profile in this Plan identifies existing housing characteristics and projected housing needs for residents of Buena Vista County. The primary goal of the housing profile is to allow the County to determine what needs to be done in order to provide safe, decent, sanitary and affordable housing for every family and individual residing within Buena Vista County. The housing profile is an analysis that aids in determining the composition of owner-occupied and renter-occupied units, as well as 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, and to determine if housing costs are a financial burden to Buena Vista County residents.

Projecting future housing needs requires several factors to be considered. These factors include population change, household income, employment rates, land use patterns, and residents' attitudes. The following tables and figures provide the information to aid in determining future housing needs and develop policies designed to accomplish the housing goals for Buena Vista County.

Age of Existing Housing Stock

An analysis of the age of Buena Vista County'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. Examining the housing stock is important in order to understand the overall quality of housing and the quality of life in Buena Vista County.

FIGURE 2: AGE OF EXISTING HOUSING STOCK, BUENA VISTA COUNTY, 2000



Source: U.S. Census Bureau, Census of Population and Housing, SF3, 2000

Figure 2 indicates 3,011, or 37.0% of Buena Vista County's 8,145 total housing units, were constructed prior to 1940. After 1940, the period with the largest number of constructed units was 1950 to 1959 with 1,276 housing units, or 15.7%. This indicates there was a strong economy during this time. In addition, there were 1,139 housing units or 14.0% of the total units were built between 1970 and 1979. Nearly 40 percent of Buena Vista County's housing units were built prior to 1940, which may indicate a need for a housing rehabilitation program to improve the quality and energy efficiency of these older homes. Additionally, demolition of units that are beyond rehabilitation may be necessary.

Housing Trends

An analysis of housing trends can reveal a great deal about the different sectors of the population in the County. Housing trends may also indicate the potential demand for additional owner- or renter-occupied housing. Examining housing trends is important in order to understand the overall diversity of the population and their quality of life within Buena Vista County.

TABLE 5: COMMUNITY HOUSING TRENDS, BUENA VISTA COUNTY, 1990 AND 2000

Selected Characteristics	1990	2000	Change	% Change 1990-2000
Population	19,965	20,411	446	2.2%
Persons in Household	18,713	19,030	317	1.7%
Persons in Group Quarters	1,252	1,381	129	10.3%
Persons per Household	2.49	2.54	0.05	2.0%
Total Housing Units	8,140	8,145	5	0.1%
Occupied Housing Units	7,515	7,499	-16	-0.2%
Owner-Occupied units	5,098	5,279	181	3.6%
Renter-Occupied units	2,417	2,220	-197	-8.2%
Vacant Housing Units	625	646	21	3.4%
Owner-Occupied vacancy rate	-	2.1%		-
Renter-Occupied vacancy rate	-	7.5%		-
Median Contract Rent - 1990 and 2000				
Buena Vista County	$218	$320	$102	**46.8%**
Iowa	**$261**	**$383**	**$122**	**46.7%**
Median Value of Owner-Occupied Units - 1990 and 2000				
Buena Vista County	$41,400	$64,900	$23,500	**56.8%**
Iowa	**$45,900**	**$82,500**	**$36,600**	**79.7%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1990, DP-4 2000

Table 5 indicates the number of persons living in households increased between 1990 and 2000 by 317 persons, or 1.7%, and the number of persons in group quarters increased by 129 persons, or 10.3%. In addition, the number of persons per household increased from 2.49 to 2.54 persons. Nationally, however, the trend has been towards a declining household size, and Buena Vista County appears to be experiencing an increase in the household size.

Table 5 also indicates the number of occupied housing units decreased slightly from 7,515 in 1990 to 7,499 in 2000, or -0.2%, while vacant housing units increased from 625 in 1990 to 646 in 2000, or 3.4%. The change in the number of housing units was greatly influenced by the number of new owner-occupied units.

Median contract rent in Buena Vista County increased from $218 per month in 1990 to $320 per month in 2000, or 46.8%. The State of Iowa's median monthly contract rent increased by 46.7%. This indicates Buena Vista County has seen contract rent grow at a rate similar to that of the State. Comparing changes in monthly rents between 1990 and 2000 with the Consumer Price Index (CPI) enables the local housing market to be compared to national economic conditions. Inflation between 1990 and 2000 increased at a rate of 32.1%, indicating Buena Vista County rents increased at a rate nearly 1.5 times faster than the rate of inflation. Thus, Buena Vista County tenants were paying higher monthly rents in 2000, in terms of real dollars, than they were in 1990, on average.

The Median value of owner-occupied housing units in Buena Vista County increased from $41,400 in 1990 to $64,900 in 2000 and represents an increase of 56.8%. The median value for owner-occupied housing units in the State showed an increase of 79.7%. Housing values in Buena Vista County increased at approximately one and a

half times the rate of the CPI. This indicates housing values Statewide and Countywide exceeded inflation and were valued considerably higher in 2000, in terms of real dollars, than in 1990, on average.

The residents in the County saw a substantial increase in housing costs. This trend is consistent with the State, as data show housing costs across Iowa have exceeded inflation. This trend has created a seller's market in Buena Vista County and the State. This market trend can also act as an incentive to property owners to update and rehabilitate housing units.

TABLE 6: HOUSING UNITS BY COMMUNITY, BUENA VISTA COUNTY - 2000

Community	Housing Units 2000	Occupied Housing Units 2000	Vacant Units 2000	Owner-Occupied 2000	Renter-Occupied 2000	Persons per Household 2000
Albert City	312	284	28	233	51	2.38
Alta	791	726	65	526	200	2.56
Lakeside	211	184	27	152	32	2.63
Linn Grove	99	89	10	75	14	2.37
Marathon	162	138	24	109	29	2.19
Newell	381	361	20	295	66	2.32
Rembrandt	102	96	6	73	23	2.38
Sioux Rapids	338	306	32	239	67	2.28
Storm Lake	3,706	3,466	240	2,215	1,251	2.57
Truesdale	47	39	8	34	5	2.33
Incorporated Areas	6,149	5,689	460	3,951	1,738	2.40
Unincorporated Areas	1,996	1,810	186	1,328	482	2.62
Buena Vista County	**8,145**	**7,499**	**646**	**5,279**	**2,220**	**2.54**

Source: U.S. Census Bureau, Census of Population and Housing, SF1 – DP1 2000

Table 6 examines the housing units based upon the communities in Buena Vista County, as well as the units in the unincorporated areas for 2000. The table indicates the majority of the housing units are located in the communities. Quantifying these numbers will allow the County to understand the conditions within the unincorporated areas. Based upon Table 6, 24.5% of the housing units were located within the unincorporated portion of Buena Vista County. However, 28.8% of the vacant units were also located in the unincorporated area. In regards to renter-occupied units, only 21.7% of the units were located within the unincorporated area.

TABLE 7: TENURE OF HOUSEHOLD BY SELECTED CHARACTERISTICS, BUENA VISTA COUNTY, 1990 TO 2000

	1990				2000				O.O.	R.O.
Householder Characteristic	Owner-Occupied	% O.O	Renter-Occupied	% R.O	Owner-Occupied	% O.O	Renter-Occupied	% R.O	Percent Change	
Tenure by Number of Persons in Housing Unit (Occupied Housing Units)										
1 person	1,111	21.8%	957	39.6%	1,162	22.0%	861	38.8%	4.6%	-10.0%
2 persons	2,005	39.3%	611	25.3%	2,099	39.8%	577	26.0%	4.7%	-5.6%
3 persons	641	12.6%	314	13.0%	697	13.2%	257	11.6%	8.7%	-18.2%
4 persons	832	16.3%	313	12.9%	724	13.7%	287	12.9%	-13.0%	-8.3%
5 persons	374	7.3%	151	6.2%	372	7.0%	132	5.9%	-0.5%	-12.6%
6 persons or more	135	2.6%	71	2.9%	225	4.3%	106	4.8%	66.7%	49.3%
TOTAL	**5,098**	**100.0%**	**2,417**	**100.0%**	**5,279**	**100.0%**	**2,220**	**100.0%**	**3.6%**	**-8.2%**
Tenure by Age of Householder (Occupied Housing Units)										
15 to 24 years	68	1.3%	368	16.6%	81	1.5%	326	14.7%	19.1%	-11.4%
25 to 34 years	711	13.9%	787	35.5%	546	10.3%	480	21.6%	-23.2%	-39.0%
35 to 44 years	1,008	19.8%	407	18.3%	1,087	20.6%	533	24.0%	7.8%	31.0%
45 to 54 years	673	13.2%	177	8.0%	1,146	21.7%	312	14.1%	70.3%	76.3%
55 to 64 years	873	17.1%	170	7.7%	700	13.3%	145	6.5%	-19.8%	-14.7%
65 to 74 years	963	18.9%	210	9.5%	827	15.7%	143	6.4%	-14.1%	-31.9%
75 years and over	802	15.7%	298	13.4%	892	16.9%	281	12.7%	11.2%	-5.7%
TOTAL	**5,098**	**100.0%**	**2,417**	**108.9%**	**5,279**	**100.0%**	**2,220**	**100.0%**	3.6%	-8.2%

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1990 / SF4 2000

Table 7 shows tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Analyzing this data gives the County the ability to determine where there may be a need for additional housing. In addition, the County can target efforts for housing rehabilitation and construction at those segments of the population exhibiting the largest need.

The largest section of owner-occupied housing in Buena Vista County in 2000, based upon number of persons, was two-person households, with 2,099 units, or 39.8% of the total owner-occupied units. By comparison, the largest household size for rentals was the single-person households which had 861 renter-occupied housing units, or 38.8% of the total renter-occupied units. This may be impacted by the student residents attending Buena Vista University and the student housing associated with the school. Buena Vista County was comprised of 4,699 1- or 2-person households, or 62.7% of all households. Households having 5 or more persons comprised only 11.3% of the owner-occupied segment, and 10.7% of the renter-occupied segment. Countywide, households of 5- or more persons accounted for only 835 units, or 11.1% of the total.

When compared to 1990, four of the six owner-occupied household groups grew in number. Owner-occupied household groups of six persons or more grew by the greatest percentage; increasing by 94 units, or 66.7%, while units with four persons decreased by 92 units, or -13.0%. Only one of the six renter-occupied housing unit groups

increased, with six person or more units increasing by 35 new units, or 49.3%. Renter-occupied units with three persons experienced the greatest percentage decrease, losing 57 units or -18.2% from 1990.

According to the 2000 data in Table 7, the largest groups of the owner-occupied units were the 45 to 54 years and 35 to 44 years categories. The age groups accounted for 21.7% and 20.6% of the total, respectively, for a combined total of 43.8%. Tenure by age indicates 67.5% of owner-occupied housing units were comprised of persons aged 45 years and older, while 39.7% of renter-occupied units were comprised of persons aged 45 years and younger. Buena Vista County, typically, has a lower percentage of renter units being leased to people 45 years and older; this is due in part to the secondary educational system available in Storm Lake. Rental units in the possession of persons 44 years of age and lower accounted for 60.3% of the total rental units. The largest category of renter-occupied units was the 35 to 44 age group, with 24.0% of the renter-occupied total; this was followed closely by the 25 to 34 age group with 21.6%.

TABLE 8: SELECTED HOUSING CONDITIONS, BUENA VISTA COUNTY, 1990 AND 2000

Housing Profile	Buena Vista County		State of Iowa	
	Total	% of Total	Total	% of Total
1990 Housing Units	8,140		1,143,669	
1990 Occupied Housing Units	7,515	92.3%	1,064,325	93.1%
2000 Housing Units	8,145		1,232,511	
2000 Occupied Housing Units	7,499	92.1%	1,149,276	93.2%
Change in Number of Units 1990 to 2000				
Total Change	5	0.1%	88,842	7.8%
Annual Change	1	0.0%	8,884	0.8%
Total Change in Occupied Units	-16	-0.2%	84,951	8.0%
Annual Change in Occupied Units	-2	0.0%	8,495	0.8%
Characteristics				
1990 Units Lacking Complete Plumbing Facilities	61	0.7%	9,771	0.9%
1990 Units with More Than One Person per Room	100	1.2%	5,354	0.5%
2000 Units Lacking Complete Plumbing Facilities	81	1.0%	9,790	0.8%
2000 Units with More Than One Person per Room	248	3.0%	20,538	1.7%
Substandard Units				
1990 Total	161	2.0%	15,125	1.3%
2000 Total	329	4.0%	30,328	2.5%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990, DP-4 2000

Table 8 indicates changes in housing conditions and includes an inventory of substandard housing for Buena Vista County. The housing occupancy rate in Buena Vista County decreased slightly from 92.3% of all housing in 1990 to 92.1% of all housing in 2000. Between 1990 and 2000, the number of housing units in Buena Vista County increased by 5, or an average of less than 1 unit per year. However, there was a decrease of 16 occupied housing units.

According to the U.S. Department of Housing and Urban Development (HUD) guidelines, housing units lacking complete plumbing or which are overcrowded are considered substandard housing units. HUD defines a complete plumbing facility as hot and cold piped water, a bathtub or shower, and a flush toilet. HUD defines overcrowding as

more than one person per room. When these criteria are applied to Buena Vista County, there were 329 housing units, or 4.0% of the total units, were considered substandard in 2000. It should be noted, however, that this figure was reached by adding together the number of housing meeting one criterion to the number of housing units meeting the other criterion. The largest amount of substandard units was based on overcrowding.

What this data fails to consider are housing units meeting both criteria and any such housing units that were counted twice, once under each criterion. However, the County should not assume the data is an overestimate of the number of substandard housing. Housing units containing major defects requiring rehabilitation or upgrading to meet building, electrical or plumbing codes should also be included in an analysis of substandard housing. 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 remodeling or rehabilitation work. This process will help ensure that a community maintains a high quality of life for its residents through protecting the quality and quantity of its housing stock.

Economic and Employment Profile

Economic data is collected in order to understand area markets, changes in economic activity and employment needs and opportunities within Buena Vista County. In this section, employment by industry, household income statistics, transfer payments, and basic/non-basic analyses were reviewed for Buena Vista County and Iowa.

Income Statistics

Income statistics for households are important for determining the earning power of households in a community. The data presented here shows household income levels for Buena Vista County in comparison to the state. These data were reviewed to determine whether households experienced income increases at a rate comparable to the State of Iowa and the Consumer Price Index (CPI). Note that income statistics may exhibit different numbers than housing statistics; for example, Table 9 shows that there were 7,514 households in Buena Vista County in 2000, but Table 7 shows that there were 7,499. Discrepancies of this nature are to be expected, and can be accounted for by the fact that these data were derived from different census survey formats.

TABLE 9: HOUSEHOLD INCOME, BUENA VISTA COUNTY, 1990 AND 2000

Household Income Ranges	1990				2000			
	Buena Vista County	% of Total	State of Iowa	% of Total	Buena Vista County	% of Total	State of Iowa	% of Total
Less than $10,000	1,116	14.8%	173,098	16.2%	661	8.8%	93,783	8.2%
$10,000 to $14,999	794	10.5%	111,561	10.5%	572	7.6%	77,333	6.7%
$15,000 to $24,999	1,784	23.7%	221,213	20.8%	1,362	18.1%	165,122	14.4%
$25,000 to $34,999	1,645	21.8%	194,997	18.3%	1,130	15.0%	168,713	14.7%
$35,000 to $49,999	1,334	17.7%	191,863	18.0%	1,501	20.0%	218,204	19.0%
$50,000 and over	857	11.4%	172,511	16.2%	2,288	30.4%	427,042	37.1%
Total	**7,530**	**100.0%**	**1,065,243**	**100.0%**	**7,514**	**100.0%**	**1,150,197**	**100.0%**
Median Household Income	$25,311		$26,229		$35,300		$39,469	
Number of Households	7,530		1,065,243		7,514		1,150,197	

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990 / DP-3 2000

Table 9 indicates the number of households in each income range for Buena Vista County for 1990 and 2000. In 1990, the household income range most commonly reported was $15,000 to $24,999, which accounted for 23.7% of all households. By 2000, the income range reported most was the $50,000 and over, which accounted for 30.4% of the total. Those households earning less than $15,000 decreased from 25.3% in 1990 to only 16.4% in 2000, or about two-thirds of the 1990 total.

The median household income for Buena Vista County was $25,311 in 1990, which was $918 less than the State. By 2000, the median household income increased to $35,300 or an increase of 39.5%, but was over $4,100 less than the State. The CPI for this period was 32.1%, which indicates incomes in Buena Vista County did exceed inflation. Buena Vista County households were earning more, in real dollars, in 2000 than in 1990. However, these incomes were not growing nearly as fast as the entire State of Iowa and were losing ground with the remainder of the State.

TABLE 10: HOUSEHOLD INCOME BY AGE (55 YEARS & OLDER) BUENA VISTA COUNTY, 2000

Income Categories	55 to 64 years	65 to 74 years	75 years and over	Householders age 55 and over	Householders age 55 and over	Total Households	% of Total Households with Householders age 55 and over
Less than $10,000	61	68	169	**298**	10.2%	661	45.1%
$10,000 to $14,999	60	71	201	**332**	11.4%	572	58.0%
$15,000 to $24,999	104	187	342	**633**	21.7%	1,362	46.5%
$25,000 to $34,999	100	179	155	**434**	14.9%	1,130	38.4%
$35,000 to $49,999	179	175	145	**499**	17.1%	1,501	33.2%
$50,000 or more	307	276	140	**723**	24.8%	2,288	31.6%
Total	**811**	**956**	**1,152**	**2,919**	**100.0%**	**7,514**	**38.8%**

Source: U.S. Census Bureau, Census of Population and Housing, SF4 2000

Table 10 indicates household income for Buena Vista County householders aged 55 years and over in 2000. The purpose for this information is to determine the income level of Buena Vista County's senior households. The table indicates 2,919 households met this criterion. Of the 2,919 households in Table 10, 1,263 or 43.3% had incomes less than $25,000 per year. Furthermore, 630 of these households, or 21.6% of the total households, had incomes less than $15,000 per year; in addition, these 630 households accounted for 51.1% of all households in the County earning less than $15,000. This information indicates many of these households could be eligible for housing assistance to ensure they continue to live at an appropriate standard of living. The number of senior households could easily continue to grow during the next twenty years. As the size of the 55 and over age cohort increases, these typically fixed income households may be required to provide their entire housing needs for a longer period of time. Also, the fixed incomes that seniors tend to live on generally decline at a faster rate than any other segment of the population, in terms of real dollars.

The last two columns of Table 10 indicate the total number of households in each income level and the proportion of those households that were age 55 years and older. Note that in the income level of less than $10,000, 45.1% of all households were over the age of 55. By contrast, 33.2% of all households in the $35,000 to $49,999 income range are over 55 years of age, and only 31.6% of all households in the $50,000 or more income range was over 55 years of age. This indicates that those who are over 55 years of age in Buena Vista County account for a major portion of these income groups and appear to be increasing in line with all ages. Over time, the over 55 age group may increase faster than any other cohort in the next twenty years.

TABLE 11: HOUSING COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME, BUENA VISTA COUNTY, 2000

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	63	1.5%	77	4.2%	**140**	**2.3%**
More than 30% of income	94	2.2%	253	14.0%	**347**	**5.7%**
$10,000 to $19,999						
Less than 30% of income	372	8.8%	151	8.3%	**523**	**8.7%**
More than 30% of income	183	4.3%	231	12.7%	**414**	**6.9%**
$20,000 to $34,999						
Less than 30% of income	796	18.8%	518	28.6%	**1,314**	**21.8%**
More than 30% of income	152	3.6%	58	3.2%	**210**	**3.5%**
$35,000 to $49,999						
Less than 30% of income	871	20.6%	245	13.5%	**1,116**	**18.5%**
More than 30% of income	43	1.0%	0	0.0%	**43**	**0.7%**
$50,000 or more						
Less than 30% of income	1,607	38.0%	280	15.4%	**1,888**	**31.2%**
More than 30% of income	47	1.1%	0	0.0%	**47**	**0.8%**
TOTAL	**4,228**	**100.0%**	**1,813**	**100.0%**	**6,041**	**100.0%**
Housing Cost Analysis						
Less than 30% of income	**3,709**	**87.7%**	**1,271**	**70.1%**	**4,980**	**82.4%**
More than 30% of income	**519**	**12.3%**	**542**	**29.9%**	**1,061**	**17.6%**
TOTAL	**4,228**	**100.0%**	**1,813**	**100.0%**	**6,041**	**100.0%**

Source: U.S. Census Bureau, Census of Population and Housing, SF 3 Table H73 and H97, 2000

Table 11 shows owner-occupied and renter-occupied housing costs as a percentage of householder income in 2000. In addition, the table identifies the number of households experiencing a housing cost burden. Note the total number of households is different, due to the use of a different survey form. A housing cost burden, as defined by the U.S. Department of Housing and Urban Development (HUD), occurs when gross housing costs, including utility costs, exceed 30% of gross household income, based on data published by the U.S. Census Bureau. Table 11 shows 4,980 households, or 82.4% of total households, paid less than 30% of their income towards housing costs. This means the remaining 1,061 households, or 17.6% of the total, were experiencing a housing cost burden.

There were 519 owner-occupied households and 542 renter-occupied households that experienced a housing cost burden. However, even though the total number of owner-occupied units was relatively close to the renter-occupied numbers, only 12.3% of owner-occupied households had a housing cost burden, while 29.9% of renter-occupied households had a housing cost burden.

Table 12 shows owner and renter costs for householders age 65 and over. Similar trends are shown in Table 12 as were shown in Table 11. A housing cost burden affects 248 households age 65 and over. In 2000, there were 151 owner-occupied households age 65 and over with a housing cost burden or 11.7% of the total households with this burden. However, 97 renter-occupied households age 65 and over experienced a housing cost burden, or 29.0% of the total households with this burden. While only 17.6% of the County population as a whole experienced a housing cost burden, 15.2% of all households over age 65 experienced a housing cost burden. This finding is of particular

importance because it shows that elderly households account for 23.3% of all the households indicating a housing cost burden; all while they continue to face increasing housing costs and fixed or decreasing incomes.

TABLE 12: AGE 65 AND OLDER COSTS AS PERCENTAGE OF INCOME, BUENA VISTA COUNTY, 2000

Income Categories	Owner-Occupied Households	% O.O. Households	Renter-Occupied Households	% R.O. Households	Total Households age 65 and Over	% of Total Households
Housing Cost Analysis						
Less than 30% of income	1,145	88.3%	237	71.0%	**1,382**	**84.8%**
More than 30% of income	151	11.7%	97	29.0%	**248**	**15.2%**
TOTAL	**1,296**	**100.0%**	**334**	**100.0%**	**1,630**	**100.0%**

Source: U.S. Census Bureau, Census of Population and Housing, SF 3 Table H71 and H96, 2000

Income Source and Public Assistance

Table 13 shows personal income by source for Buena Vista County and the State. Between 1970 and 2000, the CPI was 345.1%. Between 1970 and 2000, total income, non-farm income and per capita income showed tremendous growth. Non-farm income increased from $50,978,000 in 1970 to $319,031,000 in 2000, or an increase of 525.8%, which is nearly 1.5 times the CPI. In the same time period, farm income increased from $15,461,000 to $27,701,000, or 79.2%, which is little more than one-fifth of the CPI. Per capita income increased from $4,209 in 1970 to $23,680 in 2000, or an increase of 462.6%, again far greater than the CPI. The rate at which non-farm income and farm income were changing suggests that farm related employment activities are not growing as fast as the number of non-farm related jobs. This data indicates Buena Vista County has been going through an economic transformation and is becoming less dependent on the agricultural aspects of the economy. In 1970, farm income accounted for 17.7% of the total personal income. By 2000, farm income's role in the local economy had decreased to 5.7% of the total. The trend appears to be common to the State of Iowa as well

TABLE 13: INCOME BY SOURCE, STATE OF IOWA AND BUENA VISTA COUNTY, 1970 TO 2000

Income Characteristics	1970	1980	1990	2000	% Change 1970-2000	% Annual Change
Buena Vista County						
Total Personal Income	$87,324,000	$198,174,000	$323,847,000	$482,149,000	452.1%	16.7%
Non-farm Income	$50,978,000	$117,874,000	$190,028,000	$319,031,000	525.8%	19.5%
Farm Income	$15,461,000	$10,377,000	$35,008,000	$27,701,000	79.2%	2.9%
Per Capita Income	$4,209	$9,525	$16,199	$23,680	462.6%	17.1%
State of Iowa						
Total Personal Income	$10,931,457,000	$27,929,932,000	$48,357,991,000	$77,762,743,000	611.4%	22.6%
Non-farm Income	$9,737,226,000	$27,258,964,000	$46,123,917,000	$76,124,449,000	681.8%	25.3%
Farm Income	$1,194,231,000	$670,968,000	$2,234,074,000	$1,638,294,000	37.2%	1.4%
State of Iowa Per capita income	$3,865	$9,585	$17,389	$26,554	587.0%	21.7%

Source: Bureau of Economic Analysis, Regional Economic Information System, 2000

While per capita income in Buena Vista County was higher than the State of Iowa in 1970, it has lagged the State in subsequent decades. Buena Vista County appears to have a strong economic base; however, the County still needs to monitor and manage its resources and continue to develop its economic base so that it can sustain its per capita income growth rate. Table 14 indicates Transfer Payments to individuals in Buena Vista County from 1970 to 2000. Note the total amount of Transfer Payments equals Government Payments to Individuals plus Payments from Non-Profit Institutions plus Business Payments. The remaining categories listed in Table 14 are sub-parts of the Government Payments to Individuals category.

Total transfer payments between 1970 and 2000 showed an increase in each reporting period. Government payments, including Retirement, Disability and Insurance Benefits and Medical Payments comprised the majority of total transfer payments. The largest individual percentage increase occurred within Medical Payments, which increased by over $24,975,000 or 2,822.03%. Income Maintenance Benefits had the second largest individual percentage increase at $3,987,000, or 910.27%. Retirement, Disability and Insurance Benefits also had considerable gains, increasing by $32,427,000 or 715.99%.

TABLE 14: TRANSFER PAYMENTS, STATE OF IOWA AND BUENA VISTA COUNTY, 1970 TO 2000

Payment Type	1970	1980	1990	2000	% Change 1970 to 2000	% Change Per Year
Buena Vista County						
Government payments to individuals	$6,693,000	$22,999,000	$46,002,000	$72,208,000	978.86%	32.6%
Retirement, Disability &Insurance Benefits	$4,529,000	$14,804,000	$28,261,000	$36,956,000	715.99%	23.9%
Medical Payments	$885,000	$4,209,000	$11,786,000	$25,860,000	2822.03%	94.1%
Income Maintenance Benefits (SSI, AFDC, Food Stamps, etc)	$438,000	$1,292,000	$2,134,000	$4,425,000	910.27%	30.3%
Unemployment Insurance Benefits	$101,000	$707,000	$525,000	$957,000	35.36%	1.2%
Veteran's Benefits	$703,000	$1,181,000	$1,361,000	$1,126,000	60.17%	2.0%
Federal Education and Training Assistance	(L)	$805,000	$1,917,000	$2,818,000	250.06%	8.3%
Payments from Non-profit Institutions	$361,000	$988,000	$1,562,000	$2,851,000	689.75%	23.0%
Business Payments	$219,000	$578,000	$1,406,000	$2,301,000	950.68%	31.7%
Total	**$7,273,000**	**$24,565,000**	**$48,970,000**	**$77,360,000**	**963.66%**	32.1%
Transfer Payments Per Capita	$351	$1,181	$2,449	$3,799	982.3%	32.7%
Total Per Capita Income	$4,209	$9,525	$16,199	$23,680	462.6%	15.4%
Per Capita Transfer Payments as % of Per Capita Income	**8.3%**	**12.4%**	**15.1%**	**16.0%**	**92.4%**	**3.1%**
State of Iowa						
Total	**$992,236,000**	**$3,405,442,000**	**$6,609,056,000**	**$10,787,153,000**	**987.16%**	32.9%
Transfer Payments Per Capita	$351	$1,169	$2,376	$3,684	950%	32%
Total Per Capita Income	$3,862	$9,671	$17,389	$26,554	588%	20%
Per Capita Transfer Payments as % of Per Capita Income	**9.1%**	**12.1%**	**13.7%**	**13.9%**	**52.6%**	**1.8%**

(L) – Less than $50,000, estimates are included in totals.
Source: Bureau of Economic Analysis, Regional Economic Information System, 2005

The trend for transfer payments per capita between 1970 and 2000 indicates payments increased significantly to individuals in Buena Vista County, increasing by 982.3% in 30 years. However, transfer payments, as a proportion of the per capita income, increased at a much lower rate between 1970 and 2000. In 1970, transfer payments comprised 8.3% of total per capita income, and in 2000, transfer payments were 16.0% of total per capita income; however, the primary reason for this was that the per capita income did not increase as much as the State. During this 30 year period, Buena Vista County's proportion increased far greater than the State, 92.4% compared to 52.6%.

In 1970, Total Transfer Payments for Buena Vista County were $7,273,000 compared to $992,236,000 for the State of Iowa. Buena Vista County had approximately 0.73% of the Iowa total. By 2000, Total Transfer Payments for Buena Vista County were $77,360,000, or an increase of 963.66% compared to $10,787,153,000 for the state. In 2000, Buena Vista County accounted for 0.72% of the state's total, a slight decrease. In 30 years, Buena Vista County has seen their share of the transfer payments decrease by -1.4%. In 2000, transfer payments per capita in Buena Vista County were $3,799, while the State of Iowa indicated only $3,684.

Industry Employment

Analyzing employment by industry assists a county in determining the key components of their labor force. This section indicates the type of industry comprising the local economy, as well as identifying particular occupations that employ residents. Table 15 indicates employment size by industry for the County and State from 1970 to 2000.

TABLE 15: EMPLOYMENT BY INDUSTRY, STATE OF IOWA AND BUENA VISTA COUNTY, 1970 TO 2000

	1970	% of Total	1980	% of Total	1990	% of Total	2000	% of Total	% Change 1970 to 2000
Buena Vista County									
Farm Employment	1,827	23.6%	1,671	17.8%	1,353	12.7%	1,085	8.7%	-40.6%
Non-farm Employment	7,757	100.0%	9,382	100.0%	10,668	100.0%	12,468	100.0%	60.7%
Ag. Serv, forestry, fishing, mining and other	190	2.4%	118	1.3%	156	1.5%	264	2.1%	38.9%
Construction	470	6.1%	609	6.5%	387	3.6%	481	3.9%	2.3%
Manufacturing	1,271	16.4%	1,175	12.5%	2,093	19.6%	2,877	23.1%	126.4%
Transportation and Public Utilities	422	5.4%	358	0.0% 3.8%	309	2.9%	349	2.8%	-17.3%
Wholesale Trade	250	3.2%	873	9.3%	757	7.1%	706	5.7%	182.4%
Retail Trade	1,753	22.6%	2,154	23.0%	2,097	19.7%	2,233	17.9%	27.4%
Finance, Insurance &Real Estate	506	6.5%	690	7.4%	692	6.5%	781	6.3%	54.3%
Services	1,611	20.8%	2,161	23.0%	2,697	25.3%	3,077	24.7%	91.0%
Government and Government Enterprises	1,284	16.6%	1,244	13.3%	1,480	13.9%	1,700	13.6%	32.4%
Totals - Non-farm	7,757	100.0%	9,382	100.0%	10,668	100.0%	12,468	100.0%	60.7%
State of Iowa									
Farm Employment	170,932	15.2%	161,699	11.7%	130,807	8.6%	109,624	6.0%	-35.9%
Non-farm Employment	1,123,669	100.0%	1,379,345	100.0%	1,515,137	100.0%	1,824,453	100.0%	62.4%
Ag. Serv, forestry, fishing, mining and other	15,318	1.4%	13,297	1.0%	23,317	1.5%	28,801	1.6%	88.0%
Construction	63,507	5.7%	74,100	5.4%	71,317	4.7%	98,810	5.4%	55.6%
Manufacturing	221,422	19.7%	249,837	18.1%	242,401	16.0%	266,961	14.6%	20.6%
Transportation and Public Utilities	62,033	5.5%	69,388	5.0%	69,125	4.6%	91,574	5.0%	47.6%
Wholesale Trade	50,191	4.5%	83,066	6.0%	82,511	5.4%	90,846	5.0%	81.0%
Retail Trade	217,964	19.4%	254,670	18.5%	280,114	18.5%	327,569	18.0%	50.3%
Finance, Insurance &Real Estate	83,713	7.4%	109,213	7.9%	109,038	7.2%	135,113	7.4%	61.4%
Services	219,180	19.5%	305,028	22.1%	403,725	26.6%	528,528	29.0%	141.1%
Government and Government Enterprises	190,341	16.9%	220,746	16.0%	233,589	15.4%	256,251	14.0%	34.6%
Totals - Non-farm	1,123,669	100.0%	1,379,345	100.0%	1,515,137	100.0%	1,824,453	100.0%	62.4%

Source: U.S. Bureau of Economic Analysis, Regional Economic Information System, 2005

Between 1970 and 2000, Buena Vista County experienced many changes within its industries. Overall, non-farm employment in Buena Vista County increased by 4,711 jobs, or 60.7%. The State of Iowa had an increase of 700,784 positions, or 62.4%. Buena Vista County's workforce increased at a slightly slower rate than the state.

Buena Vista County industries with the greatest percent increases were:

- Wholesale Trade with an increase of 456 jobs or 182.4%;
- Manufacturing with an increase of 1,606 jobs or 126.4%;
- Services with an increase of 1,466 jobs or 91.0%; and
- Finance, Insurance and Real Estate (F.I.R.E) with an increase of 275 jobs or 54.3%

In comparison, the State of Iowa's largest percent changes are as follows:

- Services with an increase of 309,348 jobs or 141.1%;
- Agricultural Services, forestry, fishing, mining and other, with an increase of 13,483 jobs or 88.0%;
- Wholesale Trade with an increase of 40,655 jobs or 81.0%; and
- Finance, Insurance and Real Estate (F.I.R.E) with an increase of 51,400 jobs or 61.4%

The greatest increases in Buena Vista County were similar to that of the entire state. The one difference was the manufacturing industry versus the agricultural services industry.

Increases in employment positions occurred in all other industry categories:

- Manufacturing + 1,606 jobs
- Service + 1,466 jobs
- Retail Trade + 480 jobs
- Wholesale Trade +456 jobs
- Government and Government Enterprises + 416 jobs
- Finance, Insurance, and Real Estate + 275 jobs
- Ag. Services, Forestry, Fishing, Mining, Other + 74 jobs
- Construction + 11 jobs

The only industries that indicated a loss of employment was Farm employment and Transportation and Public Utilities that lost 742 and 73 jobs, respectively, between 1970 and 2000.

Changes within Buena Vista County are reflective of the move nationally to more service-related industries, but it is important to recognize an even more significant increase in manufacturing jobs. Despite successes in the manufacturing sector, Buena Vista County, together with their economic development partners need to continually work to identify county and community assets. The County can play heavily on its proximity to major metropolitan areas, transportation routes and quality of life when recruiting businesses and industry. As new jobs come to Buena Vista County, so will the demand for residential development. As stated previously, a solid population base is reflective of all other aspects of the county's economic health.

Commuter Trends

Tables 16 and 17 show the commuter characteristics for Buena Vista County. Table 16 indicates where the residents of Buena Vista County work by county. A trend seen between 1970 and 2000 indicates the resident workforce employed in Buena Vista County increased, as did the number of residents commuting out of the County.

TABLE 16: COMMUTER POPULATION TRENDS, RESIDENTS OF BUENA VISTA COUNTY, 1970 TO 2000

County of Residence	Work County	1970	1980	1990	2000	Change 1970-2000	% of 1970 Total	% of 2000 Total
Buena Vista County	**Buena Vista County**	**6,823**	**8,374**	**8,614**	**8,250**	**1,427**	**92.8%**	**86.5%**
	Cherokee County	161	272	202	324	163	2.2%	3.4%
	Clay County	64	168	168	294	230	0.9%	3.1%
	Dickinson County	0	0	0	20	20	0.0%	0.2%
	Ida County	22	8	43	54	32	0.3%	0.6%
	Mills County	0	0	0	20	20	0.0%	0.2%
	O'Brien County	15	0	0	20	5	0.2%	0.2%
	Palo Alto County	0	0	0	24	24	0.0%	0.3%
	Plymouth County	15	0	0	28	13	0.2%	0.3%
	Pocahontas County	114	97	182	222	108	1.6%	2.3%
	Polk County	0	0	0	33	33	0.0%	0.3%
	Sac County	60	147	143	134	74	0.8%	1.4%
	Story County	0	0	0	20	20	0.0%	0.2%
	Webster County	0	21	18	44	44	0.0%	0.5%
	Woodbury County	6	57	8	51	45	0.1%	0.5%
	Elsewhere	72	123	139	0	-72	1.0%	0.0%
	Total	**7,352**	**9,267**	**9,517**	**9,538**	**2,186**	**100.0%**	**100.0%**
	Total Commuter	529	893	903	1,288	759		
	%Commuter	7.2%	9.6%	9.5%	13.5%	70.7%		

Source: Bureau of Economic Analysis, Regional Economic Information System, 2005

The number of Buena Vista County residents employed in the County increased by 1,427, while the number of residents commuting out of Buena Vista County increased by 759 people. The majority of the outgoing commuter increase was to Clay County (Spencer), which had 230 of the 759 or 17.9% of the total increases in the commuter workforce. The total workforce commuting to Clay County for employment increased from 0.9% of the total in 1970, to 3.1% of the total in 2000. The percentage of Buena Vista County residents working in Buena Vista County decreased from 92.8% in 1970, to 86.5% in 2000. The remaining 10.5% of the 2000 workforce were scattered between at least 14 other counties in the region.

TABLE 17: COMMUTER POPULATION TRENDS; WORKERS IN BUENA VISTA COUNTY, 1970 TO 2000

Work County	County of Residence	1970	1980	1990	2000	Change 1970-2000	% of 1970 Total	% of 2000 Total
Buena Vista County	**Buena Vista County**	**6,823**	**8,374**	**8,614**	**8,250**	**1,427**	**94.0%**	**83.9%**
	Calhoun County	0	6	57	56	56	0.0%	0.6%
	Carroll County	0	0	0	18	18	0.0%	0.2%
	Cherokee County	37	92	204	303	266	0.5%	3.1%
	Clay County	38	74	185	152	114	0.5%	1.5%
	Crawford County	0	0	29	22	22	0.0%	0.2%
	Dickinson County	0	4	23	16	16	0.0%	0.2%
	Ida County	14	25	44	105	91	0.2%	1.1%
	O'Brien County	13	12	23	12	-1	0.2%	0.1%
	Palo Alto County	6	38	2	20	14	0.1%	0.2%
	Plymouth County	24	0	0	0	-24	0.3%	0.0%
	Pocahontas County	184	94	189	243	59	2.5%	2.5%
	Sac County	118	310	497	624	506	1.6%	6.3%
	Sioux County	0	13	27	0	0	0.0%	0.0%
	Webster County	0	0	24	0	0	0.0%	0.0%
	Woodbury County	0	0	0	16	16	0.0%	0.2%
	Total	**7,257**	**9,042**	**9,918**	**9,837**	**1,153**	**6.0%**	**16.1%**
	Total Commuters	316	345	756	947	631		
	%Commuters	4.4%	3.8%	7.6%	9.6%	199.7%		

Source: Bureau of Economic Analysis, Regional Economic Information System, 2005

The number of workers commuting into Buena Vista County increased by 631 people, the majority of those came from Sac County (Sac City), which added 506, or 428.8%. Sac County residents made up 80.2% of the new commuters into Buena Vista County from 1970 to 2000. The total workforce commuting from Sac County for employment increased from 1.6% of the total in 1970, to 6.3% of the total in 2000. In addition, the workforce coming to Buena Vista County from Cherokee County increased from 0.5% in 1970, to 3.1% in 2000. The percentage of Buena Vista County workers living in the County decreased from 94.0% in 1970, to 83.9% in 2000. The remaining 16.1% of the 2000 workforce commute into Buena Vista County from 15 other counties in the region.

During 1970, there were 529 workers living in Buena Vista County that commuted elsewhere for employment. There were also 316 workers living elsewhere that commuted into Buena Vista County for employment. By 2000, these numbers changed to 1,288 commuting out of Buena Vista County, and 947 commuting into the County. These changes represent an increase of 143.5% in the number commuting out, and 199.7% in the number commuting into Buena Vista County. The percentage of workers commuting into Buena Vista County grew compared to those commuting out of the county. However, the number of workers leaving the County for employment is three times the number of workers coming into the County for employment.

The information in Tables 16 and 17 allows the County to identify how much money is leaving the County every day in the pockets of resident commuters. In addition, the County can get an idea of how much is coming into the

County from non-resident commuters. By knowing how many residents are leaving the county for employment, Buena Vista County can develop strategies to create jobs within the County that will attract and keep its own residents in the County, spending their money on goods and services provided by the County workforce.

Travel time to work is another factor that can be used to gauge where Buena Vista County's workforce has been commuting. Table 18 shows how many residents of Buena Vista County travel to work in each of several time categories.

TABLE 18: TRAVEL TIME TO WORK, BUENA VISTA COUNTY, 1990 TO 2000

Travel Time Categories	1990	% of Total	2000	% of Total	% Change
Less than 5 minutes	1,414	14.9%	1,305	13.5%	-7.7%
5 to 9 minutes	2,783	29.4%	2,639	27.4%	-5.2%
10 to 19 minutes	3,069	32.4%	3,022	31.3%	-1.5%
20 to 29 minutes	638	6.7%	936	9.7%	46.7%
30 to 44 minutes	546	5.8%	611	6.3%	11.9%
45 to 59 minutes	141	1.5%	193	2.0%	36.9%
60 minutes or more	117	1.2%	297	3.1%	153.8%
Worked at home	771	8.1%	640	6.6%	-17.0%
Total	**9,479**	**100.0%**	**9,643**	**100.0%**	**1.7%**
Mean Travel Time (minutes)	**11.6**		**14.9**		**28.4%**

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990 – SF 3 Table PCT56 and DP3, 2000

Table 18 indicates the workforce spent 3.3 minutes more traveling to work in 2000 than in 1990. The average travel time increased from 11.6 minutes in 1990 to 14.9 minutes in 2000. The largest percentage increase during this period, regarding travel time, occurred in the 60 minutes or more category, which increased by 180 persons, or 153.8%. The next largest increase occurred in the 20 to 29 minutes category, which increased by 298persons, or 46.7%. Finally, the 45 to 59 minutes category was the third largest increase with 52 more commuters or 36.9%. These increases support the data shown in Table 16.

The number of persons working at home exhibited the largest percent decrease, which decreased by 131, or -17.0% from 1990 to 2000. This may be have been caused by the availability of more and better paying jobs in the area, but also may be a result of a population that has fewer children to take care of at home, and is therefore able to work farther from home.

Regional Basic/Non-Basic Analysis

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

- Basic employment is business activity providing services primarily outside the area through the sale of goods and services, the revenues of which are directed to the local area in the form of wages and payments to local suppliers.
- Non-Basic employment is business activity providing services primarily within the local area through the sale of goods and services, and the revenues of such sales re-circulate within the community in the form of wages and expenditures by local citizens.

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 categories used in the analysis are listed below:

- Management, professional, and related occupations
- Service occupations
- Sales and office occupations
- Farming, fishing and forestry occupations
- Construction, extraction, and maintenance occupations
- Production, transportation, and material moving occupations

A related concept to the basic/non-basic distinction is that of a Basic Multiplier. The basic multiplier is a number, which represents how many non-basic jobs are supported by each basic job. A high basic multiplier means that the loss of one basic job will have a large potential impact on the local economy if changes in employment occur. The rationale behind this analysis is that if basic jobs bring new money into a local economy, that money becomes the wages for workers in that economy. Finally, the more money generated by basic jobs within a county; there are more non-basic jobs supported.

Table 19 indicates the occupation category, the percent of Buena Vista County residents employed in each category, the percent of State residents employed in each category, and the basic and non-basic employment for that category in Buena Vista County. The formula for determining the basic or non-basic nature of an occupation entails subtracting the State's percentage of workforce in a particular occupation from the percentage of the workforce in that occupation in the County. If the County has a lower proportion of its workforce employed in an occupation than the State as a whole, then that occupation is non-basic.

TABLE 19: BASIC/NON-BASIC EMPLOYMENT BY OCCUPATION, BUENA VISTA COUNTY, 2000

Occupation Category	Number of Buena Vista County Workforce	% of Buena Vista County Workforce	% of State Workforce	Buena Vista County minus State of Iowa	Basic	Non-Basic
Management, professional, and related occupations	2,734	27.8%	31.3%	-3.5%	0.0%	27.8%
Service occupations	1,412	14.4%	14.8%	-0.4%	0.0%	14.4%
Sales and office occupations	2,375	24.2%	25.9%	-1.7%	0.0%	24.2%
Farming, fishing, and forestry occupations	242	2.5%	1.1%	1.4%	1.4%	1.1%
Construction, extraction, and maintenance occupations	740	7.5%	8.9%	-1.4%	0.0%	7.5%
Production, transportation, and material moving occupations	2,325	23.7%	18.1%	5.6%	5.6%	18.1%
TOTAL	**9,828**	**100%**	**100%**		7.0%	93.0%
Economic base multiplier	**14.29**					

Source: U.S. Census Bureau, Census of Population and Housing, DP-3, 2000

In Buena Vista County, there are two basic occupation industries: 1) Production, transportation, and material moving occupations, and 2) Farming, fishing, and forestry occupations. Goods and services from these occupations are exported to markets outside of Iowa, which in turn generates an infusion of dollars into the local economy. Table 19 shows that 93.0% of the jobs in Buena Vista County are non-basic, while only 7.0% provide goods and services outside of the County. With two of the six categories indicating exports puts the County's economic survival in a difficult position, especially since one is agriculture and the other requires the use of fuels such as diesel, which has seen significant price increases in the past few years. However, nearly 90% of the exports are within two of the categories. If an economic downturn occurred in this area, it could have a major impact on the County's economy.

The basic multiplier for Buena Vista County is 14.29. This number indicates that 14.29 non-basic jobs support every one basic job in Buena Vista County. Every time the County loses a job in 1) Production, transportation, and material moving occupations, and 2) Farming, fishing, and forestry occupations, the County potentially could lose 15.29 non-basic jobs. In order to decrease this potential, Buena Vista County needs to accentuate the basic jobs by diversifying the employment base even more. Counties want a balance of basic and non-basic employment in their economy to ensure future economic stability.

TABLE 20: REGIONAL AND STATE LABOR FORCE COMPARISONS, BUENA VISTA COUNTY, 2000

Location	Occupation 1	Occupation 2	Occupation 3	Occupation 4	Occupation 5	Occupation 6	Base Multiplier
Iowa	31.3%	14.8%	25.9%	1.1%	8.9%	18.1%	NA
Buena Vista County	27.8%	14.4%	**24.2%**	**2.5%**	7.5%	**23.7%**	14.29
Calhoun County	**32.8%**	**17.4%**	**22.7%**	1.7%	**10.9%**	14.6%	14.93
Cherokee County	**29.2%**	**15.3%**	21.7%	2.3%	**10.4%**	**21.2%**	**15.87**
Clay County	26.0%	13.7%	**25.8%**	1.3%	9.6%	**23.6%**	15.63
Ida County	**29.7%**	14.9%	**23.0%**	**2.8%**	8.1%	**21.6%**	**18.87**
O'Brien County	28.3%	15.0%	19.8%	**2.5%**	**10.5%**	**23.9%**	11.11
Palo Alto County	**31.6%**	**16.6%**	20.8%	2.0%	**10.0%**	19.0%	**20.00**
Pocahontas County	**35.5%**	**15.2%**	21.2%	**2.5%**	7.9%	17.8%	**16.67**
Sac County	28.2%	**16.1%**	**23.8%**	**3.0%**	**9.8%**	19.0%	**20.00**

Occupation 1 = Management, professional, and related occupations
Occupation 2 = Service occupations
Occupation 3 = Sales and office occupations
Occupation 4 = Farming, fishing, and forestry occupations
Occupation 5 = Construction, extraction, and maintenance occupations
Occupation 6 = Production, transportation, and material moving occupation

Source: U.S. Census Bureau, Census of Population and Housing, DP-3, 2000

Table 20 indicates the 2000 percentage of employment by occupational categories for residents of the State of Iowa, Buena Vista County, and surrounding counties. Buena Vista County is located near the middle or bottom of most occupational categories. In only one case does Buena Vista County have the lowest percentage of employment, Occupation 5, Construction, extraction and maintenance occupations. Buena Vista County's Basic Multiplier is second lowest among counties in the region.

While the surrounding counties have a multiplier in the range of 11.11 to 20.00, Buena Vista County's multiplier is 14.29. The impact of a multiplier as seen in all of these counties is that they are more sensitive to the loss of one basic position. The reason for the higher multiplier in Buena Vista County is that the workforce is only 7.0% basic. This indicates a very small proportion of the workforce is responsible for generating the flow of new money into the County. The higher the basic percentage becomes, the lower the basic multiplier will become. There is no perfect multiplier; however, a set of balanced occupational categories provides a more balanced economy.

One way for the County to increase the proportion of basic labor would be to increase the number of jobs in the existing basic categories, 1) Production, transportation, and material moving occupations, and 2) Farming, fishing, and forestry occupations. Another strategy would be for Buena Vista County to diversify its employment opportunities and increase the strength and security of its workforce. To do this, Buena Vista County must bring some of its non-basic jobs into the basic category.

TABLE 21: BASIC/NON-BASIC EMPLOYMENT BY INDUSTRY, BUENA VISTA COUNTY, 2000

Industry Categories	Buena Vista County		State of Iowa		Buena Vista County minus State of Iowa	Basic	Non-Basic
	2000	% of Total	2000	% of Total			
Agriculture, forestry, hunting and mining	**806**	**8.2%**	**65,903**	**4.4%**	**3.8%**	**3.8%**	**4.4%**
Construction	425	4.3%	91,824	6.2%	-1.8%	0.0%	4.3%
Manufacturing	**2,175**	**22.1%**	**253,444**	**17.0%**	**5.1%**	**5.1%**	**17.0%**
Wholesale Trade	**392**	**4.0%**	**53,267**	**3.6%**	**0.4%**	**0.4%**	**3.6%**
Retail Trade	1,145	11.7%	179,381	12.0%	-0.4%	0.0%	11.7%
Transportation and warehousing and utilities	409	4.2%	73,170	4.9%	-0.7%	0.0%	4.2%
Information	162	1.6%	41,970	2.8%	-1.2%	0.0%	1.6%
Finance, Insurance, Real Estate and rental and leasing	392	4.0%	100,395	6.7%	-2.8%	0.0%	4.0%
Professional, scientific, management, administration, and waste management service	406	4.1%	90,157	6.1%	-1.9%	0.0%	4.1%
Educational, health, and social services	**2,184**	**22.2%**	**324,142**	**21.8%**	**0.5%**	**0.5%**	**21.8%**
Arts, entertainment, recreation, accommodation and food services	605	6.2%	98,819	6.6%	-0.5%	0.0%	6.2%
Other services (except public administration)	433	4.4%	66,286	4.4%	0.0%	0.0%	4.4%
Public Administration	294	3.0%	51,058	3.4%	-0.4%	0.0%	3.0%
Total	**9,828**	**100.0%**	**1,489,816**	**100.0%**		**9.8%**	**90.2%**
Base Multiplier	**10.23**						

Source: US Census – 2000 DP-3

Table 19 shows that three of the non-basic occupation categories are very close to the same percentage as the State, so it is possible that these categories could become basic, if additional jobs were created. If these occupational areas were to surpass the State percentage, they would start to contribute to the basic employment of the County, which in turn would lower the basic multiplier. However, as jobs are added to one occupation category, the percentages for all of the industries will change. This makes forecasting future basic and non-basic occupations complex and difficult.

Table 21 offers another basic/non-basic analysis. This approach is based upon Industry Categories instead of Occupation Categories. With the data presented in this Table, Buena Vista County will have more detailed information to define where job growth needs to occur. Note the total percentage of basic and non-basic employment is calculated in this Table.

According to Table 21, the following industries are strong in Buena Vista County:

- Agriculture, forestry, fishing, hunting and mining
- Manufacturing
- Wholesale Trade
- Educational, health, and social services

These industries are providing many of the basic jobs that are supporting non-basic employment. The industries having the most room for growth are Finance, Insurance, and Real Estate; Professional, scientific, management,

administration, and waste management services; and Construction. These industries fail to meet the State average by 2.8%, 1.9%, and 1.8% respectively.

Tables 19 and 21 combine to give Buena Vista County a picture of the employment conditions. In order to boost the economy of the County, there must be a flow of money into the County from other regions. To do that, Buena Vista County needs to offer goods and services to those other areas. The County could also diversify its economic structure, which will add strength and stability.

Agricultural Profile

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

Agriculture Trends

Table 22 identifies key components affecting Buena Vista County's agricultural profile. This table indicates the number of farms within Buena Vista County decreased between 1987 and 2002, likely due to an agricultural sector that has operated with economic instability. The average size of farms increased from 327 acres in 1987 to 414 acres in 2002. The average value of land and buildings increased from $354,375 per farm in 1987 to $707,730 per farm in 2002 and from $1,102 per acre in 1987 to $2,005 per acre in 2002. The typical trend in the Midwest has been for the number of farms to decrease, but increase in size and value. The number of acres committed to crops decreased in the 15-year period; while, the acres actually harvested, had an increase.

TABLE 22: AGRICULTURAL PROFILE, BUENA VISTA COUNTY, 1987 TO 2002

Agricultural Characteristics	1987	1992	1997	2002	% Change 1987-2002
Number of Farms	1,097	972	867	825	-24.8%
Land in Farms (acres)	358,798	341,923	356,751	341,677	-4.8%
Average size of farms (acres)	327	352	411	414	26.6%
Total land area for Boone County	368,000	368,000	368,000	368,000	0.0%
Percentage of land in farm production	97.5%	92.9%	96.9%	92.8%	-4.8%
Total cropland (acres)	330,950	314,590	326,418	315,058	-4.8%
Harvested cropland (acres)	264,594	294,236	315,405	305,632	15.5%
Estimated Market Value of Land & Bldg (avg./farm)	**$354,375**	**$549,084**	**$845,515**	**$707,730**	**99.7%**
Estimated Market Value of Land & Bldg (avg./acre)	**$1,102**	**$1,494**	**$2,242**	**$2,005**	**81.9%**

Source: U.S. Census of Agriculture, 1987, 1992, 1997, and 2002

The average size of farms in Buena Vista County has increased by 26.6%. The period between 1987 and 2002 was one of great turmoil for the agriculture industry. Looking only at the period from 1987 to 2002, Table 22 shows the average value per farm increased by 99.7% and the average value per acre increased by 81.9%.

TABLE 23: NUMBER OF FARMS BY SIZE, BUENA VISTA COUNTY, 1987 TO 2002

Farm Size (acres)	1987	1992	1997	2002	% Change 1987-2002
1 to 9	81	96	67	59	-27.2%
10 to 49	65	64	66	113	73.8%
50 to 179	260	182	158	146	-43.8%
180 to 499	456	379	305	241	-47.1%
500 to 999	205	213	216	200	-2.4%
1,000 or more	30	38	55	66	120.0%
Total	**1,097**	**972**	**867**	**825**	**-24.8%**

Source: U.S. Census of Agriculture, 1987, 1992, 1997, and 2002

The size of farms, in acres, is indicated in Table 23. Table 23 shows between 1987 and 2002 there was a mixture of change with regard to farm size. Those farms 1 to 9 acres in size saw a -27.2% change while those 10 to 49 acres saw an increase of 73.8%. Furthermore, the number of farms between 180 acres and 999 acres decreased by 220 farms or -33.3%. Finally, the number of farms with 1,000+ acres more than doubled in the 15-year period, increasing by 120.0%. Buena Vista County has seen some unique changes with regard to the number of farms by size.

Table 24 indicates the number of farms and livestock by type for Buena Vista County between 1987 and 2002. The predominant livestock raised in the County are hogs and pigs, as well as cattle and calves. All livestock productions showed a decline in the number of farms raising animals. During the 15-year period, only hogs and pigs hit their peak number of animals. This was in 2002 with 314,097 animals. Average livestock numbers per farm were calculated for each type of operation and the results indicated that every livestock group except sheep and lambs increased despite the declining number of farms. Information was not available for chickens.

TABLE 24: NUMBER OF FARMS & LIVESTOCK BY TYPE, BUENA VISTA COUNTY, 1987 TO 2002

Type of Livestock	1987	1992	1997	2002	% Change 1987 to 2002
Cattle and Calves					
farms	240	210	205	166	-30.8%
animals	30,112	23,882	22,926	21,471	-28.7%
average per farm	125	114	112	129	3.1%
Beef Cows					
farms	141	144	155	120	-14.9%
animals	4,413	4,368	4,592	4,405	-0.2%
average per farm	31	30	30	37	17.3%
Milk cows					
farms	15	12	4	3	-80.0%
animals	498	471	321	194	-61.0%
average per farm	33	39	80	65	94.8%
Hogs and Pigs					
farms	432	382	270	178	-58.8%
animals	212,076	214,021	298,220	314,097	48.1%
average per farm	491	560	1,105	1,765	259.4%
Sheep and lambs					
farms	84	62	39	23	-72.6%
animals	6,247	3,547	3,162	1,096	-82.5%
average per farm	74	57	81	48	-35.9%
Chickens (layers and pullets)					
farms	25	14	12	8	-68.0%
animals	D	D	440,449	D	-
average per farm	-	-	36,704	-	-

Source: U.S. Census of Agriculture, 1987, 1992, 1997, and 2002

Table 25 indicates the number of farms and crop by type for the period from 1987 to 2002. This table shows the prominent crops grown in the County. In addition, the table indicates the total number of farms producing the specific crop and finally an average per farm. Corn and soybeans have been the two most frequently raised crops in Buena Vista County since 1987. Three of the seven categories showed an increase in acres farmed; these include Corn for grain, Corn for silage, and Soybeans. The crop with the largest increase is Corn for grain with an increase of 23.9%, while Corn for silage increased by 18.2%. Finally, most of the crops indicated an increase in the average acres per farm, except for Oats and Alfalfa. This indicates the farms that are continuing to grow these crops are getting larger; this is a statewide as well as a nationwide trend.

TABLE 25: NUMBER OF FARMS & CROPS BY TYPE, BUENA VISTA COUNTY, 1987 TO 2002

Type of Crop	1987	1992	1997	2002	% Change 1987 to 2002
Corn for Grain					
farms	953	818	714	606	-36.4%
acres	125,356	154,306	158,339	155,329	23.9%
average per farm	132	189	222	256	94.9%
Corn for Silage					
farms	55	64	66	49	-10.9%
acres	1,504	2,865	2,887	1,777	18.2%
average per farm	27	45	44	36	32.6%
Sorghum					
farms	NA	NA	NA	2	-
acres	NA	NA	NA	D	-
average per farm	-	-	-	-	-
Wheat					
farms	3	0	0	2	-33.3%
acres	D	0	0	D	-
average per farm	-	-	-	-	-
Oats					
farms	169	137	89	43	-74.6%
acres	3,160	2,352	1,448	803	-74.6%
average per farm	19	17	16	19	-0.1%
Soybeans					
farms	924	789	712	599	-35.2%
acres	130,258	133,787	150,291	144,212	10.7%
average per farm	141	170	211	241	70.8%
Alfalfa					
farms	255	243	209	169	-33.7%
acres	6,408	4,935	3,976	3,904	-39.1%
average per farm	25	20	19	23	-8.1%

Source: U.S. Census of Agriculture, 1987, 1992, 1997, and 2002

COUNTY FACILITIES

County 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 in the public facilities plan.

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, Buena Vista County. These facilities and services provide County residents with social, cultural, educational, and recreational opportunities, as well as law enforcement and fire protection services 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.

An important step is to establish a list of services and facilities which are currently provided to citizens of the county. 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.

Buena Vista County Facilities Inventory

The Facilities Inventory component of a Comprehensive Development Plan list all the available services and facilities available in Buena Vista County. This inventory provides decision makers a resource to evaluate future demands. Information was gathered by JEO Consulting Group, Inc. staff and Buena Vista County staff.

The Facilities Inventory for Buena Vista County is divided into the following categories:

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

Recreational Facilities

Buena Vista County, located in northwest Iowa, includes portions of the Little Sioux River and Lake Storm Lake. The Little Sioux River corridor has not seen an abundance of urbanization at the time of the planning period and its surroundings remain relatively untouched. This river corridor offers many recreational opportunities.

State Recreational Facilities

Although the parks listed below are located outside Buena Vista County, these resources offer a variety of recreational opportunities to the residents of the County. A general distance of 30 miles was used when determining what sites to include in the following table.

TABLE 26: STATE PARKS

Name	County	Size	Features	Amenities
Black Hawk State Park	Sac	86 Acres	957 acre glacier-formed lake	Modern campsites (68 electric, 108 non-electric), open picnic shelters, hiking and interpretive trails, swimming, fishing, boating, Frisbee golf course, volleyball courts, and playground
Wanata State Park	Clay	160 Acres	Overlooks the scenic Little Sioux River Valley, picnic shelter listed on the National Register of Historic Places	Hiking, fishing, and picnicking

Source: Iowa Department of Natural Resources, 2005

The Buena Vista County Conservation Board is responsible for twelve facilities within the County. These include Brooke Wildlife Area, Buena Vista County Conservation Park, Bur Oak Wildlife Area, Elk Wildlife Area, Gabrielson Park/Gustafson Lake, Linn Grove Dam Area, Linn Grove Wildlife Area, Pheasant Ridge Wildlife Area, Raccoon River Heritage Wildlife Corridor, South Cove Park, Sturcher Pit Area, and Three Waters Wildlife Area.

The features of each location are outlined below in Table 27. Most county parks have places designated for passive recreation such as camping, hiking, and picnicking, which do not have an intense impact on the environment. However, some of the county parks provide more specialized recreational activities including hunting, fishing, and boating.

A view of the historic shelter within Wanata State Park

TABLE 27: BUENA VISTA COUNTY PARKS AND FACILITIES

Name	Location	Size	Features	Activities
Brooke Wildlife Area	5 miles west of Linn Grove	60 acres	Maintained as wildlife area	Hunting and trapping allowed
Buena Vista County Conservation Park	5 miles west of Linn Grove	308 acres	Prairie grass area, arboretum, and nature trails	Modern and primitive camping facilities, picnicking, basketball, playground, hiking, cross country skiing, snowmobiling, and tubing
Bur Oak Wildlife Area	2 miles south of Peterson	40 acres	Maintained as wildlife area	Hunting allowed
Elk Wildlife Area	8 miles north of Alta	65 acres	Maintained as wildlife area	Hunting and trapping allowed
Gabrielson Park/ Gustafson Lake	South edge of Sioux Rapids on Highway 71	36 acres	7.5-acre man-made lake, 7 acres of native prairie grasses and wildflowers, and enclosed heated shelter house	Fishing, swimming, boating, picnicking, and playground
Linn Grove Dam Area	Linn Grove	12 acres	Located on the Little Sioux River	Primitive camping, fishing, boating, picnicking, and playground
Linn Grove Wildlife Area	Southeast edge of Linn Grove	9.5 acres	Wildlife refuge	No hunting allowed
Pheasant Ridge Wildlife Area	3 miles south of Newell	6 acres	Maintained as wildlife area	Hunting allowed
Raccoon River Heritage Wildlife Corridor	Starts 2 miles west of Newell	330 acres	Maintained as wildlife area	Hunting, trapping, fishing, and boating
South Cove Park	South edge of Storm Lake	3 acres	Located along bank of 3,200-acre Storm Lake	Fishing, boating, picnicking, and playground
Sturchler Pit Area	1 mile north and west of Newell	120 acres	5-acre gravel pit located along the Raccoon River, prairie grass areas	Fishing, boating, picnicking, and playground
Three Waters Wildlife Area	5 miles northwest of Newell	85 acres	Maintained as wildlife area, prairie grass areas, three water bodies (creek, small lake and the Raccoon River)	Hunting, trapping, fishing, and boating

Source: Buena Vista County Conservation Board, 2005

Golf Courses

There are a total of six golf courses within Buena Vista County. A brief description of each is given in Table 28 below.

TABLE 28: BUENA VISTA COUNTY GOLF COURSES

Name	Location	Type of Facility	Number of Holes	Season
Alta Golf & Country Club	Alta	Private	9	April 1 to November 1
Lake Creek Country Club	Storm Lake	Semi-Private	18	April 1 to November 1
Little Sioux Golf & Country Club	Sioux Rapids	Semi-Private	9	April 15 to October 21
Newell Golf Course	Newell	Public	9	April 1 to October 31
Sunrise Pointe Golf Course	Storm Lake	Public	9	March 25 to November 1
West Links Estates Golf Course	Alta	Public	10	April 1 to October 31

Source: www.golfable.com

Buena Vista Raceway

The Buena Vista Raceway is a three-eighths mile dirt oval track, located at the County Fairgrounds on the northeast side of Alta. The racing season typically lasts from April to September and includes both ICMA sanctioned and non-sanctioned races for several classes of cars.

Inkpaduta Canoe Trail

Running nearly 131 miles between the cities of Spencer and Smithland, the Inkpaduta Canoe Trail follows the meandering Little Sioux River through loess hill of six northwest Iowa counties, including Buena Vista. The slow-moving Little Sioux River offers canoeists excellent fishing and scenic opportunities, as well as camping and a chance to explore local history as you pass by pioneer log cabins.

Educational Facilities

There are fourteen school districts that serve the residents of Buena Vista County, as depicted in Figure 3. Of these, one district, South Clay, only has an elementary school. However, this district is affiliated with larger districts containing middle and high school facilities. The ability and opportunity for parents to provide their children with a quality education within a close proximity has a major impact where families locate. Areas experiencing growth must also plan for an expanding school system. Specific information pertaining to the various school districts is given in Table 29.

Parochial Schools

Besides the education provided to residents of Buena Vista County via the public school system, the residents also have the availability of parochial (non-public) schools. The parochial schools in Buena Vista County are St. Mary's Grade School, St. Mary's High School and Concordia Lutheran School, all of which are religion-based. School enrollments for the 2004-2005 school year are shown in Table 29 below.

Table 29: Buena Vista County Parochial Schools

School Name/Type & Location	Grades	2004-2005 Enrollment
St. Mary's Grade School (Storm Lake)	PK-4	147
St. Mary's High School (Storm Lake)	5-12	145
Concordia Lutheran School (Storm Lake)	K-6	38

Source: Iowa Department of Education, 2005.

Postsecondary Schools

Buena Vista University (BVU), founded as Buena Vista College in 1891, is located on a 60-acre campus on the north side of Storm Lake in the City of Storm Lake. The college received accreditation in 1952. The college received a large anonymous donation of 18 million dollars in 1980 which allowed for a competitive college endowment, physical reconstruction and renovation, and supported the development of additional programs. The University has continued to grow since that time and currently has 14 additional Centers located throughout Iowa.

At the time of the planning period, BVU had 1,150 undergraduate students 80 graduate students at its Storm Lake main campus. Another 1,378 students were enrolled at the other 14 Center locations. The University supports more

than 43 majors and 15 pre-professional programs in five academic schools including business, communication and arts, education, science, and social science/philosophy/religion. The student-to-faculty ration is 13:1.

Iowa Central Community College (ICCC) was founded in 1966 to accommodate nine counties. The school was developed when three previous standing junior colleges that had been in operation since the 1920's, were consolidated by the Area School Act.

A fourth building structure, the Storm Lake Center, was built in 1971 with the original intention of serving the Buena Vista County's 12 public and private school systems as a secondary career education center. The Storm Lake Center currently offers students a wide range of community college programs.

In 1975, Iowa Central formed a joint bachelor degree program with Buena Vista College in Storm Lake. The degree participants spend their initial two years at Iowa Central and their final two years at Buena Vista at the Fort Dodge Center.

The ICCC was an accreditation candidate in 1973 and a year later the college was accredited. The college's latest reaffirmed accreditation was in June of 2001.

There are several other postsecondary institutions that serve the residents of the Buena Vista County area. The following are some of the main facilities:

- Bellevue University, WIT Campus (Sioux City, Iowa)
- Briar Cliff University (Sioux City, Iowa)
- Des Moines Area Community College (Carroll, Iowa)
- Dordt College (Sioux Center, Iowa)
- Iowa State University (Ames, Iowa)
- Morningside College (Sioux City, Iowa)
- Northwest Iowa Community College (Sheldon, Iowa)
- Northwestern College (Orange City, Iowa)
- St. Luke's College (Sioux City, Iowa)
- Western Iowa Tech Community College (Cherokee, Iowa)

FIGURE 3: SCHOOL DISTRICTS

TABLE 30: BUENA VISTA COUNTY PUBLIC SCHOOLS BY SCHOOL DISTRICT

School District/ District Number	School Name/Type & Location	Grades	2000-2001 Enrollment	2004-2005 Enrollment	Percent Change 2000-01 to 2004-05
Albert City-Truesdale (0072)	Albert City-Truesdale Elementary (Albert City)	PK-5	111	104	-6.3%
	Albert City-Truesdale High (Albert City)	6-12	149	*	---
Alta (0171)	Alta Elementary (Alta)	PK-4	219 **	194	-11.4%
	Alta Middle (Alta)	5-8	200 ***	187	-6.5%
	Alta High (Alta)	9-12	204	198	-2.9%
Aurelia (0423)	Aurelia Elementary (Aurelia)	PK-4	136	106	-22.1%
	Aurelia Middle (Aurelia)	5-8	109	73	-33.0%
	Aurelia High (Aurelia)	9-12	116	145	25.0%
Galva-Holstein (2376)	Galva-Holstein Elementary (Holstein)	PK-4	173	183	5.8%
	Galva-Holstein Middle (Holstein)	5-8	184	143	-22.3%
	Galva-Holstein High (Holstein)	9-12	202	196	-3.0%
Laurens-Marathon (3537)	Laurens-Marathon Elementary (Laurens)	PK-5	194 **	177	-8.8%
	Laurens-Marathon Middle (Laurens)	6-8	123	116	-5.7%
	Laurens-Marathon High (Laurens)	9-12	268	165	-38.4%
Newell-Fonda (4644)	Newell-Fonda Lower (Newell)	PK-3	104 **	129	24.0%
	Newell-Fonda Higher (Fonda)	4-5	72	66	-8.3%
	Newell-Fonda Middle (Fonda)	6-8	113	111	-1.8%
	Newell-Fonda High (Newell)	9-12	180	169	-6.1%
Schaller-Crestland (5823)	Schaller-Crestland Middle-Elementary (Schaller)	PK-8	332 **	291	-12.3%
	Schaller-Crestland High (Early)	9-12	166	159	-4.2%
Sioux Central (6035)	Sioux Central Elementary (Sioux Rapids)	PK-5	205	145	-29.3%
	Sioux Central Middle (Sioux Rapids)	6-8	137	144	5.1%
	Sioux Central High (Sioux Rapids)	9-12	230 †	231	0.4%
	Buffalo Ridge Charter (Sioux Rapids)	1-6	---	59	---
South Clay (6092)	South Clay Elementary (Gillett Grove)	PK-6	112	74	-33.9%
Storm Lake (6219)	North Elementary (Storm Lake)	2-4	108 ††	115	6.5%
	South Elementary (Storm Lake)	K-4	239 ††	246	2.9%
	East Elementary (Storm Lake)	PK-1	109 ††	125	14.7%
	West Elementary (Storm Lake)	K-4	246 ††	197	-19.9%
	Storm Lake Middle (Storm Lake)	5-8	554	619	11.7%
	Storm Lake High (Storm Lake)	9-12	630	641	1.7%
	Storm Lake Alternative (Storm Lake)	---	---	2	---

Note: Grade levels shown in table are those which were offered in 2004-2005
* No data available for Albert City-Truesdale High School in 2004-2005.
** Schools did not offer PK classes in 2000-2001
*** Enrollment figure comprised of numbers for two middle schools in 2000-2001; one with grades 5 and 6, and the other with grades 7 and 8
† 2000-2001 enrollment figure for Sioux Central High School includes special education students for grades 6 through 12
†† All elementary schools in Storm Lake Community School District had grades K through 4 in 2000-2001
Source: Iowa Department of Education, 2005

Law Enforcement

Law enforcement in Buena Vista County is the responsibility of the County Sheriff. The Buena Vista County Sheriff's office and the County Jail are located in the Law Enforcement Center, in the City of Storm Lake. Storm Lake, along with Alta, Sioux Rapids, and Newell, has its own police department.

Table 31 identifies the number of sworn officers serving Buena Vista County. The years are 2000 through 2004, as per the available data through the Iowa Uniform Crime Report. The number of sworn officers is then converted to officers per 1,000 people; this conversion is done in order to better compare counties with different populations. The proportionate data are also present as a means to compare but there are not any hard standards that need to be followed.

Table 31: Sworn Officers, Buena Vista and Surrounding Counties, 2000 to 2004

County	2001		2002		2003		2004	
	Sworn Officer	Officers per 1,000	Sworn Officers	Officers per 1,000	Sworn Officers	Officers per 1,000	Sworn Officers	Officers per 1,000
Buena Vista	**9**	**0.87**	**10**	**0.96**	**10**	**0.97**	**10**	**0.97**
Calhoun	7	0.63	7	0.63	7	0.65	5	0.47
Cherokee	6	0.78	5	0.65	6	0.80	6	0.81
Clay	9	1.49	9	1.48	9	1.53	9	1.53
Ida	8	1.02	8	1.02	8	1.04	8	1.06
O'Brien	9	0.88	11	1.07	10	1.00	10	1.02
Palo Alto	8	1.29	8	1.29	8	1.33	8	1.34
Pocahontas	5	0.58	7	0.81	7	0.84	6	0.72
Sac	7	0.76	7	0.76	7	0.79	6	0.69

Source: Iowa Uniform Crime Report, 2000-2004.

The data indicate Buena Vista County has been steady in the number of officers employed, with an increase of one full-time officer between 2001 and 2002. As stated, these are only sworn officers and not total employees.

In 2000 and 2001, the number of officers per 1,000 people was 0.87; while that increased to 0.97 for 2002 and 2003. The county with the largest proportion in 2004 was Clay County, which has remained steady since 2001 with 1.53 officers per 1,000 people. Buena Vista County has one of the higher proportions in the comparisons; however, some of this can be attributed to the fact that the City of Storm Lake, as of 2007, has their own police force of 18 officers. Officers serving the City of Storm Lake patrol a jurisdiction of 10,076 people, which is approximately 50% of the county's population. Therefore, the County has primary jurisdiction over a much smaller share of the population.

Besides the rural residents of Buena Vista County, the Sheriff's Department has 28E agreements in place to patrol all of the communities in Buena Vista County, except, Storm Lake, Alta, and Newell. It is much more cost effective and efficient for the Sheriff's Department to patrol these communities than for each community to have their own police department.

FIGURE 4: RESCUE DISTRICTS

FIGURE 5: FIRE AND FIRST RESPONDER DISTRICTS

COUNTY BUILDINGS

The **Buena Vista County Courthouse** is located at 215 East 5th in the City of Storm Lake. This facility houses the Buena Vista County Assessor, Auditor, Communications Center, Custodian, Drivers License Office, Election Commissioner, Engineer, Environmental Health and Zoning, Law Library, Motor Vehicle Department, Recorder of Deeds, Treasurer, and Veterans Services Officer. Also contained in the Courthouse are the State offices of the Clerk of the District Court, Small Claims, Magistrate Court, District Court, and Juvenile Court Services. The Department of Human Services is located in the **Courthouse Annex**, located at the corner of East 5th and Cayuga Street. The Case Manager and Community Services Director are located in the **Yon Building**, and the Home Health Agency, Naturalist, Public Health Nurse, and Social Worker are housed in the **East Richland Annex** at 1709 East Richland Street. The County Attorney maintains an office at 606 Geneseo in Storm Lake.

Fairgrounds

The Buena Vista County Fairgrounds are located off Highway 7 near the City of Alta, approximately six miles east of Storm Lake. The fairgrounds are host to the annual Buena Vista County Fair and include a stock car racing facility.

County Historical Sites and Buildings

Within Buena Vista County there are various places of historical significance. Specific locations listed on the National Register of Historic Places are shown in Table 32 below.

TABLE 32: NATIONAL REGISTER OF HISTORIC PLACES, BUENA VISTA COUNTY

Registered Historic Site	Location	City	Year Placed on Register
Jesse J. and Mary F. Allee House	20006 640 Street	Newell	1992
Brook Creek Bridge	470th Street over Brooke Creek	Sioux Rapids	1998
Chan-Ya-Ta Village Site (aka BBVI)	No address	Linn Grove	1978
Chicago, Milwaukee and Pacific Railroad - Albert City Station	212 North 2nd Street	Albert City	1976
Harker House	328 Lake Avenue	Storm Lake	1990
Illinois Central Passenger Depot - Storm Lake	South of West Railroad Street between Lake and Michigan Avenues	Storm Lake	1990
Storm Lake Public Library (aka Buena Vista County Historical Museum)	East 5th and Erie Streets	Storm Lake	1983

Source: National Register of Historic Places, National Park Service, 2005

The **Buena Vista County Historical Museum** is located at 214 West 5th Street in Storm Lake. The museum houses:

- Rotating exhibits reflecting the history of Buena Vista County and its communities
- Indoor Main Street dioramas, including livery, barber shop, lawyer's office, bank, pharmacy, and general store
- Wildlife and art displays
- Log House
- School House

COMMUNICATION FACILITIES

Radio

There are several radio stations that provide music, entertainment, and information to Buena Vista County residents. Among these radio stations are:

KASI-1430 AM	KAYL-990 AM/101.7 FM	KBGG-1700 AM	KBVU-97.5 FM
KCCO-105.1 FM	KCHE-1440 AM/92.1 FM	KCIM-1380 AM	KDCR-88.5 FM
KDFR-91.3 FM	KDSN-1530 AM/107.1 FM	KFGQ-1260 AM/99.3 FM	KGGO-94.9 FM
KGLI-95.5 FM	KILR-1070AM/95.9 FM	KHKI-97.3 FM	KICB-88.1 FM
KIOA-93.3 FM	KICD-1240 AM/107.7 FM	KJAN-1220 AM	KJJY-92.5 FM
KJMC-89.3 FM	KKBZ-99.3 FM	KKDM-107.5 FM	KKEZ-94.5 FM
KKIA-92.9 FM	KKRL-93.7 FM	KLGA-1600 AM/92.7 FM	KLKK-103.7 FM
KLLT-104.9 FM	KLTI-104.1 FM	KMNS-620 AM	KMXD-100.3 FM
KNOD-105.3 FM	KPSZ-940 AM	KRKQ-98.3 FM	KRNT-1350 AM

Television

Buena Vista County residents are served by several regional television stations, including:

- WOI-Channel 5 (ABC)-Des Moines
- KCAU-Channel 9 (ABC)-Sioux City
- KMEG-Channel 14 (CBS)-Sioux City
- KCCI-Channel 8 (CBS)-Des Moines
- KTIV-Channel 4 (NBC)-Sioux City
- WHO-Channel 13 (NBC)-Des Moines
- KDSM-Channel 17 (Fox)-Des Moines
- KPWB-Channel 23 (WB)-Ankeny
- KDIN-Channel 11 (PBS)-Des Moines
- KSIN-Channel 27 (PBS)-Sioux City

Newspapers

There are several newspapers serving the residents of Buena Vista County. These include:

- Storm Lake Times
- Sioux City Journal
- Des Moines Register
- Ames Tribune
- Spencer Daily Reporter
- Ida County Courier
- Fort Dodge Messenger
- Humboldt Independent
- Pilot Tribune
- Buena Vista County Journal
- La Prensa
- Los Tiempos

Public Utilities

Utility services, including power, water, telephone, and waste disposal, are essential factors for the development of residential, commercial, and industrial areas. One of Buena Vista County's goals should be to continuously provide adequate services to all County residents. The following sections identify and discuss certain utilities found in Buena Vista County.

Electrical Service

Buena Vista County is served by four electrical service providers, as well as municipal systems. The service areas for these utilities are determined by the Iowa Utilities Board. The companies are Iowa Lake Electric CO-OP, Humboldt County Rural Electric Co-Op, MidAmerican Energy and Alliant Energy (formally Iowa Electric Services).

Alliant Energy is a private corporate supplier of electricity in Buena Vista County. The company's service area includes the communities of Albert City, Linn Grove, Rembrandt, and Sioux Rapids, as well as a significant portion of rural Buena Vista County. Alliant distributes power, to the area, that has been generated at its plants in Des Moines and Cedar Rapids. Company officials based in Cedar Rapids determine any improvements that are or will be needed to the system.

Natural Gas

There are three main natural gas providers that have pipelines in Buena Vista County. These include Alliant Energy, MidAmerican Energy, and Altatec (Alta Municipal Utilities).

Telephone Services

There are multiple telephone providers in Buena Vista County for both local and long distance service.

Cable Television Providers

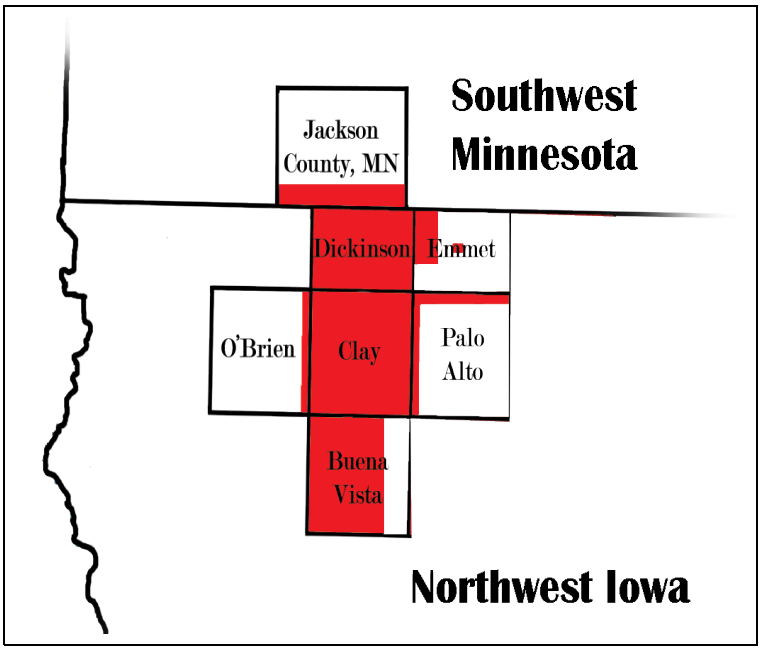
There are various cable television providers in Buena Vista County.

Rural Water Systems

Iowa Lakes Regional Water

The primary rural water provider in Buena Vista County is Iowa Lakes Regional Water (recently Clay regional water) based in Spencer, Iowa. Formed in 1976, Iowa Lakes is a non-profit organization, which is governed by an elected board of directors. As depicted in the map below, Iowa Lakes serves a large share of the rural customers in Buena Vista County, as well as all or portions of Clay, Dickinson, Emmet, O'Brien, and Palo Alto counties in Iowa,

and Jackson County, Minnesota. The remaining rural residents of Buena Vista County are either members of small water cooperatives, get water from municipalities (where available), or have personal wells.



Iowa Lakes Regional Water Service Area Map

Municipal Water Systems

The cities of Albert City, Alta, Linn Grove, Marathon, Newell, Sioux Rapids, and Storm Lake are the main municipal water providers in the County. Rembrandt receives water from Iowa Lakes Regional Water. In addition, the City of Storm Lake serves Lakeside, Truesdale, Lake Creek, Bel Air, South Shore, South Cove, Casino Beach, and Stoney Point.

Sanitary Sewer

Wastewater services in the rural areas are generally in the form of onsite wastewater treatment, typically consisting of a septic tank and drain field which utilizes soil for treatment of wastewater on individual properties. Each city currently has a centralized sewer system.

Solid Waste Disposal Facilities

Two solid waste disposal facilities currently exist in Buena Vista County, the County's Sanitary Landfill and the Harold Rowley Material Recovery Center. Both sites are located off of 630th Street, approximately two miles southeast of the communities of Lakeside and Storm Lake. While the Iowa Department of Natural Resources indicates the landfill is permitted to operate through October 2007, the facility is slated for closure (permitted to be completed by year 2017). The material recovery center performs recycling and composting services and is located at the landfill location.

Buena Vista County is part of a comprehensive solid waste planning area with two other counties, Plymouth and Cherokee, and the City of Fonda in Pocahontas County. This means that the County's facilities accepts waste from and can send waste to facilities in these other jurisdictions. Currently, the only facility outside of Buena Vista County that accepts general waste is the Cherokee County Landfill. The Plymouth County Landfill converted to a construction and demolition debris only facility in Fiscal Year 2000-2001.

Since Fiscal Year 1999-2000, the Buena Vista County Sanitary Landfill has accepted an average of more than 6,300 tons of waste annually, ranging from 4,633 tons in FY 2002-2003 to 9,191 tons in FY 1999-2000.

Health Facilities

Health care facilities are critical to the quality of life and safety of a county and its residents. The facilities include hospitals, clinics, and elderly care facilities. These facilities need to be located in key areas of a county in order to provide efficient and cost effective health care.

Medical care services are of particular importance to the large number of elderly residents in the County. In addition to the Buena Vista Regional Medical Center, there are three medical clinics in the County. Additional medical facilities can be found in the following adjacent counties: Cherokee (Cherokee Regional Medical Center), Clay (Spencer Hospital), Ida (Horn Memorial Hospital), O'Brien (Baum Harmon Mercy Hospital and Northwest Iowa Health Center), Palo Alto (Palo Alto County Health System), and Pocahontas (Pocahontas Community Hospital).

Hospital

The Buena Vista Regional Medical Center, located in Storm Lake, is a full-service healthcare facility with 49 staffed beds, which provides general medical and surgical care for inpatient, outpatient, and emergency room patients. Some of the services the facility is equipped to handle include surgery/endoscopy, prenatal care and labor/delivery, cardiac and pulmonary rehabilitation, hospice, oncology, specialty physicians, and a laboratory.

Medical Clinics

Buena Vista County has three primary medical clinics serving the residents. These clinics are the Buena Vista Clinic, Community Health Center, and Storm Lake Family Health Center in the City of Storm Lake, and the Sioux Rapids Family Care clinic in Sioux Rapids.

The Buena Vista Clinic and Storm Lake Family Health Center are closely associated with the Buena Vista Regional Medical Center and Iowa Health System (IHS), based in Des Moines. The facility offers family practice, internal medicine, and orthopedic services, and is staffed by seven physicians and a nurse practitioner. The Storm Lake

Family Health Center also offers services in family medicine and orthopedics, and is staffed with five physicians. Both clinics offer care by medical professionals with a variety of specialized clinical interests.

The third facility is Sioux Rapids Family Care in Sioux Rapids. This clinic, affiliated with Avera McKennan Hospital and University Health Center in Sioux Falls, South Dakota, is staffed by three physicians whose primary specialty is family medicine, supported by two nurse practitioners and two physicians' assistants.

Nursing Home Facilities

Nursing home facilities can range from fully staffed assisted-living arrangements to an apartment-like setting staffed by few persons, who may have only basic medical knowledge. These facilities are designed to accommodate persons in various health conditions in a setting that provides as much independence as possible to the resident. There are long-term care facilities in Buena Vista County. There are many additional long-term care facilities located in nearby Pocahontas, O' Brien, and Cherokee Counties.

- Buena Vista Manor – Storm Lake
- Sioux Care Center – Sioux Rapids
- Sutherland Care Center – Sutherland
- Sunset Knoll Retirement Home – Aurelia
- Pleasant View Home – Albert City
- Methodist Manor Retirement – Storm Lake
- Newell Good Samaritan Center – Newell
- Fonda Nursing Home and Rehabilitation Center – Fonda

EXISTING LAND USE

EXISTING LAND USE

Introduction

Evaluating the land uses that presently exist within Buena Vista County is critical to the formulation of the Comprehensive Development Plan. The analysis of land including location, size, and characteristics is important in understanding the pattern of development, past land use trends, and other significant factors shaping the existing layout of Buena Vista County. This analysis is essential to the preparation of the Future Land Use Plan found later in Achieve Buena Vista County Chapter. In order to realistically plan for future growth and development in Buena Vista County, the starting point is the existing shape, form, and amount of land presently used to provide for County functions. It also assists in the formulation of workable zoning regulations to protect existing uses.

Land Use Categories

To evaluate these land uses in Buena Vista County, a Land Use Survey was undertaken by JEO Consulting Group, Inc. staff through review of 2005 aerial photography to determine, evaluate, and map the various existing land uses located throughout the County. The County staff then verified the existing land use map. The location of each specific use of land is shown graphically on the Existing Land Use Map, Figure 6. The existing land uses of Buena Vista County were classified under the following categories:

- Agriculture
- Agricultural Storage
- Confined Animal Feeding Operations
- Farmstead
- Acreage
- Single-Family Residential
- Multi-Family Residential
- Commercial
- Industrial
- Public/Quasi-Public
- Parks/Recreation
- Incorporated Cities
- Wind Generator
- Airport

The above land use categories may be generally defined in the following manner:

Agriculture- Row crop, alfalfa, pasture land and all grain crops are considered agriculture land uses. Buena Vista County is largely an agricultural based County and the existing land use map verifies this.

Agriculture Storage- This category consists of abandoned farmsteads and uses related to agricultural storage, including grain, livestock or mechanical storage. Storage buildings can range from grain bins to abandoned buildings, with no human occupancy. These particular uses are scattered throughout the County.

Confined Animal Feeding Operations (CAFOs)- Feedlots, confinements of high production densities, and agricultural industries comprise the uses of industrial agricultural areas. These uses may be large or small, a family operation, or a standard operation. Also included in this category are commercial kennels and hog/cattle confinements or feedlots that are no longer in operation. These operations are scattered throughout the County.

Farmsteads- Uses in this category are residential dwellings that have adjacent operational agriculture buildings and/or family livestock operations. Residential units of this type are evenly distributed throughout the County.

Acreages- This use comprises residential dwellings that are not related to agriculture or feedlots and includes single residential dwellings located on county roads, highways, or private drives.

Single Family Dwelling- A structure specifically designed for occupancy of one family which may share infrastructure with other similar structures.

Multi Family Dwelling- A structure specifically designed for occupancy of more than one family which may share infrastructure with other similar structures.

Commercial- Uses in this category consist of convenient stores; entertainment facilities; feed, seed, automobile and machinery sales; petroleum sales; large home businesses such as mechanical and welding shops, etc. Commercial uses tend to be located near urban areas or in proximity to highways for accessibility.

Industrial- Land uses of this nature may include communication plants, commercial grain elevators, light manufacturing, commercial storage, industrial parks, large salvage yards, etc. These uses tend to be located near municipalities and major transportation routes for accessibility purposes.

Wind Energy- This category includes locations of the wind power generation towers in western Buena Vista County.

Public/Quasi-Public- This category consists of all historical markers, nature preserves, rural school houses, etc. and are scattered throughout the County. Many rural school houses are abandoned or have other uses. Some of these current uses have been illustrated, while some have not been shown. Quasi-public category includes rural churches and cemeteries. Cemeteries near churches or along roadsides range in size from an acre to a few graves.

Park and Recreation - This category includes State Recreational Areas and/or Wildlife Management Areas, camping areas, and private hunting/recreational areas or camps owned and operated by clubs or organizations.

FIGURE 6: EXISTING LAND USE

Existing Land Use Analysis

Physical Character of Buena Vista County

The physical character of the landscape will determine the land use capabilities. Buena Vista County's physical character is typical of most rural Midwestern counties; rolling hills, rivers, shelter belts, pockets of trees, a lake, and widespread agriculture. Storm Lake is a natural 3,200 acre lake located in the southwest corner of the county. One unique characteristic of Buena Vista County is the presence of 277 wind turbines 280 feet tall atop Buffalo Ridge along the western edge of the county. These wind turbines, a dominant feature on the horizon, provide electricity to over 71,000 households.

Rural Unincorporated Land Uses

Agriculture Development

The vast majority of the 367,872 acres of land within the County is used for agricultural production. According to the 2002 Census of Agriculture, Buena Vista County had 825 farms in 2002 covering 341,677 acres or 92.8% of the land. The most prominent agricultural activities in the 2002 census were crop production of corn and soybeans at 155,329 acres and 144,212 acres respectively, or 81.4% of the entire county.

Agriculture Storage

Figure 6 indicates the amount of agriculture storage in Buena Vista County graphically displayed as light-green squares. A total of 156 agricultural storage facilities were located through review of the aerial photography. Aside from agricultural development, agriculture storage is the leading use of land in the rural portions of the County. As stated before, this land use could include vacant farmsteads, mechanical storage, and agriculture storage such as grain or livestock. Usually this type of land use has a relatively low impact on the land. These storage facilities are evenly distributed throughout the County; usually close to a farmstead, but some do stand alone. Some of these uses could be seasonal, thus when locating future agriculture storage sites certain guidelines should be taken into account.

Confined Animal Feeding Operations

Buena Vista County has 141 CAFOs according to the Iowa Department of Natural Resources. CAFOs of varying sizes, including confined livestock feeding operations, are scattered relatively evenly throughout the County. The existing operations, in most instances, are located a substantial distance from the urban areas of the County. These uses are indicated as black squares on the existing land use map, Figure 6. Generally, many of the CAFOs are located in areas where rural farmsteads are the predominant land use. The development of these uses in close proximity with farmsteads in the County has occurred for the same reasons original farmsteads were constructed; the availability of adequate water, supplies, higher crop production potentials, and the desire to have the confined feeding facilities located near the producers' farming or ranching operations.

Farmstead Development

As indicated in Figure 6 by dark-brown squares, farmsteads are evenly scattered throughout the County. A total of 977 farmsteads were located from the aerial photography during the existing land use analysis. Examination of the land use pattern, with regard to farmstead development, reveals no specific pattern aside from the fact that the majority of farmsteads were developed in near a major transportation route.

Acreages

Non-farm rural residential development is a growing trend throughout the State of Iowa over the past two or three decades. Figure 6 displays 760 acreages, graphically as light-brown squares, located throughout the county. This has been driven by market demand for larger parcels of land and larger homes. In most instances, larger parcels of land are not available within the corporate limits of smaller cities; as a result the development has occurred in rural areas. This trend should continue to occur throughout the County in the future. It is important for the governing body of Buena Vista County to acknowledge the potential increase in non-farm residents in the future, and design regulations that adequately manage their impact on the existing uses within the County. Acreage development has occurred throughout the entire county; however, the southern half of the county has experienced slightly more acreage growth.

Single Family Residential

Single family residential development as noted before is similar to rural residential but many dwellings may share infrastructure. The developments of this type in the County are clustered on the south side of Storm Lake and in areas on the outside of Storm Lake, Iowa.

Multi Family Residential

Only one parcel was identified as multi family residential development in the existing land use evaluation. This parcel is located on the Lake Creek County Club between Alta and the City of Storm Lake.

Commercial Development

As indicated in Figure 6, rural commercial development is limited in Buena Vista County. The majority of most commercial operations and businesses are located within the corporate limits of the communities within the county.

Industrial Development

Figure 6 specifies different industrial sites located within Buena Vista County. The major industrial uses in Buena Vista County are located east of the City of Storm Lake and northeast of Lakeside. Other industrial development located in the unincorporated portion the county is outside of Albert City where an ethanol plant is located, near Alta where an ethanol plant is being developed, and

Public/Quasi-Public Development

As shown in Figure 6, public/semi-public land uses are located throughout Buena Vista County. These uses are generally located in close proximity to the major transportation routes of the County, including U.S. Highway 71 and Iowa State Highway 7. There are three public/quasi-public developments south of Storm Lake.

Park and Recreation

Buena Vista County at the present time has a considerable amount of land designated as park and recreation development. These twelve recreation areas consist mostly of wildlife reserves, hunting ground, and nature reserves located throughout the county

Wind Generator

Buena Vista County is home to a large 257 wind turbine farm located in the western portion of the county on Buffalo Ridge. This 193 megawatt facility consists of the largest wind turbines in North America. Each turbine requires one-quarter acre of land including the service road. Each tower is 208 feet tall and weighs 62-tons.

Existing Residential Density

Four different residential density maps, Figures 7-10, were derived from the existing land use map depicting the density of residential development within Buena Vista County. The maps were developed in direct response to the growing concerns of rural residential growth throughout the county. These maps display spatially where and how much rural residential development has been allowed to occur in the county. This map can be utilized when making future land use decisions as well as future transportation decisions.

For example, if a particular section of land has been deemed a higher density area with rural residential properties then this specific section should be given a due amount of care when the future residential growth decisions are proposed. Additionally when future transportation project decisions are visited at a county level, this particular area of the county should given a higher priority when making these decisions to meet the needs of these county residents. In addition to land use and transportation decisions, services and facilities also must be weighed depending upon the density of development in that area of the county. This allows the planning commission and the governing body of Buena Vista County to fully analyze ratio of development and the services needing to be provided to residents in a specific area of the county.

Acreage Density by Section

Figure 7 displays the acreage density per section (640 acres) for the unincorporated areas of the county. Acreage development does not include farms. The map displays density in five categories listed by acreages per section, these categories are: 0 units, 1-2 units, 3-5 units, 6-10 units, and 11 units or more.

The majority of development appears primarily in the southern half of Buena Vista County. One section, located north of Sioux Rapids, has a density of 11 or more units per section. Only ten sections have densities of 6-10 units

per section. Seven of those are located within one mile of Sioux Rapids, Storm Lake, and Newell. A total of 191 sections, of 33.1 % of the entire county, do not record any acreage development.

Acreage Density by Quarter-Section

Figure 8 displays the total acreage development per quarter section within the unincorporated areas of Buena Vista County. Acreage development does not include farmsteads. The map displays density in five categories listed by residential developments per section, these categories are: 0 units, 1 unit, 2 units, 3 units, and 4 units or more.

Acreage density is more accurately displayed by quarter section. According to Figure 8, 73% of Buena Vista County's unincorporated area does not have even one acreage. Twenty-two percent of the quarter sections have at least one acreage development while less than one percent has greater than 3 acreages per 160 acres.

Total Residential Development by Section

Figure 9 displays total residential development by section (640 acres). Total residential development includes acreages and farmstead development. The map displays density in five categories listed by residential development per section, these categories are: 0 units, 1-2 units, 3-5 units, 6-10 units, and 11 units or more.

According to Figure 9, only 14 sections have no residential development besides the area which Storm Lake occupies. The densest development occurs directly south of Storm Lake and north and northwest of the City of Storm Lake. A total of 75.6% of the sections with greater than 6 units per section are located in the south half of the county.

Total Residential Development by Quarter-Section

Figure 10 displays total residential development by quarter-section (160 acres). Total residential development includes acreages and farmstead development. The map displays density in five categories listed by residential development per section, these categories are: 0 units, 1 unit, 2 units, 3 units, and 4 units or more.

According to Figure 10, 36.8% of all quarter-sections do not have a residential unit. Just over half, or 52.7% have one residential unit. Only 3.4% have two residential units or more per quarter-section. Beyond lakeside developments south of Storm Lake, rural residential density is relatively low throughout the county, especially the northern one-half.

FIGURE 7: ACREAGE DENSITY PER SECTION

FIGURE 8: ACREAGE DENSITY PER QUARTER-SECTION

FIGURE 9: TOTAL RESIDENTIAL DENSITY PER SECTION

FIGURE 10: TOTAL RESIDENTIAL DENSITY PER QUARTER-SECTION

Existing Land Use Summary

The existing land use pattern in the rural portions of the County must have implications with the development of land use in the future. There should be a place for each type of development (i.e. farming, non-farm residents, and confined feeding operations) within the rural portions of Buena Vista County, but locating these uses should be extensively evaluated. If Buena Vista County is to encourage development within the rural areas of the County, it will be imperative to formulate Future Land Use Plan and Zoning Regulations, which effectively balance development and minimize conflicting land uses.

Overall, the existing land use pattern in Buena Vista County is typical of most agriculturally rich Midwest counties. A heavy confined animal feeding operation (CAFOs) density throughout the county can have a significant affect on establishing locations for additional developments due to issues with air and water pollution, noise, and odor. The establishment of the wind farm on the western edge of the county may also create restrictions for new developments due to setback issues and land utilized for maintenance of the equipment. Residential developments around Storm Lake have created challenges for the county to maintain an adequate level of water quality for the lake. Acreage development has become denser north and east of the city of Storm Lake but has not grown out of control at the time of the planning period. Buena Vista County should establish rural residential development standards as part of a Future Land Use Plan and Zoning Regulations.

ENVIRONMENT, NATURAL, AND MAN-MADE RESOURCES

INTRODUCTION

In order to formulate a truly valid and "comprehensive" plan for the future development of Buena Vista County, it is necessary to evaluate the environment and man-made conditions which currently exist and determine the impacts these factors may have on limiting future land uses in the County. This component of the Buena Vista County Comprehensive Development 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 that will directly or indirectly impact future land uses in the County.

Nearly all of the data in this section is available through other sources. The intent of this plan is to bring the critical information from those sources and include it within the plan. The inclusion of these data provide the Planning and Zoning Commission, County Board of Supervisors and County staff with key tools that are at their fingertips. In some cases the data in this plan may require more detailed research in order to find specific information. The data included in this section does not include all data available; however, the key portions of the data are able to educate decision makers that something special may be occurring in the vicinity of an application.

NATURAL ENVIRONMENTAL CONDITIONS

- Climate and Topography
- Wildlife
- Watersheds (Water Quantity and Quality)
- Wetlands
- Soil Association
- Capability Grouping
- Prime Farmland
- Soil Limitations

Climate

(This information was taken from the Buena Vista County Soil Survey, developed by the United States Department of Agriculture, Soil Conservation Service, in 1973)

On clear, calm nights, river valleys and areas that are relatively low compared to the surrounding areas may have minimum temperatures that are several degrees lower than those of upland or urban areas. Maximum temperatures do not vary so much, but extreme temperatures may be slightly less at Storm Lake. In an average year the number of days that have maximum temperatures of 90 degrees or higher ranges from 16 days at Storm Lake to 26 days at Sioux Rapids. These temperatures are too high for optimum crop production, because water demand is excessive on those days.

Annual precipitation ranges from about 28.5 inches in the southeast to slightly less than 28 inches in the northwest. About 75 percent of the annual precipitation falls as showers during the warm season of April through September. In

the years 1951 to 1960 at Storm Lake, there was an average of 18 days in which rainfall was 0.5 inches or more and an average of 50 days in which it was 0.10 inch or more.

Heavy rains are important in determining the erosion potential. Most of the heavy showers fall during the warm half of the year, with the months of May, June, and August averaging 3 days each. The amount of precipitation in individual showers varies in different parts of the County, but over a long period, the total average rainfall in showers is about the same throughout. June averages out as the wettest month of the year, and periods of drought in the summer are most likely to occur in July. The probability of receiving an inch or more of rainfall in a 1-week period is about 4 years in 10 in June and slightly less than 3 years in 10 in July and August. Well-developed crops use more than an inch of water a week during the summer.

The amount of moisture in the soil is an important factor in growth and survival of crops. A 5-inch reserve of available soil moisture is considered a critically low level in spring. In the southeastern part of the County there is about a 25 percent probability of having less than 5 inches of plant-available water present in the upper 5 feet of soil on April 15, but in the northwestern part this probability increase to 35 percent. The probability of having more than 9 inches available at this time is less than 10 percent.

Relief and Drainage

(The following information was taken from the Buena Vista County Soil Survey, developed by the United States Department of Agriculture, Soil Conservation Service, in 1973)

Relief is important in soil formation mainly because it affects drainage and erosion. Soil erosion generally increases as steepness increases. Less water soaks into steeper soils, and leaching of carbonates and movement of clay from the surface soil to the subsoil are both less in these soils. In the nearly level or depressed areas, soils such as those of the Webster series are wet and frequently have a gray or mottled subsoil that results from poor aeration and restricted drainage.

The relief of the eastern and central part of the county is geologically immature as shown by the large number of potholes and other depressions and by the absence of well developed upland streams. The western part of the county is somewhat more dissected in some areas, but relief is also fairly immature. Areas adjacent to the major streams are dissected, but streams have not extended their channels much at the heads. Most of Buena Vista County is nearly level to rolling. Many of the soils in the nearly level areas are poorly drained. Most of the soils that are gently sloping or moderately sloping, such as Clarion or Sac soils, are well drained.

The thickness and color of the A horizon and the thickness of the solum are also related to slope. Generally the Storden soils have steep slopes, the Clarion soils have intermediate slopes, and the Nicollet soils are nearly level.

The thickness of the A horizon increases and the color becomes darker in these soils as the slope decreases. In like manner, the thickness of the solum increases from the thinner Storden soils to the thicker Clarion and Nicollet soils.

The glacial till plains and the loess-mantled plain on uplands are the two major physiographic areas of the county. The glacial till plains are in the eastern and central part of the county. They are characterized by short, irregular, undulating slopes and nearly level areas that have many landlocked depressions called "potholes".

The loess-mantled plain is in the western part of the county. It is moderately dissected by drainage ways and small streams. The loess-mantled plain generally has long, nearly level and gentle slopes, but shorter, moderate slopes are adjacent to the larger drainage ways and stream valleys.

The steepest areas in the county are the breaks between the uplands and bottom lands along the Little Sioux River and Brooke Creek.

More than 60 percent of the county is in the Raccoon River watershed. Raccoon River originates in Poland Township and flows through, Lee, Lincoln, Grant, and Providence Townships. This watershed includes the Storm Lake watershed, which empties into Outlet Creek. Outlet Creek, in turn, empties into Raccoon River.

The Little Sioux River, which flows through the northern part of Lee, Barnes, and Brooke Townships drains more than 90,000 acres of Buena Vista County, mainly through the Brooke Creek watershed. Brooke Creek flows north to north-northwest through Washington Township, the southwestern corner of Scott Township, and Elk and Brooke Townships.

The Maple River in Cherokee County drains more than 30,000 acres of Buena Vista County through the Little Maple River in Maple Valley and Nokomis Townships, through Maple Creek in Brooke and Elk Townships, and through an unnamed creek in the northwestern part of Nokomis Township.

The Boyer River, through the Boyer river in Hayes and Maple Valley Townships and Boyer Creek in Hayes Township, drains more than 13,000 acres.

The Raccoon River watershed is part of the Mississippi River watershed area, and the Little Sioux, Maple, and Boyer River watersheds are part of the Missouri River watershed area.

Plant and Animal Life

(The following information was taken from the Buena Vista County Soil Survey, developed by the United States Department of Agriculture, Soil Conservation Service, in 1973)

Plants and animals have greatly influenced the formation of soils in Buena Vista County. Micro-organisms have helped in the decay of organic matter. The native vegetation of Buena Vista County at the time of settlement was mainly tall prairie grasses, but a few areas, mainly along the Little Sioux River, were in trees. Ruhe and Scholtes (7) report that for the last 5,000 years the environment in Iowa has been conducive to prairie plants. Between 5,000 and 16,000 years ago, however, the cooler, more moist climate was more favorable to trees. The effect of this period of forest vegetation is not reflected in the formation of the Clarion, Galva, Nicollet, Primghar, Sac, or other dark-colored soils that formed more recently under prairie vegetation.

Most of the soils of Buena Vista County formed under prairie grasses. The formation of Lester soils, however, was influenced by trees at least part of the time. It may be that they began forming under grasses, and the grasses were later encroached upon by trees. The vegetation in potholes and other depressions was sedges, cattails, rushes, and similar plants.

Under similar conditions, soils that formed under grass are darker and less acid and have a thicker surface layer than soils that formed under trees. Soils that formed under vegetation consisting of mixed grass and trees have properties that are intermediate between those of soils that formed under trees.

Wetlands

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods during the year, including during the growing season. Water saturation (hydrology) largely determines the soil development and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Two general categories of wetlands are recognized: coastal or tidal wetlands and inland or non-tidal wetlands.

Inland wetlands found in Buena Vista County are most common on floodplains along rivers and streams (riparian wetlands), in isolated depressions surrounded by dry land (for example, playas, basins, and "potholes"), along the margins of lakes and ponds, and in other low-lying areas where the groundwater intercepts the soil surface or where precipitation sufficiently saturates the soil (vernal pools and bogs). Inland wetlands include marshes and wet meadows dominated by herbaceous plants, swamps dominated by shrubs, and wooded swamps dominated by trees. Certain types of inland wetlands are common to particular regions of the country, such as wet meadows or wet prairies in the Midwest, and prairie potholes found in Iowa.

Many of these wetlands are seasonal (dry one or more seasons every year). The quantity of water present and the timing of its presence in part determine the functions of a wetland and its role in the environment. Even wetlands

that appear dry at times for significant parts of the year – such as vernal pools – often provide critical habitat for wildlife adapted to breeding exclusively in these areas.

The federal government protects wetlands through **regulations** (like Section 404 of the Clean Water Act), **economic incentives and disincentives** (for example, tax deductions for selling or donating wetlands to a qualified organization and the "Swampbuster" provisions of the Food Security Act), cooperative programs, and **acquisition** (for example, establishing national wildlife refuges). Beyond the federal level, a number of states have enacted laws to regulate activities in wetlands, and some counties and towns have adopted local wetlands protection ordinances or have changed the way development is permitted. Few states, however, have laws specifically regulating activities in inland wetlands, although some states and local governments have non-regulatory programs that help protect wetlands.

Partnerships to manage whole watersheds have developed among federal, state, tribal, and local governments; nonprofit organizations; and private landowners. The goal of these partnerships is to implement comprehensive, integrated watershed protection approaches. A watershed approach recognizes the inter-connection of water, land, and wetlands resources and results in more complete solutions that address more of the factors causing wetland degradation.

The government achieves the restoration of former or degraded wetlands under the Clean Water Act Section 404 program as well as through watershed protection initiatives. Together, partners can share limited resources to find the best solutions to protect and restore America's natural resources. While regulation, economic incentives, and acquisition programs are important, they alone cannot protect the majority of our remaining wetlands. Education of the public and efforts in conjunction with states, local governments, and private citizens are helping to protect wetlands and to increase appreciation of the functions and values of wetlands. The rate of wetlands loss has been slowing, but there is still work to be done. Approximately 75 percent of wetlands are privately owned, so individual landowners are critical in protecting these national treasures.

Wetlands play an important role in the ecology of Buena Vista County. Wetlands are home to many species of wildlife, many of which live only in wetland areas. Wetlands also provide an important service to nearby areas by holding and retaining floodwaters. These waters are then slowly released as surface water, or are used to re-charge groundwater supplies. Wetlands also help regulate stream flows during dry periods.

The U.S. Fish and Wildlife Service (FWS) produce information on the characteristics, extent, and status of the Nation’s wetlands and deepwater habitats. This information has been compiled and organized into the National Wetlands Inventory (NWI). At the time of this Plan, the FWS has mapped 89% of the lower 48 states. Maps produced by the NWI are available through their website or national office.

Wetlands are categorized in several classifications, each more detailed and specific than the previous. The NWI uses five systems; marine, estuarine, riverine, lacustrine, and palustrine. Within each system, there are subsystems, classes, subclasses, and dominance types to describe different wetland characteristics. The system classification refers to wetlands that share similar hydrologic, geomorphologic, chemical, or biological factors. Following are definitions and examples of three of the five systems used to describe wetlands. The Marine and Estuarine wetland systems are located in and near the open ocean; therefore, they do not occur in Iowa. Further information, through NWI, on specific classifications is available.

Buena Vista County experiences each of these three other wetland systems. The wetlands in Buena Vista County are scattered throughout the county and most dominate along the Little Sioux River and in and around Storm Lake. The following figures depict common ways in which these three systems develop. These figures were produced by the United States Fish and Wildlife Service, and are taken from their 1979 publication entitled "Classification of Wetlands and Deepwater Habitats of the United States." Figures 11, 12, and 13 depict common examples of the riverine, lacustrine, and palustrine wetlands, respectively. Figure 14 shows the occurrence of wetlands in Buena Vista County.

FIGURE 11: RIVERINE WETLAND SYSTEM

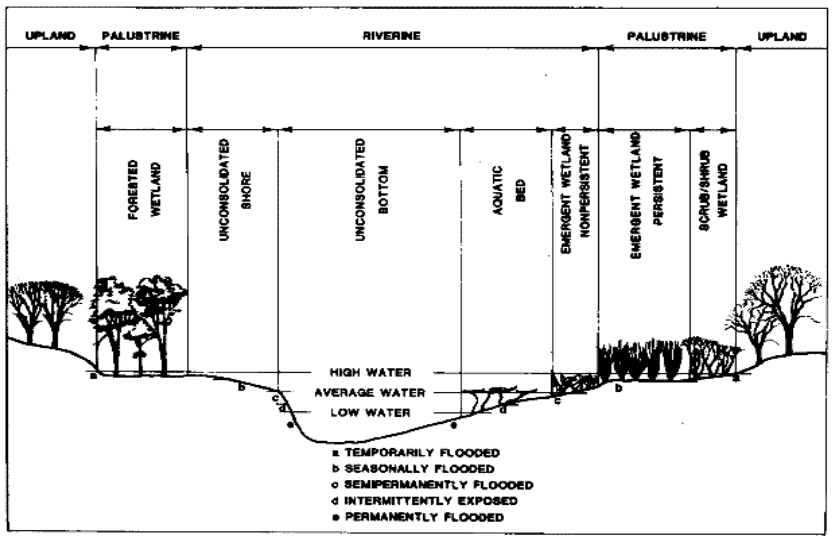
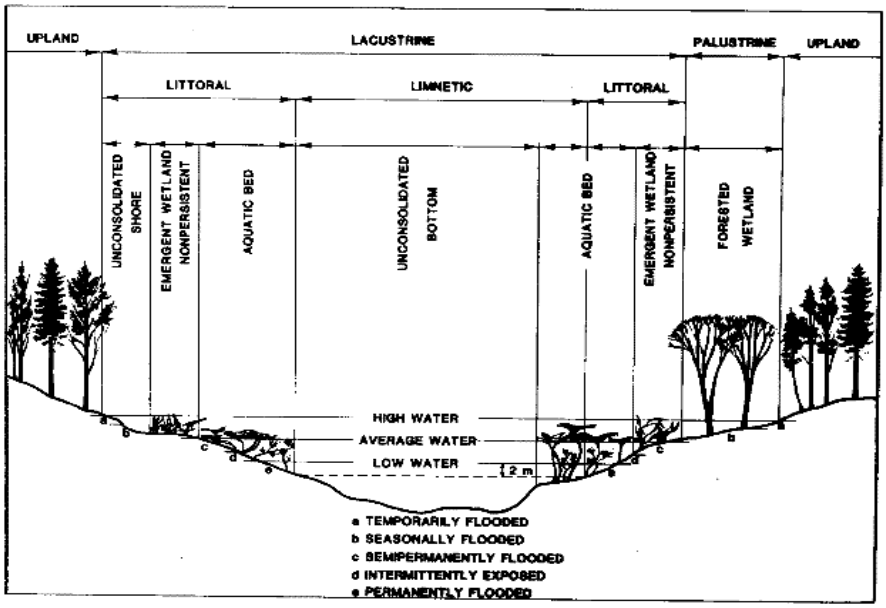


Figure 11 shows the riverine system includes all wetlands that occur in channels, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean derived salts in excess of 0.5%. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. Therefore, water is usually, but not always, flowing in the riverine system.

Springs discharging into a channel are also part of the riverine system. Uplands and palustrine wetlands may occur in the channel, but are not included in the riverine system. Palustrine Moss-Lichen Wetlands, Emergent Wetlands, Scrub-Shrub Wetlands, and Forested Wetlands may occur adjacent to the riverine system, often in a floodplain.

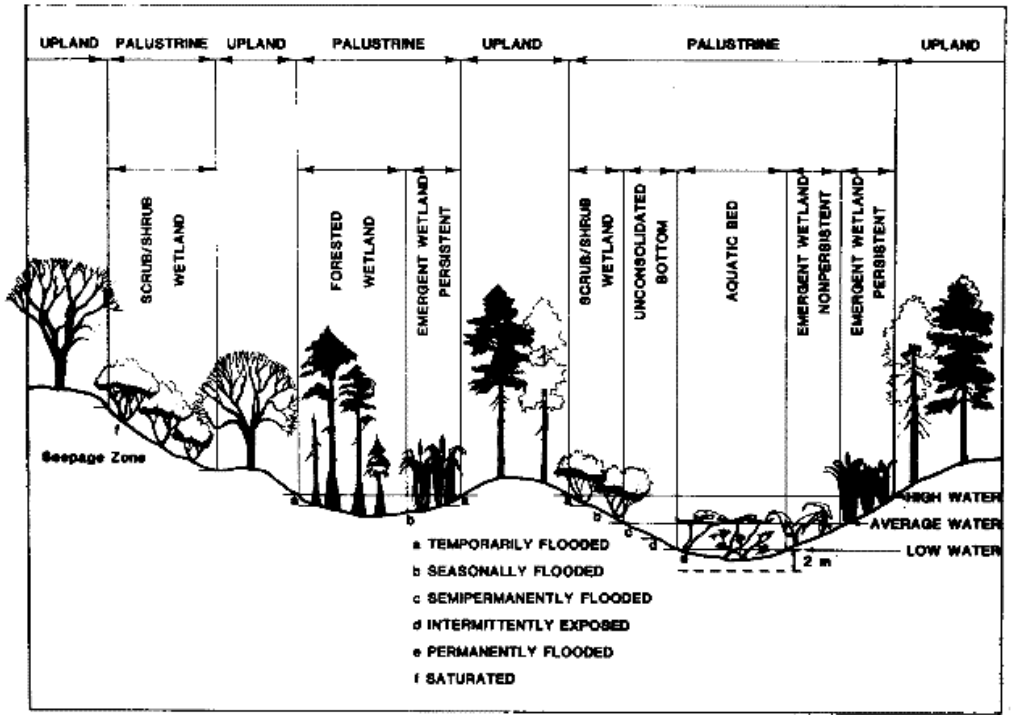
FIGURE 12: LACUSTRINE WETLAND SYSTEM



The Lacustrine System includes all wetlands with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent moss or lichens with greater than 30% area coverage; and (3) total area exceeds 20 acres. Similar wetland areas totaling less than 20 acres are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up all or part of the boundary, or if the water depth in the deepest part of the basin exceeds 6.6 feet (2 meters) at low water.

The Lacustrine System includes permanently flooded lakes and reservoirs (e.g. Lake Superior), intermittent lakes (e.g. playa lakes), and tidal lakes with ocean-derived salinities below 0.5% (e.g. Grand lake, Louisiana). Typically, there are extensive areas of deep water and there is considerable wave action. Islands of Palustrine wetlands may lie within the boundaries of the Lacustrine System.

FIGURE 13: PALUSTRINE WETLAND SYSTEM



The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 20 acres; (2) lacking active wave-formed or bedrock shoreline features ; (3) water depth in the deepest part of basin less than 6.6 feet (2 meters) at low water; and (4) salinity due to ocean-derived salts less than 0.5%.

The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent, or intermittent water bodies often called ponds. These wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers.

FIGURE 14: WETLANDS

SOIL FORMATION AND CLASSIFICATION

Factors of Soil Formation

Soil is produced through an interaction of materials that have been deposited or accumulated by geologic process. The characteristics of the soil at any given point are determined by (1) the physical and mineralogical composition of the parent material; (2) the climate under which the soil material has accumulated and existed since accumulation; (3) the plant and animal life on and in the soil; (4) the relief, or lay of the land; and (5) the length of time the forces of soil development have acted on the soil material.

Climate and vegetation are active factors of soil genesis. They act on the parent material that has accumulated through the weathering of rocks and slowly change it into a natural body with genetically related horizons. The effects of climate and vegetation are conditioned by relief. The parent material also affects the kind of profile that can be formed, and in extreme cases, determines it almost entirely. Finally, time is needed for the changing of the parent material into a soil profile. It may be much or little, but some time is always required for horizon differentiation. Generally, a long time is required for the development of distinct horizons.

The five factors of soil genesis are so closely interrelated in their effects on the soil that few generalizations can be made regarding the effect of any one factor unless conditions are specified for the other four. Many of the processes of soil development are unknown.

Soil Association

(The Soil Association data was taken directly from the Buena Vista County Soil Survey developed by the United States Department of Agriculture, Soil Conservation Service, in 1973)

Clarion-Nicollet-Canisteo Association

Well-drained to poorly drained, medium-textured and moderately fine textured, nearly level to moderately sloping soils on uplands.

The soils of this association are nearly level to moderately sloping loams and silty clay loams. They are on the undulating Wisconsin (Cary) till plain that has few natural streams and drainageways. This plain generally has short irregular slopes. Many knobs and hills are intermingled with areas of nearly level soils that have many landlocked depressions.

This association occupies about 59 percent of the county. It is about 30 percent Clarion soils, 22 percent Nicollet soils, 20 percent Canisteo soils, 14 percent Webster soils, and 14 percent minor soils.

Clarion soils in this association are gently sloping and moderately sloping. They generally are on irregular convex ridges and knobs on the glacial till plain. Clarion soils formed in loamy, calcareous glacial till. They are well drained.

Nicollet soils are nearly level. They generally are at intermediate elevations between the ridges of Clarion soils and the low-lying Canisteo and Webster soils. Nicollet soils generally formed in loamy glacial till. They are somewhat poorly drained.

Canisteo soils are nearly level. They are on low-lying flats on the glacial till plain. Canisteo soils formed in loamy, calcareous glacial sediment or glacial till. They are calcareous and poorly drained.

Webster soils are nearly level. They are on low-lying flats on the glacial till plain. Webster soils formed in loamy glacial sediment or glacial till. They are poorly drained.

The minor soils in this association are mainly in the Biscay, Blue Earth, Collinwood, Colo., Cylinder, Harps, Lanyon, Okoboji, Salida, Spillville, Storden, Talcot, Wacousta, Wadena, and Walforf series.

The depressional, very poorly drained Blue Earth, Lanyon, and Wacousta soils occupy the shallow glacial lake basins; the depressional, very poorly drained Okoboji soils occupy the smaller landlocked depressions; and the nearly level, poorly drained Harps soils generally occupy narrow rims around the landlocked depressions and larger glacial lake basins. The nearly level, poorly drained Colo soils and the nearly level, somewhat poorly drained Spillville soils are adjacent to the drainageways and stream valleys on sloping, concave foot slopes.

Areas of fine-textured, poorly drained Waldorf soils and fine-textured, somewhat poorly drained Collinwood soils are closely intermingled with areas of Webster and Nicollet soils; areas of well-drained and somewhat poorly drained glacial outwash soils of the Wadena and Cylinder series that have sand and gravel at a depth of 24 to 40 inches are intermingled with areas of Clarion and Nicollet soils; areas of very poorly drained and poorly drained glacial outwash soils of the Talcot and Biscay series that have sand and gravel at a depth of 24 to 40 inches are intermingled with areas of Canisteo and Webster soils; and areas of moderately sloping or strongly sloping, calcareous, loamy Storden soils and moderately sloping or strongly sloping, shallow, moderately coarse textured Salida soils are intermingled with areas of Clarion soils.

Corn, soybeans, small grain, and alfalfa grow well in the nearly level and gently sloping soils of this association, but the moderately sloping soils are only moderately well suited to row crops. The soils in this association have moderate or moderately slow permeability and high available water capacity. The content of organic matter is high in the surface layer in the nearly level soils, moderate or high in the gently sloping soils, and moderately low or moderate in the moderately sloping soils. The content of available phosphorus generally is very low or low in the

surface layer and very low in the subsoil. The content of available potassium in the surface layer generally ranges from very low to medium, and the content of available potassium in the subsoil generally is very low or low. Clarion, Nicollet, and Webster soils are slightly acid or neutral in the surface layer, and Canisteo soils are mildly alkaline or moderately alkaline in this layer. The major concerns of management for cropland are adequate erosion control on the gently sloping and moderately sloping soils and adequate drainage on the nearly level, poorly drained soils.

Nearly all areas of this association are used for cultivated crops, but a few areas of strongly sloping soils, a few undrained areas that are wet, and a few areas of droughty soils are used for permanent pasture. The main enterprises are growing cash crops and feeding hogs and beef cattle. The soils of the Clarion-Nicollet-Canisteo association are among the most productive in the county.

Sac-Primghar-Galva Associsation

Well-drained and somewhat poorly drained, moderately fine textured, nearly level to moderately sloping soils on loess-mantled uplands.

The soils of this association are nearly level to moderately sloping silty clay loams. They are on a loess-mantled upland plain that is moderately dissected by drainageways and small streams. This plain generally has long, nearly level and gentle slopes, but some shorter moderate slopes are adjacent to the larger drainageways and stream valleys.

This association occupies about 23 percent of the county. It is about 35 percent Sac soils, 30 percent Primghar soils, 20 percent Galva soils, 9 percent Marcus soils, and 6 percent minor soils.

Sac soils are gently sloping and moderately sloping. The gently sloping soils generally are on long convex slopes, and the moderately sloping soils are on shorter convex slopes adjacent to the larger drainageways and stream valleys. Sac soils formed in thin loess that is generally 24 to 40 inches deep, and in the underlying glacial till. They are well drained and have a substratum of loam.

Primghar soils are nearly level and gently sloping. The nearly level soils generally are on broad flats, and the gently sloping soils generally are in long, narrow concave draws. Primghar soils formed in loess more than 40 inches thick. They are somewhat poorly drained.

The Galva soils in this association are nearly level and gently sloping. The nearly level soils occupy small convex slopes, and the gently sloping soils generally are on long convex slopes. Galva soils formed in loess more than 40 inches thick. They are well drained.

Marcus soils are nearly level. They are on broad flats and in narrow, concave draws. Marcus soils formed in loess more than 40 inches thick. They are poorly drained.

The minor soils in this association are in the Afton, Colo, Ely, Everly, Spillville, and Storden series.

The nearly level, poorly drained Colo soils occupy the stream valleys and larger drainageways; and the nearly level, poorly drained Afton soils occupy the small drainageways. The somewhat poorly drained Ely and Spillville soils are adjacent to the drainageways on gently sloping, concave foot slopes. The moderately sloping to very steep, loamy and calcareous, well-drained Storden soils occupy the short, steep slopes adjacent to the larger drainageways and stream valleys. Areas of the well-drained, gently sloping and moderately sloping, loamy Everly soils are intermingled with areas of the Sac soils.

Corn, soybeans, small grain, and alfalfa grow well in the nearly level and gently sloping soils of this association, but the moderately sloping soils are only moderately well suited to row crops. The oils in this association have moderate or moderately slow permeability and high available water capacity. The content of organic matter is high in the surface layer in the nearly level soils, moderate or high in the gently sloping soils, and moderately low or moderate in the moderately sloping soils. The content of available phosphorus generally is very low or low in the surface layer and very low in the subsoil. The content of available potassium in the surface layer generally is medium or high, and the content of available potassium in the subsoil generally is very low or low. Unless they are limed, the dominant soils in this association are acid in the surface layer. The major concerns of management for cropland are adequate erosion control on the gently sloping and moderately sloping soils and adequate drainage on the nearly level, poorly drained soils.

Nearly all areas of this association are used for cultivated crops, but a few areas of steep soils and a few undrained areas that are wet are used for permanent pasture. The main enterprises are growing cash crops and feeding hogs and beef cattle. The soils of the Sac-Primghar-Galva association are among the most productive in the county.

Galva-Sac-Primghar Association

Well-drained and somewhat poorly drained, moderately fine textured, nearly level to moderately sloping soils on loess-mantled uplands.

The soils of this association are nearly level to moderately sloping silty clay loams. They are on a loess-mantled upland plain that is moderately dissected by drainageways and small streams. This plain generally has long, nearly level and gentle slopes, but some areas of moderate slopes are adjacent to the larger drainageways and stream valleys.

This association occupies about 6 percent of the county. It is about 32 percent Galva soils, 30 percent Sac soils, 25 percent Primghar soils, and 13 percent minor soils.

Galva soils are gently sloping and moderately sloping. The gently sloping soils generally are on long convex slopes, and the moderately sloping soils are on moderately long convex slopes adjacent to the larger drainageways and stream valleys. These Galva soils formed in loess that is more than 40 inches thick. They are well drained.

Sac soils are gently sloping and moderately sloping. The gently sloping Sac soils generally are on long convex slopes, and the moderately sloping ones are on moderately long convex slopes adjacent to the larger drainageways and stream valleys. These Sac soils formed in loess that is 24 to 40 inches deep, and in the underlying glacial till. They are well drained and have a substratum of clay loam.

Primghar soils are nearly level and gently sloping. The nearly level soils generally are on broad flats, and the gently sloping soils generally are in long, narrow concave draws. These Primghar soils formed in loess that is more than 40 inches thick. They are somewhat poorly drained.

The minor soils in this association are in the Afton, Colo, Ely, Everly, and Marcus series.
The nearly level, poorly drained Colo soils occupy the larger drainageways and stream valleys, and the nearly level, poorly drained Afton and Marcus soils occupy the smaller drainageways. The somewhat poorly drained Ely soils are adjacent to the drainageways on gently sloping, concave foot slopes. Areas of the well-drained, gently sloping and the moderately sloping Everly soils are intermingled with areas of Sac soils.

Corn, soybeans, small grain, and alfalfa grow well in the nearly level and gently sloping soils of this association, but the moderately sloping soils are only moderately well suited to row crops. These soils have moderate or moderately slow permeability and high available water capacity. The content of organic matter is high in the surface layer in the nearly level soils, moderate or high in the gently sloping soils, and moderately low or low in the moderately sloping soils. The content of available phosphorus generally is very low or low in the surface layer and very low in the subsoil. The content of available potassium in the surface layer generally is medium or high, and the content of available potassium in the subsoil generally is very low or low. Unless they are limed, the dominant soils in this association are acid in the surface layer. The major concern of management for cropland is adequate erosion control on the gently sloping and moderately sloping soils.

Nearly all areas of this association are used for cultivated crops, but a few are used for permanent pasture. The main enterprises are growing cash crops and feeding hogs and beef cattle.

Colo-Calco-Spillville Association

Poorly drained and somewhat poorly drained, moderately fine textured and medium-textured, nearly level and gently sloping soils on bottom lands.

The soils of this association are nearly level and gently sloping silty clay loams and loams. They are on bottom lands that occupy stream valleys and larger drainageways.

This association occupies about 4 percent of the county. It is about 65 percent Colo soils, 15 percent Calco soils, 10 percent Spillville soils, and 10 percent minor soils.

Colo soils generally are nearly level, but they are gently sloping in many of the narrow stream valleys. They generally are adjacent to streams and larger drainageways. Colo soils formed in silty, moderately fine textured alluvium. They are poorly drained.

Calco soils are similar to Colo soils, but they are calcareous. Calco soils are nearly level. They generally are adjacent to large drainageways, especially near the heads of these drainageways. Calco soils formed in calcareous, silty, moderately fine textured alluvium. They are poorly drained.

Spillville soils are nearly level or gently sloping. They are on flood plains of streams and on low concave foot slopes below moderately sloping and strongly sloping soils. Spillville soils formed in loamy, medium-textured alluvium. They are somewhat poorly drained.

The minor soils in this association are in the Millington series.

The channeled, calcareous, poorly drained Millington soils, along with Colo and Spillville soils, occupy parts of the flood plain of Brooke Creek and Little Sioux River.

Corm, soybeans, small grain, and alfalfa grow well in the soils of this association that are not frequently flooded. The frequently flooded areas generally are channeled. The soils in this association that are dissected by many stream channels and are frequently flooded are poorly suited to row crops. All the soils in this association have moderate or moderately slow permeability and high available water capacity. The content of organic matter is high in the surface layer. The content of available phosphorus generally is medium in the surface layer in Colo and Spillville soils and very low, low, or medium in Calco soils. The content of available phosphorus in the underlying material generally is medium in Colo soils, low or medium in Spillville soils, and very low, low, or medium in Calco soils. The content of available potassium in the surface layer generally is medium in Colo and Spillville soils and very low, low, or medium in Calco soils. The content of available potassium in the underlying material generally is low or medium in Colo and Spillville soils and very low or low in Calco soils. Colo and Spillville soils

are neutral or slightly acid in the surface layer, and Calco soils are mildly alkaline or moderately alkaline in this layer. The major concerns of management, for cropland, are adequate drainage and flood control.

The soils of this association are used for cultivated crops and pasture. The productivity of the cultivated areas depends on drainage and the frequency of flooding. The channeled areas generally are limited to pasture and scrub timber. Few farms lie entirely within this association. The main enterprises are growing cash crops and feeding hogs and beef cattle.

Wadena-Talcot-Cylinder Association
Well-drained to very poorly drained, medium-textured and moderately fine textured, nearly level to moderately sloping soils on outwash plains and terraces.

The soils of this association are nearly level to moderately sloping loams and clay loams. They generally are on glacial outwash plains and stream terraces.

This association occupies about 3 percent of the county. It is about 40 percent Wadena soils, 16 percent Talco soils, 14 percent Cylinder soils, and 30 percent minor soils.

Wadena soils are nearly level to moderately sloping. They generally are on convex slopes on glacial outwash plains and stream terraces. Wadena soils formed in loamy glacial outwash that is 24 to 40 inches thick over calcareous sand and gravel. They are well drained.

Talcot soils are nearly level. They are on low-lying flats in glacial outwash areas and on stream terraces. Talcot soils formed in calcareous, moderately fine textured glacial outwash that is 24 to 40 inches thick over calcareous sand and gravel. They are somewhat poorly drained.

Cylinder soils are nearly level. They generally are at intermediate elevations between the ridges of Wadena soils and the low-lying Talcot soils. Cylinder soils formed in loamy glacial outwash that is 24 to 40 inches thick over calcareous sand and gravel. They are somewhat poorly drained.

The minor soils in this association are in the Biscay, Canisteo, and Estherville series.

Small areas of the poorly drained, noncalcareous Biscay soils and areas of the poorly drained, calcareous Canisteo soils are on broad, low-lying flats in the glacial outwash areas. Small areas of the somewhat excessively drained Estherville soils are on ridges in glacial outwash areas and on stream terraces.

Corn, soybeans, small grain, and alfalfa grow well in the nearly level Wadena, Talcot, Cylinder, Biscay, and Canisteo soils and in the gently sloping Wadena soils. The gently sloping Estherville soils and the moderately sloping Estherville and Wadena soils are moderately well suited to row crops.

Wadena, Talcot, Cylinder, and Biscay soils have moderate or moderately slow permeability above the sand and gravel and have rapid or very rapid permeability in the sand and gravel. Canisteo soils have moderate permeability, and Estherville soils have moderately rapid or rapid permeability.

The moderately deep Wadena, Talcot, and Cylinder soils, have moderate or low available water capacity, and the deep Wadena, Talcot, Cylinder, and Biscay soils have moderate available water capacity. Canisteo soils have high available water capacity, and Estherville soils have very low or low available water capacity.

The content of organic matter in the surface layer is moderate or high in the nearly level soils, and it ranges from moderate to very low in the gently sloping and moderately sloping soils. The content of available phosphorus generally is very low or low in the surface layer and very low in the subsoil of soils in this association. The content of available potassium in the surface layer generally ranges from very low to medium, and the content of available potassium in the subsoil generally is very low or low. Unless limed, Wadena and Estherville soils generally are slightly acid in the surface layer. Talcot and Canisteo soils, generally are moderately alkaline in the surface layer, Cylinder and Biscay soils generally are neutral or slightly acid in this layer. The major concerns of management for cropland are the lack of available moisture, adequate erosion control on the gently sloping and moderately sloping soils, and adequate drainage on the nearly level, poorly drained soils.

The soils of this association are used for cultivated crops, meadow, and pasture. The main enterprises are growing cash crops and feeding hogs and beef cattle.

Waldorf-Collinwood-Clarion Association

Poorly drained to well-drained, medium-textured to fine-textured, nearly level to moderately sloping soils on uplands.

The soils of this association are nearly level to moderately sloping loams and silty clay loams. They are on the Wisconsin (Cary) till plain in areas largely mantled by fine-textured lacustrine sediment.

This association occupies about 3 percent of the county. It is about 25 percent Waldorf soils, 20 percent Collinwood soils, 20 percent Clarion soils, 18 percent Nicollet soils, and 17 percent minor soils.

Waldorf soils are nearly level. They generally are on low-lying ground moraines on the Wisconsin (Cary) till plain. Waldorf soils formed in fine-textured lacustrine sediment. They have a moderately fine textured surface layer and a fine textured subsoil. They are somewhat poorly drained.

Clarion soils in this association are gently sloping or moderately sloping. They generally are on convex ridges or knobs on the glacial till plain. Clarion soils formed in loamy, calcareous glacial till. They are medium textured or moderately fine textured and are well drained.
Nicollet soils are nearly level. They generally are at intermediate elevations on the glacial till plain. Nicollet soils formed mainly in loamy glacial till. They are medium textured or moderately fine textured and are somewhat poorly drained.

The minor soils in this association are mainly in the Okoboji, Storden, and Webster series.

The very poorly drained Okoboji soils are in small, landlocked depressions. Areas of the moderately sloping or strongly sloping, calcareous, loamy Storden soils are intermingled with areas of the Clarion soils. Areas of the nearly level, poorly drained Webster soils are intermingled with areas of the Nicollet soils.

Corn, soybeans, small grain, and alfalfa grow well on the nearly level and gently sloping soils of the association, but the moderately sloping soils are only moderately well suited to row crops. Waldorf and Collinwood soils have moderately slow or slow permeability, and Clarion and Nicollet soils have moderately permeability. Most of the soils in this association have high available water capacity. The content of organic matter is high in the surface layer in the nearly level soils, moderate or high in the gently sloping soils, and moderately low or moderate in the moderately sloping soils. The content of available phosphorus generally is very low or low in the surface layer and very low in the subsoil. The content of available potassium in the surface layer generally ranges from very low to medium, and the content of available subsoil potassium generally is very low or low. The soils in this association are slightly acid or neutral in the surface layer. The major concerns of management for cropland are erosion control on the gently sloping and moderately sloping soils and drainage on the nearly level, poorly drained soils.

Nearly all areas of this association are used for cultivated crops, but a few areas of moderately sloping and strongly sloping soils are used for permanent pasture. The main enterprises are growing cash crops and feeding hogs and beef cattle.

Storden Association
Somewhat excessively drained, medium-textured, moderately sloping to very steep soils on uplands.

The soils of this association are moderately sloping to very steep loams. They are on Wisconsin till plains (Tazewell and Cary) on slopes generally adjacent to bottom lands along the Little Sioux River and its larger tributaries.

This association occupies about 3 percent of the county. It is about 90 percent Storden soils and 10 percent minor soils.

Storden soils are moderately sloping to very steep. They are on slopes adjacent to bottom lands along the larger streams. Storden soils formed in loamy, calcareous glacial till. They are calcareous and somewhat excessively drained.

The minor soils in this association are in the Lester and Terril series. The well-drained Lester soils generally are in steep and very steep wooded areas. The loamy, well-drained Terril soils generally are on moderately sloping foot slopes below areas of the strongly sloping to very steep Storden soils.

In most areas the soils of this association are either poorly suited or unsuited to cultivated crops. The soils have moderate permeability and high available water capacity. The content of organic matter in the surface layer ranges from moderately low to very low. The content of available phosphorus generally is very low or low in the surface layer of Storden soils and very low in the underlying material. The content of available potassium in the surface layer generally is low, and the content of available potassium in the underlying material generally is very low. Storden soils are mildly alkaline or moderately alkaline in the surface layer.

These soils generally are used for wooded or are left as wooded areas. Many of the wooded areas are grazed.

FIGURE 15: GENERAL SOILS

Capability Grouping of Soils

The capability classification is a grouping that shows, in a general way, how suitable soils are for most kinds of farming. It is a practical grouping based on limitations of the soils, the risk of damage when they are used, and the way they respond to treatment.

In this system, all the kinds of soil are grouped at three levels, the capability class, subclass, and unit. The eight capability classes in the broadest grouping are designated by Roman numerals I through VIII. Class I soils have few limitations, the widest range of use, and the least risk of damage when they are used. The soils in the other classes have progressively greater natural limitations. In class VIII are soils and landforms so rough, shallow, or otherwise limited do not produce worthwhile yields of crops, forage, or wood products.

The subclasses indicate major kinds of limitations within the classes. Within most of the classes there can be up to four subclasses. The subclass is indicated by adding a small letter, e, w, s, or c, to the class numeral, for example, "IIe". The letter "e" shows the main limitation risk is erosion unless close-growing plant cover is maintained. A "w" means that water in or on the soil will interfere with plant growth or cultivation (in some soils wetness can be partly corrected by artificial drainage). An "s" shows the soil is limited mainly because of shallow, droughty, or stony. Finally, a "c" when used, indicates that the chief limitation is climate that is too cold or too dry.

In Class I there are no subclasses, because the soils of this class have few or no limitations. Class V can contain, at the most, only subclasses "w", "s", and "c", because these soils have little or no susceptibility to erosion but have other limitations limiting their use largely to pasture, range, woodland, or wildlife.

Within the subclasses, there are additional capability units. These groups of soils are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally identified by numbers assigned locally, for example, IIe-1 or IIIe-1.

Soils are classified in capability classes, subclasses, and units in accordance with the degree and kind of their permanent limitations. This is done without consideration to major and expensive land forming that would change the slope, depth, or other characteristics of the soil; and without consideration of possible but unlikely major reclamation projects.

The eight classes in the capability system and the subclasses and units in this county are described in the list that follows.

Soil Capability System, Buena Vista County, Iowa

Class I Soils that have a few limitations that restrict their use. These soils are suitable for intensive cultivation over long periods and do not require special practices other than those used for good farming. (No subclasses).

Class II Soils that have moderate limitations that reduce the choice of plants or require moderate conservation practices. They are suitable for tiled crops, pasture, or woodland.

Class III Soils that have severe limitations that reduce the choice of plants, require special conservation practices, or both. These soils are suitable for tilled crops, pasture, woodland, or wildlife habitat.

Class IV Soils that have very severe limitations that reduce the choice of plants, require very careful management, or both. They are suited to tilled crops, but need intensive management. They are also suited to pasture, woodland, or wildlife habitat.

Class V Soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife habitat.

Class VI Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.

Class VII Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII Soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, or water supply, or to esthetic purposes. (None in Buena Vista County.)

Class I through Class III soils, even with some limitations are the best soils in a county. Any soil rated higher, typically, will present some significant limitations, thus having an impact on the actual use of the land. The following table lists the different soils and their rating.

Table 33 indicates the soil symbol, the soil type, the percent slope, and the soil classification. There are 71 different soil types identified in the Soil Survey. Of these soil types, six have been rated Class I. Class II soil types accounted for 29 of the soil types. Finally, 19 soils are Class III. The top three class's accounted for 94.5% of the total land area. Most of the subclasses present in the Soil Survey were "e" and "w" indicating that the soils in Buena Vista County have strong characteristics based upon erodability and wetness.

TABLE 33: SOIL CAPABILITY TABLE

Map Symbol	Mapping Units	Capability Rating
6	Okoboji silty clay loam, 0 to 1 percent slopes	IIIw
27C	Terril loam, 4 to 9 percent slopes	IIIe
31	Afton silty clay loam , 0 to 2 percent slopes	IIw
32	Spicer silty clay loam, 0 to 2 percent slopes	IIw
34B	Estherville sandy loam, 2 to 5 percent slopes	IIs
34C2	Estherville sandy loam, 5 to 9 percent slopes, moderately eroded	IVe
55	Nicollet loam, 1 to 3 percent slopes	I
62C	Storden loam, 5 to 9 percent slopes	IIIe
62D	Storden loam, 9 to 14 percent slopes	IIIe
62E	Storden loam, 14 to 18 percent slopes	IVe
62F	Storden loam, 18 to 25 percent slopes	Vie
62G	Storden loam, 25 to 40 percent slopes	VIIe
73C	Salida gravelly sandy loam, 5 to 9 percent slopes	IVs
73D	Salida gravelly sandy loam, 9 to 14 percent slopes	IVe
77B	Sac silty clay loam, loam substratum, 2 to 5 percent slopes	IIe
77C2	Sac silty clay loam, loam substratum, 5 to 9 percent slopes, moderately eroded	IIIe
78B	Sac silty clay loam, clay substratum, 2 to 5 percent slopes	IIe
78C2	Sac silty clay loam, clay substratum, 5 to 9 percent slopes, moderately eroded	IIIe
91	Primghar silty clay loam, 0 to 2 percent slopes	I
91B	Primghar silty clay loam, 2 to 4 percent slopes	IIe
92	Marcus silty clay loam, 0 to 2 percent slopes	IIw
95	Harps loam, 0 to 2 percent slopes	IIw
107	Webster silty clay loam, 0 to 2 percent slopes	IIw
108	Wadena loam, moderately deep, 0 to 2 percent slopes	IIs
108B	Wadena loam, moderately deep, 2 to 5 percent slopes	IIe
108C2	Wadena loam, moderately deep, 5 to 9 percent slopes, moderately eroded	IIIe
133	Colo silty clay loam, 0 to 2 percent slopes	IIw
138B	Clarion loam, 2 to 5 percent slopes	IIe
138C2	Clarion loam, 5 to 9 percent slopes, moderately eroded	IIIe
138D2	Clarion loam, 9 to 14 percent slopes, moderately eroded	IIIe
175B	Dickinson fine sandy loam, 2 to 5 percent slopes	IIIe
202	Cylinder loam, moderately deep, 0 to 2 percent slopes	IIs
203	Cylinder loam, deep, 0 to 2 percent slopes	I
236F	Lester loam, 18 to 25 percent slopes	Vie
236G	Lester loam, 25 to 40 percent slopes	VIIe
250B	Clarion silty clay loam, 2 to 5 percent slopes	IIe
251	Nicollet silty clay loam, 1 to 3 percent slopes	I
259	Biscay clay loam, deep, 0 to 2 percent slopes	IIw
274	Rolfe silt loam, 0 to 1 percent slopes	IIIw
308B	Wadena loam, deep, 1 to 5 percent slopes	IIe
310	Galva silty clay loam, 0 to 2 percent slopes	I
310B	Galva silty clay loam, 2 to 5 percent slopes	IIe
310C2	Galva silty clay loam, 5 to 9 percent slopes, moderately eroded	IIIe
354	Marsh	NA
384	Collinwood silty clay loam, 0 to 2 percent slopes	IIw
384B	Collinwood silty clay loam, 2 to 5 percent slopes	IIe
384C	Collinwood silty clay loam, 5 to 9 percent slopes	IIIe
390	Waldorf silty clay loam, 0 to 2 percent slopes	IIw
428B	Ely silty clay loam, 2 to 5 percent slopes	IIe
485	Spillville loam, 0 to 2 percent slopes	IIw
485B	Spillville loam, 2 to 5 percent slopes	IIe
501	Gravel Pits	NA
504	Fill Land	NA
506	Wacousta mucky silt loam, 0 to 1 percent slopes	IIIw
507	Canisteo silty clay loam, 0 to 2 percent slopes	IIw
511	Blue earth mucky silt loam, 0 to 1 percent slopes	IIIw
558	Talcot clay loam, moderately deep, 0 to 2 percent slopes	IIw

559	Talcot clay loam, deep, 0 to 2 percent slopes	IIw
577B	Everly clay loam, 2 to 5 percent slopes	IIe
577C	Everly clay loam, 5 to 9 percent slopes	IIIe
577C2	Everly clay loam, 5 to 9 percent slopes, moderately eroded	IIIe
585B	Colo-Spillville complex, 2 to 5 percent slopes	IIw
606	Lanyon silty clay loam, 0 to 1 percent slopes	IIIw
733	Calco silty clay loam, 0 to 2 percent slopes	IIw
5080	Orthents, sanitary landfill	NA
C458	Millington loam, channeled, 0 to 2 percent slopes	Vw
C585	Colo-Spillville complex, channeled, 0 to 2 percent slopes	Vw
INT	Intermittent Water	NA
SL	Sewage Lagoon	NA
T310	Galva silty clay loam, benches, 1 to 3 percent slopes	NA
W	Water	NA

Source: United States Department of Agriculture, Natural Resources Conservation Service, December 2005.
NA = Not Assigned

Soil Suitability

The characteristics of soils play a major role in determining the potential compatibility of certain uses on the land. The ability to absorb certain liquids such as water and wastewater are different for certain soils. In addition, as noted in the capabilities section, how sensitive an area is to erosion or how shallow the soils are in an area can have a major impact on the ability to develop a specific area of Buena Vista County. These conditions have an impact on a soils ability to support certain types of uses. This ability to support certain uses is referred to as limitations.

Soil Limitations

The interpretations are based on the engineering properties of soils and test data for soils in the survey area. Ratings are used to summarize limitations or suitability of the soils for certain purposes. Soil limitations are indicated by the ratings slight, moderate, and severe. Slight means that soil properties are generally favorable for the rated use, or in other words, that limitations are minor and easily overcome. Moderate means that some soil properties are unfavorable but can be overcome or modified by special planning and design. Severe means that soil properties are so unfavorable and so difficult to correct or overcome as to require major soil reclamation, special designs, or intensive maintenance.

Conventionally, the onsite wastewater treatment system has proven satisfactory for many areas when properly designed, installed, and maintained. However, conditions do exist where this system is not suitable. Areas of seasonal high groundwater tables, bedrock in close proximity to the soil surface, or soils having very fast or very slow percolation rates are not suited for the s onsite wastewater treatment system. Other limitations for this system include topography, small lot size and proximity to water supplies used for drinking or recreation.

Slope

The slope of the soil also has an impact on the ability to use a piece of land for specific uses. The natural slope is somewhat determined by the type of soil association. Slope is a major determining factor in soil suitability with regard to onsite wastewater treatment systems, sewage lagoons, prime farmland, and dwelling units.

Figure 16 indicates the percent slope of the land within Buena Vista County. The data were taken from the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). The map was generated using SSURGO soil data from this agency. The data are tied to actual soil types and associations and then mapped based upon the specific locations of these soil types.

The map in Figure 16 indicates that the majority of Buena Vista County has slight to moderate slopes. However, slopes are steepest along the Little Sioux River and other waterways. The slopes in these areas of the County range from 9% to 40%. These areas are where the greatest amount of vegetation in Buena Vista County can be found.

Prime Farmland

The **prime farmland c**lassification identifies map units as all areas are prime farmland, farmland of statewide importance, prime farmland if drained, or prime farmland if protected from flooding. Farmland classification identifies the location and extent of the most suitable land for producing food, feed, fiber, forage, and oilseed crops (USDA, 2004)

In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable sodium content, and few or no rocks. They are permeable to water and air. Prime farmland is not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Buena Vista County has an abundance of prime farmland. This can be seen in Figure 17. The prime farmland is located throughout the county. However, the northwest corner of the County along the river corridor has the majority of land considered to be "not as prime" due to higher susceptibility to flooding conditions. Due to the importance of prime farmland the County may want to add special protection to these areas identified.

Dwellings without Basements and Dwellings with Basements

The ability for soils to handle different structural uses such as residential dwellings is dependant upon a number of conditions. It is these conditions that determine the level of suitability of the soil for this specific use. Based upon the data in the Soil Survey of Buena Vista County, there are a number of factors that influence the suitability of the soil. These factors are:

- wetness,
- flooding,
- shrink-swell capacity of the soil,
- slope of the soil,

- low strength

The soils for this category are rated Not Limited, Somewhat Limited, and Very Limited. Any one of these factors can play a significant role in the type of construction methods that will need to be employed in constructing a residence in Buena Vista County. Thus, land rated "Very Limited" does not necessarily disqualify the use, but merely indicates that special circumstances exist and these need to be accounted for in the design of the structure. Figure 18 and 19 indicate the level of suitability for these uses throughout Buena Vista County.

The limitations in Buena Vista County's soils for both uses are somewhat equal between the moderate and severe limitations categories. However, there are some locations in the County where severe limitations begin to become more dominant. There is not a solid distinction between the three categories. This will require, in some cases, more detailed information to be collected as a dwelling unit is proposed and constructed.

FIGURE 16: PERCENTAGE OF SLOPE

FIGURE 17: PRIME FARMLAND

FIGURE 18: DWELLINGS WITH BASEMENTS; LIMITATIONS

FIGURE 19: DWELLINGS WITHOUT BASEMENTS; LIMITATIONS

Onsite wastewater treatment system

The typical onsite wastewater treatment system consists of two major components – the septic tank and the absorption field. In the septic tank, solids are separated from the liquid, undergo anaerobic digestion and are stored as sludge at the bottom of the tank. The liquid (septic tank effluent) flows to the absorption field where it percolates into the soil. The soil acts as a final treatment by removing bacteria, pathogens, fine particles, and some chemicals.

Onsite wastewater treatment systems consist of tile or perforated pipe that distribute effluent from a septic tank into natural soil. The soil material between depths of 18 inches and six feet is evaluated. The soil properties considered are those that affect both absorption of effluent and construction and operation of the system. Properties that affect absorption are:

- wetness of the soil
- flooding
- percolation rate of the soil
- poor filter characteristics
- slope of the soil

Slope affects difficulty of layout and construction and also the risk of erosion, lateral seepage, and down slope flow of effluent. The other properties impact the use in a manner that system will not operate properly, thus creating problems within the overall system and even with the environment.

The soils in Buena Vista County regarding septic tank absorption fields is shown in Figure 20. The use and the soils are rated as not limited, somewhat limited, and very limited. The soils in Buena Vista County appear to be predominately severe or moderate.

Again, these conditions will need to be addressed when designing and constructing a septic tank and absorption field. In a number of situations, these conditions may be overcome by special designs; however, some of the conditions impacting the construction of this system will completely halt the ability at certain sites.

Local Roads and Streets

Local roads and streets have an all-weather surface expected to carry automobile traffic year round. There is a subgrade of underlying soil materials – a base consisting of gravel, crushed rock, or soil material stabilized with lime or cement – and a flexible or rigid surface, commonly asphalt or concrete. These roads are graded to shed water and have ordinary provisions for drainage. They are typically built from soils at hand. Soil properties that most affect design and the construction of roads and streets are the load supporting capacity, the stability of the subgrade, and the workability and quantity of cut and fill material available. Design and capacity of roads and streets should follow the AASHTO and Unified classifications of the soil materials.

The soils in Buena Vista County are defined as one of three ways: Not Limited, Somewhat Limited, and Very Limited. The majority of the County is considered to have moderate to severe limitations. These conditions are based upon a varying number of reasons including:

- wetness
- low strength
- floods
- frost action
- slope
- shrink-swell properties

Again, these conditions will need to be addressed when designing and constructing a roads and streets within Buena Vista County. In a number of situations, these conditions may be overcome by special designs; however, some of the conditions impacting the construction will completely halt the ability at certain sites.

Sanitary Landfills

Sanitary landfills are becoming more of an issue in current times and are likely to increase in their importance to our society during the planning period. Regionalization of sanitary landfills for solid waste disposal will likely become more popular during this planning period. Buena Vista County is already practicing regionalism at a smaller level. Both the North Dallas landfill and the Buena Vista County landfill are located within the county. The North Dallas facility is privately owned and operated and has been contracted to accept solid waste from portions of Dallas County, but Buena Vista county's refuse is not placed within this facility. The Buena Vista County facility is more of a regional facility which accepts waste from Buena Vista County, portions of Greene County, Dallas County, and part of the waste generated in the City of Ames. The life expectancy of the Buena Vista County facility is forty years.

As studies occur examining the feasibility of additional solid waste facilities in Buena Vista County, by either County residents or other public and/or private owners/operators, soil conditions will be critical to the location, size, and overall feasibility of a facility. Figure 23 indicates three levels of suitability regarding landfills. These suitability levels are Not Limited, Somewhat Limited, and Very Limited. Buena Vista County is predominately influenced by moderate and severe limitations. Some of the conditions influencing these ratings are as follows:

- wetness
- seepage
- depth to rock
- floods
- slope

Again, these conditions will need to be addressed when designing and constructing sanitary landfills within Buena Vista County. In a number of situations, these conditions may be overcome by special designs; however, some of the conditions impacting the construction will completely halt the ability at certain sites.

FIGURE 20: ONSITE WASTEWATER TREATMENT SYSTEMS; LIMITATIONS

FIGURE 21: SEWAGE LAGOONS; LIMITATIONS

FIGURE 22: LOCAL ROADS AND STREETS; LIMITATIONS

FIGURE 23: LANDFILLS; LIMITATIONS

Water and the Impact on Buena Vista County

Water, along with the soil conditions discussed in this section, are the two most restricting environmental conditions facing land use planning in the future. Damaging either one of these two elements will impact the residents of a County for years to come. As with the soil descriptions and conditions, it is important to discuss the water factors impacting Buena Vista County during the present and the coming planning period. Water in this section will apply to two different topics, surface water and ground water.

Surface Water

Surface water applies to any water running across a surface that eventually runs into a minor or major drainage area, eventually ending up in a major waterway such as the Little Sioux River. However, a certain portion of surface water can be and is absorbed by the soil in order to support plant life, including corn, soybeans and grass lawns. In addition, this absorption is critical to recharging aquifers and wetland areas. Figure 24 indicates the ability of specific soils to drain. These areas are defined as:

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained

A mixture of drainage levels exist throughout Buena Vista County. There does not appear to be a single classification that dominates the County. The only place any one category dominates is within the County's extensive watershed network, with the majority of the soils being classified as Somewhat Poorly Drained and Poorly Drained.

Permeability

Permeability rates as shown in Figure 24 indicate the rate at which water will transfer through soils. This is also known as the Percolation Rate. This process is important since the transfer rate of water through the soil can greatly impact the ability of aquifers and water tables to be recharged. One factor that will greatly impact the permeability of soil is the amount of clay in the soil type. The higher the clay content the lower the permeability. Data in the Soil Survey is based upon the percentage of clay less than two millimeters in thickness.

A low permeability rate typically means that groundwater in that area is going to be difficult to recharge via surface water and the rain and snow cycle, while higher rates allow the water to be absorbed at greater rates into the groundwater system. Figure 24 reviews the Permeability Rates for Buena Vista County, the rates were derived straight from data developed by the United States Department of Agriculture, Natural Resources Conservation Service. The classes for these data are:

- Very Rapid Permeability

- Moderately Rapid/Very Rapid Permeability
- Moderately Rapid/Rapid Permeability
- Moderate/Very Rapid Permeability
- Moderate Permeability
- Moderately Slow Permeability
- Slow Permeability

Examining the engineering tables within the survey, the cause for the different, ranges, especially the large ranges, are due to many different factors including the clay content, depth of the soil, moisture content, and more. The majority of soil within Buena Vista County has a permeability classification of Moderate to Moderate/Very Rapid. Portions of the southwest corner of the County are classified as having Moderately Slow permeability. Lastly, several pockets of soil with Slow permeability are present in the northern and central areas of the County.

Hydric Soils

Hydric soils are formed under conditions of saturation, flooding, or ponding. The process has to occur long enough during the growing season to develop anaerobic conditions in the upper part. Hydric soils along with hydrophytic vegetation and wetland hydrology are used to define wetlands. (USDA/NRCS, Fall 1996) Figure 25 indicates where the different levels of hydric soils are located in Buena Vista County. The soils are classified as the following:

- All Hydric
- Partially Hydric
- Not Hydric

The majority of the soils in Buena Vista County are considered either Not Hydric or All Hydric. Although scattered, the greatest concentration of non-hydric soils is along the western third of the County, while the largest areas of hydric soils are located in the eastern part of the County and along the Little Sioux River.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four USDA/NRCS groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are placed into four groups A, B, C, and D, and three dual classes, A/D, B/D, and C/D. Definitions of the classes are as follows:

Hydric Soil Class	Description
A	Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
B	Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
C	Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
D	Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Dual hydrologic groups, A/D, B/D, and C/D, are given for certain wet soils that can be adequately drained. The first letter applies to the drained condition, the second to the undrained. Only soils that are rated D in their natural condition are assigned to dual classes.

TABLE 34: HYDROLOGICAL CHARACTERISTICS

Map Symbol	Soil Name	Hydrological Group	Rating
6	Okoboji	B/D	All Hydric
27C	Terril	B	Not Hydric
31	Afton	C/D	All Hydric
32	Spicer	B/D	All Hydric
34B/34C2	Estherville	B	Not Hydric
55	Nicollet	B	Not Hydric
62C, 62D, 62E, 62F, 62G	Storden	B	Not Hydric
73C, 73D	Salida	A	Not Hydric
77B, 77C2	Sac	B	Not Hydric
78B, 78C2	Sac	B	Not Hydric
91, 91B	Primghar	B	All Hydric
92	Marcus	B/D	All Hydric
95	Harps	B/D	All Hydric
107	Webster	B/D	All Hydric
108, 108B, 108C2	Wadena	B	Not Hydric
133	Colo	B/D	All Hydric
138B, 138C2, 138D2	Clarion	B	Not Hydric
175B	Dickinson	B	Not Hydric
202	Cylinder	B	All Hydric
203	Cylinder	B	All Hydric
236F, 236G	Lester	B	Not Hydric
250B	Clarion	B	Not Hydric
251	Nicollet	B	All Hydric
259	Biscay	B/D	All Hydric
274	Rolfe	C	All Hydric
308B	Wadena	B	Not Hydric
310, 310B, 310C2	Galva	B	Not Hydric
354	Palms	A/D	All Hydric
384, 384B, 384C	Collinwood	C	All Hydric
390	Waldorf	C/D	All Hydric
428B	Ely	B	All Hydric
485, 485B	Spillville	B	All Hydric
501	Gravel pits	---	Unknown
504	Fill land	---	Unknown
506	Wacousta	B/D	All Hydric
507	Canisteo	C/D	All Hydric
511	Blue earth	B/D	All Hydric
558	Talcot	B/D	All Hydric
559	Talcot	B/D	All Hydric
577B, 577C, 577C2	Everly	B	Not Hydric
585B	Colo-Spillville complex	B/D and B	All Hydric
606	Lanyon	C/D	All Hydric
733	Calco	B/D	All Hydric
5080	Udorthents, Landfill	---	Unknown
C458	Millington	B/D	All Hydric
C585	Colo-Spillville complex	B/D and B	All Hydric
INT	Intermittent water	A	Not Hydric
SL	Sewage lagoon	---	Unknown
T310	Galva	B	Not Hydric
W	Water	---	Unknown

Source: United States Department of Agriculture, Natural Resources Conservation Service, December 2005.

Groundwater

Groundwater deals with the water under the surface. Groundwater has three primary zones. The first is the aeration zone. The aeration zone is that area from ground level to the point where plant roots absorb moisture. This is area is typically unsaturated. The second zone is called the water table. The water table is that area below the aeration zone and bedrock. This water is essential that water not absorb by plant life. This area is typically saturated and acts more like a sponge rather than an underground lake. Their location is very dependant upon the underground geology of the area and the soil conditions and types. The final groundwater type is the aquifer. Aquifers are large or small areas of water usually within a half mile of the surface.

Some aquifers can be closer than others to the surface. These areas are sometimes referred to as underground lakes. Each of these zones is at varying levels below the surface. Their location is very dependant upon the underground geology of the area and the soil conditions and types. Most public and private wells will drill into either the water table zone or the aquifer zone, especially when is in close proximity to the surface.

FIGURE 24: SOIL PERMEABILITY

FIGURE 25: HYDRIC SOILS

FIGURE 26: FLOODING FREQUENCY

Flooding Frequency

Flooding Frequency examines how often flooding occurs based upon the soil types. The majority of Buena Vista County falls under the category of none; however, there are areas where the flooding is considered to be frequent. All of the frequent areas are not surprising considering they appear along the Little Sioux River and other waterways and drainage areas. Areas with frequent flooding should be avoided for development purposes.

Buena Vista County NRCS - Storm Lake Water Quality Project

Mission Statement: Educate and inform land owners, operators, and residents of the Storm Lake Watershed to use conservation for improving the water quality of Storm Lake. Preserve this natural resource, Storm Lake, by community and agency partnership.

1. Storm Lake's primary water resource problem is turbidity. The average Secchi Disk measurement is 0.3 meters according to the Iowa Lakes Survey. The turbidity has a negative impact on the aquatic system, fisheries and recreational potential of Storm Lake. Sediment accumulation on lake the bottom as well as constant resuspension of sediments is the major problem. It is very important that we address this problem now for two reasons. First, the community is beginning a multi year dredging project to remove 4 to 6 feet of sediment from approximately 1,500 acres of Storm Lake. Second, the lake is the community of Storm Lake's major resource to draw and maintain people in the area.
2. Storm Lake's non point source pollution problem stems primarily from erosion off 11,250 acres of cropland that drains into Storm Lake. The cropland has slight to moderate slopes with good soils for cropping. Permanent infield structures such as terraces are not well accepted or even practical because of moderate slopes. This has lead to use of yearly management practices by ag producers to control soil loss. As producers change and weather conditions create unusual situations in the field these management practices many times are not followed resulting in continued excessive soil loss especially during large rain events. Approximately 1,700 acres of urban land in the watershed also provides its share of sediments entering the lake.
3. The project activities that will be used to accomplish goals and objectives are as follows:
    a. Installation of the following BMPs – nutrient management, boulder weirs, wetland construction, pasture and livestock management, grass buffer systems, grassed waterways, wellhead protection and conservation cover.
    b. There will be several demonstration projects completed in conjunction with this project. Several Low Impact Development projects will be completed in urban areas as well as a golf course demonstration project showing precision nutrient and pest application which is expected reduce inputs by 50%.
    c. Information and education will also be an import component of this project. Educational meetings will be held for homeowners, lawn care providers, landscapers and realtors stressing the importance of managing water runoff before it leaves landowners property. GIS maps will be used

by the coordinator and sponsors to educate watershed residents about actions that need to be taken and why.

d. A web page will be used to educate, promote, inform and recognize local residents of activities in the watershed.

e. Scheduling of activities will be completed to maximize accomplishments over the life of the 5 year project. A major effort will be made to sign up nutrient management cooperators early since there is a 5 year maintenance on this practice. By cooperating with various agencies and universities time will be used efficiently. Richard Schultz, agroecologist from ISU will assist in implementing boulder weirs. Tom Gould pasture and grassland specialist from NRCS will assist in application of pasture and livestock management project. The City of Storm Lake is taking the lead on several demonstration projects and Lake Creek golf course is very willing to participate and assist in the planned project in and around the golf course. The total project budget for the 5 year project is $680,300 with a grant request of $462,900. This proposed budget will be maximized with the high level of cooperation present with this project. It will be a wonderful opportunity to accomplish much good conservation work while a full scale dredging project is in progress. This will have a very visible impact on planning conservation activities with landowners in the watershed.

4. Measuring the progress of this project will be accomplished by analyzing:
    a. The number of permanent boulder weirs constructed and measuring their expected sediment retention capabilities.
    b. One wetland constructed on Powell Creek
    c. Two Sediment Basins/Wetland constructed on southwest side of lake.
    d. The number of permanent in field structures completed such as grass buffers and grass waterways.
    e. The number of acres of nutrient management completed both urban and ag and accumulated reduction of nutrients in the watershed.
    f. The number of acres of Wellhead protection acres seeded around Little Storm Lake.
    g. The completion of one pasture management project on Powell Creek and adjacent to Little Storm Lake.
    h. Information gathered by IOWATER volunteers during the life of the project and beyond.

(Source: www.slwaterquality.com)

CONCLUSIONS

Buena Vista County is and will continue to be faced with a number of land use and growth issues through the planning period. Future decisions regarding the location of land uses will likely create a significant cause and effect scenario for the current and future residents as well as the environment of the County.

ENVISION BUENA VISTA COUNTY

GOALS AND POLICIES

Introduction

Planning for the future land uses of the County is an ongoing process of goal setting and problem solving aimed at enhancing and encouraging better communities and a higher quality of life. Planning focuses upon ways of solving existing problems within the County, and providing a management tool enabling Buena Vista County citizens to 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 Buena Vista County's strengths and weaknesses, the community can decide what it wants to be, and then develop a "roadmap" for guiding decisions and ultimately fulfilling the vision of the County.

Change is continuous, therefore Buena Vista County must decide on specific criteria that will be used to judge and manage change. Instead of reacting to development pressures after the fact, the County along with their strategic vision, can better reinforce the desired changes, and discourage negative impacts that may undermine the vision. A shared vision permits Buena Vista County to focus its diverse energies and minimize conflicts in the present, and in the future.

Key components of a Comprehensive Development Plan are the goals and policies. The issues and concerns of the citizens 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 for future growth, development and change within Buena Vista County. Consensus on "What is good land use?" and "How to manage change in order to provide the greatest benefit to the County and its residents?" is formed. Buena Vista County's goals and policies attempt to address various issues, regarding the questions of "how" to plan Buena Vista County 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 within a county. In order to attain certain goals and/or policies within county government, they may need to be modified or changed from time to time.

Policies are concerned with defining and implementing the broad goals of the Comprehensive Plan.
Policies are a means to achieving the goals established by the County. They are specific statements of principle or actions that imply a clear commitment that is not mandatory. Policies are part of the value system linking goals with action. Policies have three different elements:

- an end that needs to be achieved,
- a means by which to achieve that end, and

- an administrative mechanism by which the means are carried out

These policies will synthesize the information from the goals, as well as the responses from the participants of the Town Hall meetings in order to develop solutions that will achieve the goals of the Comprehensive Plan. Therefore, policies play an important role in the Comprehensive Plan because they are the actions that need to be taken to meet the goals.

The goals and policies assure that the Comprehensive Plan accomplishes the desires of the residents in Buena Vista County. This section of the Comprehensive Plan is therefore a compilation of local attitudes that were generated through public meetings and workshops. When followed, development proposals in the County will be evaluated as to their relationship with the citizens' comments. Therefore, "goals and policies" should be referred to as diligently as the Future Land Use Map or any other part of the Comprehensive Plan when reviewing and/or making recommendations on planning issues. Likewise, they should be current, in order to reflect the attitudes and desires of the County and its residents.

It is important for counties to establish their goals and policies in a manner that allows for both long-term and short-term accomplishments. The short-term goals and policies serve several functions:

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

Buena Vista County Town Hall Meetings

During February 6-9, 2006, a total of 10 town hall meetings were held across the county in order to gather input on issues facing the residents of Buena Vista County. At each meeting the group in attendance was asked to identify negative and positive aspects of the County. The residents were also asked what they felt the vision of Buena Vista should be for the future. Finally, the citizens were asked how it would be best to achieve the vision. The attendees then ranked their three top priorities for each question. The following information summarizes the results of each question and the corresponding percentage (i.e. importance) the residents of Buena Vista County indicated for each question.

Note the number of points for each question may differ due to the fact that not all residents prioritized three concerns for each question or they used all of their points to indicate one major problem that needed action. In addition, not every resident of Buena Vista County will agree with the order of these issues or that these were all the aspects of the County that should have been listed, but this was taken from the participants at the town hall meetings. Another detail of note, not all issues indicated have goals and policies identified since they do not have bearing on the land use of the County. The County, through the appropriate governing bodies, should attend to the issues not addressed by the goals and policies due to their specific nature.

As stated before, during the town hall meetings the participants where asked four separate questions which included the following:

Positives - *"What do you like about Buena Vista County?"*

The participants in the Town Hall Meetings were asked to respond to this question as honestly as possible. They were told this was a brainstorming exercise, and that there was no wrong or bad response. Through brainstorming and listing to every response, the participants are more likely to engage in a discussion that can lead to more responses. The reasoning behind this question is to identify what topics in the County are positive so that through the process these will remain positive.

Improvements - *"What needs to be improved in Buena Vista County?"*

This question was presented to the participants just as the positive question was, as a brainstorming exercise. The reasoning behind this question is to identify topics in the County that could be positives and through comprehensive planning these can become positives during the planning period.

Vision - *"What is your vision for Buena Vista County?"*

This question allows participants to discuss what they feel the future of Buena Vista County will be. A vision is a roadmap to the future. This gave the participants an opportunity to dream a little and express their desires for the county.

Accomplish - *"What do we need to do to accomplish this vision?"*

After listing thoughts and ideas about the vision of Buena Vista County participants were asked how they best thought the vision could be accomplished.

TABLE 35: TOWN HALL MEETINGS RESULTS, SIOUX RAPIDS

POSITIVES	Total	% of Total
Good Post Secondary Ed Facilities/Programs	8	20.5%
Good Communication w/Hospital/Rescue Services	8	20.5%
GoodRoads (Paved/Gravel) & Bridges	5	12.8%
Ethanol Plant (Albert City)	5	12.8%
Wind Farm	4	10.3%
Good Parks	4	10.3%
Strong Ag Economic Base	3	7.7%
Employment Opportunities	2	5.1%
Good Communication w/County Sheriff	0	0.0%
TOTALS	**39**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Improved County/City Cooperation (W/I Region)	9	22.0%
More Mid & Upper Level Job Opportunities	8	19.5%
More Ag Job Opportunities	7	17.1%
Market County More - Web., ETC	5	12.2%
Wastewater Treatment	4	9.8%
Odor (Livestock)	2	4.9%

Blacktop Around Lake	2	4.9%
Better County Zoning (RE: Rural Housing)	2	4.9%
Space Needs in Courthouse	1	2.4%
Roads	1	2.4%
Newspaper	0	0.0%
Lower Taxes	0	0.0%
Lower Crime Rate	0	0.0%
Deer Population Control	0	0.0%
TOTALS	**41**	**100.0%**
VISION	**Total**	**% of Total**
Countywide Cooperation	8	18.6%
Capitalize on Natural Resource Value of Little Sioux River	8	18.6%
Clean Water	5	11.6%
Odor Free (Ag Production)	4	9.3%
Deer Hunting Lodge Opportunity	4	9.3%
Upper Level Housing/Home Enterprise Zone	3	7.0%
No Restricted Bridges or Culverts	3	7.0%
Better Acceptance of Ethnic Diversity	3	7.0%
Less Ag Regulations	2	4.7%
Bike Trail Along Little Sioux	2	4.7%
Barn Quilts	1	2.3%
State of the Art Emergency OP Center	0	0.0%
Junk/Debris Removal	0	0.0%
Better Sanitary Services (AKA Trash Removal)/Recycling	0	0.0%
TOTALS	**43**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Get More People Involved (Within & Between Communities)	15	36.6%
County Leaders/Adopt More of Regional Attitude	10	24.4%
Improve Technology/Availability/Utilization	6	14.6%
Coordination of Stakeholders	5	12.2%
Political Will	3	7.3%
Assignment of Duties/Responsibilities	2	4.9%
TOTALS	**41**	**100.0%**

Source: Town Hall Meeting, Sioux Rapids Legion Building, February 6, 2006

TABLE 36: TOWN HALL MEETING RESULTS, NEWELL

POSITIVES	**Total**	**% of Total**
Friendly People	3	20.0%
Churches	3	20.0%
Strong Law Enforcement	3	20.0%
Schools	1	6.7%
Roads	1	6.7%
Multi-Generational	1	6.7%
Low Crime Rate	1	6.7%
Ability to Get State & Federal Dollars	1	6.7%
Storm Lake and River Valley	1	6.7%
Steady Population/Stable	0	0.0%
Positive Image	0	0.0%
Low Population Density	0	0.0%
Industry	0	0.0%
TOTALS	**15**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Encourage Young Generations to Stay/Come Back	4	28.6%
Affordable Housing Needed	3	21.4%
Shared Vision	2	14.3%
Main Streets of Small Towns/More Businesses	2	14.3%
Tax Equity	1	7.1%
Communication Between Gov't Bodies (& Within)	1	7.1%

Average Wage Rate/More Mid & Upper Level Jobs	1	7.1%
Water Quality/Streams & Rivers	0	0.0%
Recreational Ops./Social	0	0.0%
Quality of Housing/Rehab	0	0.0%
Access to Broadband	0	0.0%
Ability to Live in Country	0	0.0%
TOTALS	**14**	**100.0%**
VISION	**Total**	**% of Total**
More Complementary Businesses	4	30.8%
Keep Semblance of Local Schools in Town	3	23.1%
County Wide Cooperation	2	15.4%
Thriving Main streets	1	7.7%
Marketable Community	1	7.7%
Maintain a Divers Ag Economy	1	7.7%
Continued Assimilation of the Workforce	1	7.7%
Continued Acceptance of Diversity	0	0.0%
Clean Air & Water	0	0.0%
TOTALS	**13**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Open/Positive Attitudes	3	18.8%
More Dollars	3	18.8%
More Community (Capacity) Involvement	3	18.8%
Friendly Gov't Structures/Taxes, Policies, Etc.	3	18.8%
Advertise Community Assets	3	18.8%
Better Education of Minorities - RE: Area Values	1	6.3%
Maintaining Existing Industry	0	0.0%
Improving Technology Base	0	0.0%
Better Stakeholder Education/Info	0	0.0%
Attitude Surveys/Needs Assessment for Broader Feedback	0	0.0%
TOTALS	**16**	**100.0%**

Source: Town Hall Meeting, Newell Council Chambers, February 7, 2006

TABLE 37: TOWN HALL MEETING RESULTS, ALTA

POSITIVES	**Total**	**% of Total**
Family Oriented	5	26.3%
B.V. University/IA Central CC	3	15.8%
Alternative Energy Source	3	15.8%
Storm Lake and River Valley (Recreation)	2	10.5%
Good, Fertile Soils	2	10.5%
Good Secondary Road System	2	10.5%
Lack of Traffic	1	5.3%
County Parks	1	5.3%
Clean Air	0	0.0%
B.V. Regional Medical Center	0	0.0%
TOTALS	**19**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Diversification of Economy (More Higher Wage Jobs)	6	28.6%
Hwys 3 & 6 (Infrastructures)	4	19.0%
Balance of Livestock Operation & Housing (Where to Locate?)	3	14.3%
Water Quality (Streams & Rivers)	2	9.5%
Safety Areas (Storm Shelters, Etc.)	2	9.5%
Cooperation Between Jurisdications	2	9.5%
Shortage of Public Access for Hunting	1	4.8%
Conflicts in Land Uses/Annexations, Etc.	1	4.8%
Promote Rural Water for Economic Dev. & Rural Housing	0	0.0%
TOTALS	**21**	**100.0%**
VISION	**Total**	**% of Total**
More Affordable Housing for Persons of Low/Mod Income	7	29.2%

More Diversified Economy	4	16.7%
4 - Lane Hwy 20	4	16.7%
More High Tech Jobs	3	12.5%
Financial Capability of Maintaining Existing Roads	2	8.3%
County/City Cooperation & Regional Coop	2	8.3%
Modern Educational Facilities (All Levels)	1	4.2%
Clean Water	1	4.2%
Triple Percent of People Speaking more than 1 Language	0	0.0%
Tax Incentive for Rural Housing Development	0	0.0%
Modern Well-Equipped Emergency Services	0	0.0%
Increase (Double) Rural Population	0	0.0%
Bring Back/Keep Younger Population	0	0.0%
TOTALS	**24**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Money $$$ (Outside Sources)	4	20.0%
Develop Incentives for Housing (Rural & Affordable)	4	20.0%
Regional Grant Writing	3	15.0%
Partnership w/BVU Extension Services	2	10.0%
Market Quality of Life in County/Cities/Rural Areas	2	10.0%
Improve Technology	2	10.0%
Develop "Good Neighbor" Policy for County	2	10.0%
Develop Social Programs (IE, Scholarships, Etc.)	1	5.0%
Regional Economic Development Efforts	0	0.0%
TOTLAS	**20**	**100.0%**

Source: Town Hall Meeting, Alta Council Chambers, February 7, 2006

TABLE 38: TOWN HALL MEETINGS RESULTS, LAKESIDE

POSITIVES	**Total**	**% of Total**
Storm Lake	6	24.0%
Schools/BV University/IA Central CC	6	24.0%
Space/Openness	3	12.0%
Parks	2	8.0%
Employment Opportunities	2	8.0%
Roads/Transportation	1	4.0%
Nature Trails	1	4.0%
Make-up/Morals of the Citizenry	1	4.0%
Doctors/Hospital	1	4.0%
Churches	1	4.0%
Awaysis/Tourism Attractions	1	4.0%
Work Ethic	0	0.0%
Wind Farm	0	0.0%
Location	0	0.0%
Growing/Stable Population	0	0.0%
Farm Land	0	0.0%
TOTALS	**25**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
4-Lane Highway 20 & 71	5	17.9%
More Shopping/Retail Opps.	4	14.3%
More Opportunities for Professional Employment	4	14.3%
Lights on Intersection	3	10.7%
Animal Confinement/Air Quality	3	10.7%
Package-type Sewer System	2	7.1%
Clean-up Abandoned House Locations	2	7.1%
Bike/Ped Trail Along Highway	2	7.1%
Wider Shoulders Along Roads	1	3.6%
Locating Undocumented Wells	1	3.6%
Locating Septic Systems That Dump into Ditches	1	3.6%
Litter Control from Landfill	0	0.0%

TOTALS	28	100.0%
VISION	**Total**	**% of Total**
Completed Dredging Project	7	25.9%
High Tech Jobs	6	22.2%
More Businesses	5	18.5%
Utilize Little Sioux River Corridor	2	7.4%
Expaded Hwy System (IE - 4 Lanes)	2	7.4%
County Wide Bike Paths - Especially C65	2	7.4%
Upgraded Airport	1	3.7%
Involved in Raccoon River Project	1	3.7%
Assimilation of New Residents	1	3.7%
Rails to Trails - Old MWNW RR	0	0.0%
More Retail	0	0.0%
More Lake Rec. Opportunities/Festivals	0	0.0%
Hwy Commercial Opportunities @ Interchanges	0	0.0%
Casino	0	0.0%
Anticipate K-12 Consolidation	0	0.0%
TOTALS	**27**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Funding Source	7	24.1%
More Employment	6	20.7%
Involvement of Political Officials	4	13.8%
Grant Writer	4	13.8%
Pre-Disaster Mitigation Planning/Funding	3	10.3%
Community Involvement/Education	2	6.9%
Positive Attitude	1	3.4%
Develop New Leadership	1	3.4%
Develop Incentives	1	3.4%
Partnerships to Create Opportunities	0	0.0%
Partner w/ISU, ICCC, BCU	0	0.0%
Higher Ed Opportunities Continued	0	0.0%
Development of Knowledge Base	0	0.0%
Assist Developers w/Process Location/ETC	0	0.0%
TOTALS	**29**	**100.0%**

Source: Town Hall Meeting, Lakeside Council Chambers, February 7, 2006

TABLE 39: TOWN HALL MEETING RESULTS, STORM LAKE

POSITIVES	Total	% of Total
Quality of Life	4	18.2%
Project Analysis	4	18.2%
Economic Development Efforts	3	13.6%
Renewable Energy	2	9.1%
Diverse Population	2	9.1%
B. V. University	2	9.1%
Storm Lake	1	4.5%
Public/Private Schools	1	4.5%
Health Care Facilities	1	4.5%
Diverse Economy	1	4.5%
Diverse Customs/Cultures	1	4.5%
Service Organizations	0	0.0%
Rural Water	0	0.0%
Regional Economic Development Strategy	0	0.0%
Newspapers	0	0.0%
Natural Resources	0	0.0%
Good Roads	0	0.0%
Fire/EMS/Plice	0	0.0%
Financial Institutions	0	0.0%
Faith Based Organizations	0	0.0%
Engaged Population/Citizenry	0	0.0%

Collaborative Efforts	0	0.0%
Assimilation of New Families	0	0.0%
TOTALS	**22**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Higher Paying Jobs	4	18.2%
Shared Vision and Goals	3	13.6%
Housing Availability	3	13.6%
Negative Perception of Storm Lake	2	9.1%
Access to 4-Lane Hwys - US20 & 71	2	9.1%
Youth/Young Adult Rec Opportunities	1	4.5%
Protection of Quality of Life	1	4.5%
Increase Outdoor Rec. Areas/Facilities	1	4.5%
Identity of Storm Lake	1	4.5%
Housing Affordability	1	4.5%
Cooperation Among Jurisdictions - meetings/etc.	1	4.5%
Communication with Citizens & Stakeholders	1	4.5%
Assistance to Minority Business Start-ups	1	4.5%
Upgrades of Em. Mgmt/Response Capabilities	0	0.0%
Stereotypes of Rural Area & Economy	0	0.0%
Recognition of Community	0	0.0%
Keep Young People	0	0.0%
Housing Quality	0	0.0%
Attention to Transient Work Force	0	0.0%
TOTALS	**22**	**100.0%**
VISION	**Total**	**% of Total**
Diversity of Job Opportunities	4	18.2%
Shared Vision and Cooperation	3	13.6%
Recognized Identity & Reputation	3	13.6%
Well Developed Businesses @ Hwy 7/7/ & 3/71	2	9.1%
Storm Lake as the Regional Hub of HW IA	2	9.1%
Stable Housing Growth	2	9.1%
Protect Natural Resources	2	9.1%
Maintain Quality of Life	2	9.1%
County Wide Trails	1	4.5%
"Good Neighbor" Policy in Rural Areas	1	4.5%
US 71 Properly Zoned for Growth	0	0.0%
Traffic Congestion	0	0.0%
Tourism Linkages & Marketing	0	0.0%
Stable/Increased School Population/Enrollment	0	0.0%
Keep NW Part of County As Is	0	0.0%
Dependable Mass Transit	0	0.0%
Controlled Growth & Development	0	0.0%
TOTALS	**22**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Incentives for Job Creation	8	36.4%
Communication with Urban & Rural Stakeholders	4	18.2%
Money - Outside Sources	3	13.6%
Relationships with State & Federal Officials	2	9.1%
Identify and Protect Critical Resources/Areas	2	9.1%
Rec Center in Storm Lake	1	4.5%
Encourage Local Investment	1	4.5%
Constant Education Regarding Plans & Projects	1	4.5%
Political Will	0	0.0%
Incentives to Build Housing in Rural Areas	0	0.0%
Incentives to Assist Communities	0	0.0%
TOTALS	**22**	**100.0%**

Source: Town Hall Meeting, Storm Lake Council Chambers, February 8, 2006

TABLE 40: TOWN HALL MEETINGS RESULTS, TRUESDALE

POSITIVES	Total	% of Total
Low Taxes	5	26.3%
Good Leadership	5	26.3%
County/City Collaboration for Services	4	21.1%
Good Law Enforcement	3	15.8%
Strong Work Ethic of the People	2	10.5%
Good Roads	0	0.0%
TOTALS	**19**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Tax Incentives for New Home Construction	5	26.3%
Road Maintenance - No Respect for Personal Property	4	21.1%
Snow Removal (Timely)	4	21.1%
Rural Weather Emergency Alert System	3	15.8%
Communication Between Cities/County	3	15.8%
Water Quality (Rivers & Lakes)	0	0.0%
TOTALS	**19**	**100.0%**
VISION	**TOTAL**	
More Business and Industry	NA	
ACCOMPLISH	**Total**	**% of Total**
Incentives for New Businesses	6	31.6%
Communication Between County & Cities	6	31.6%
Focus More Away from Storm Lake/At Cities	2	10.5%
"In-Sourcing" Jobs to Small Towns Rather than "Out-Sourcing to Foreign Countries	2	10.5%
Public Hunting Lands & Recreation Areas	1	5.3%
Promote County More	1	5.3%
Communicate with Legislators (Keep Informed)	1	5.3%
Term Limits for Supervisors	0	0.0%
Non-Partisan Politics	0	0.0%
TOTALS	**19**	**100.0%**

Source: Town Hall Meeting, Truesdale Lake Council Chambers, February 8, 2006

TABLE 41: TOWN HALL MEETING RESULTS, REMBRANDT

POSITIVES	Total	% of Total
Storm Lake/Little Sioux River	3	30.0%
Good Roads/Well Maintained	3	30.0%
Parks & Recreation Opportunities	1	10.0%
Good Educational Base/Schools, BVU, & ICCC	1	10.0%
Good Business Growth/Agri Business - Coop Expansion	1	10.0%
County Wide Bike Trail	1	10.0%
Good Tax Base	0	0.0%
Analysis Project	0	0.0%
TOTALS	**10**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
More Community Input in Decision Making Process	3	27.3%
Better Voter Turnout	0	0.0%
Lack of Involvement	3	27.3%
Communication/Education	5	45.5%
TOTALS	**11**	**100.0%**
VISION	**Total**	**% of Total**
Youth Involvement to Carry On	6	46.2%
Clean Water (Lake/Rivers) + Clean Air	3	23.1%
Improving Environment For Business Growth	2	15.4%
Making Analysis a Destination for Tourism/Expanding Other Tourism	1	7.7%
Agribusiness Growth/Dairy, Spin-off Businesses	1	7.7%
TOTALS	**13**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
More Community Involvement	4	36.4%

Budgeting/Scheduling	3	27.3%
Working w/Other Cities & County (Cooperation)	2	18.2%
Develop Law Enforcement Capabilities (Surveillance Camera System, Etc)	1	9.1%
Agri Business & Complementary Business (Dairy)	1	9.1%
Grants/Other Outside Funding Sources	0	0.0%
Education of Shareholder	0	0.0%
TOTALS	**11**	**100.0%**

Source: Town Hall Meeting, Rembrandt Lake Council Chambers, February 8, 2006

TABLE 42: TOWN HALL MEETING RESULTS, MARATHON

POSITIVES	Total	% of Total
Clean Air/Clean Water	4	25.0%
Quality of Life	3	18.8%
Good Road System	3	18.8%
Sheriff's Dept/New Jail	2	12.5%
BV Reg. Medical Center	2	12.5%
Strong Ag Economy	1	6.3%
Buena Vista University	1	6.3%
Storm Lake	0	0.0%
Analysis	0	0.0%
TOTALS	**16**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
Expand Renewable Energy	2	13.3%
Bring In More Industry/Business for More Jobs	2	13.3%
Improve Water Quality (Streams/Rivers/Lakes)	2	13.3%
Expand on Recreational Opportunities	2	13.3%
Higher Paying Jobs	2	13.3%
Update Codes Relating to S.O.B.'s	2	13.3%
Sanitary Landfill/Consistent Waste Collection	1	6.7%
Shared Vision Between Cities & County	1	6.7%
Improve Tourism Development	1	6.7%
TOTALS	**15**	**100.0%**
VISION	**Total**	**% of Total**
Keep/Bring Back Youth/Young Families	3	21.4%
Road/Bridge Improvements (4-Lane Hwy 20 & 71)	2	14.3%
More/Better Jobs	2	14.3%
Improving Primary/Secondary Education	2	14.3%
Safe/Good Law Enforcement	1	7.1%
New Technology for Biomass	1	7.1%
Marked Drive Trail/Guided Tour	1	7.1%
Less Corporate Farming	1	7.1%
Everyone Working to Market the County	1	7.1%
Quality Water (Drinking/Natural)	0	0.0%
Improved Housing (Quality/Affordability)	0	0.0%
TOTALS	**14**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Money $$$/Grants & Other Funding Sources	5	35.7%
Young/Youth Involvement	3	21.4%
Strong Leadership & Commitment	3	21.4%
Have a Plan	3	21.4%
Tax Breaks to Bring Industry in	0	0.0%
Talk to County, State & Federal Elected Officials	0	0.0%
Communication Between & Within Communities & County	0	0.0%
TOTALS	**14**	**100.0%**

Source: Town Hall Meeting, Marathon Council Chambers, February 8, 2006

TABLE 43: TOWN HALL MEETING RESULTS, ALBERT CITY

POSITIVES	Total	% of Total

USI BIO Plant	4	33.3%
Good Water Quality (Lakes & Rivers)	3	25.0%
New Jail	2	16.7%
Fairgrounds	1	8.3%
Elevator	1	8.3%
Availability of Rural Water	1	8.3%
Water For Fire Suppression	0	0.0%
Threshermen	0	0.0%
Storm Lake & Little Sioux River Valley	0	0.0%
ISU Extension/4-H	0	0.0%
Infrastructure/Road & Bridges	0	0.0%
Good Soil	0	0.0%
BVC Law Enforcement	0	0.0%
BV University/ICCC	0	0.0%
TOTALS	**12**	**100.0%**
IMPROVEMENTS	**Total**	**% of Total**
More Industry/Jobs	4	40.0%
Communication Between Cities & County Supervisors, Etc.	2	20.0%
Outdoor Recreation/Access for Hunting, Fishing, Biking	1	10.0%
More Alternative Energy Sources	1	10.0%
Fairground Buildings Need Repair	1	10.0%
Cellular Phone SVC	1	10.0%
Water Quality (Lakes & Streams)	0	0.0%
Preservation of Historical Buildings	0	0.0%
Day Care Facilities	0	0.0%
TOTALS	**10**	**100.0%**
VISION	**Total**	**% of Total**
More Recreational Options	3	25.0%
High-Tech Jobs	3	25.0%
Growth/Population	3	25.0%
More Wind Turbines	1	8.3%
Hwy 20/71 4-Lanes	1	8.3%
Harmonious Co-Existence of Housing & CAFO's/Good Neighbor Policy	1	8.3%
Regional Center - Court System	0	0.0%
Opportunities for Persons of all Ages/Keeping & Brining Back Youth & Families	0	0.0%
More Cell Phone Towers	0	0.0%
Local & Regional Cooperation & Marketing	0	0.0%
Expanded Markets	0	0.0%
Enhances Transport System/Facilities	0	0.0%
Diverse Population	0	0.0%
Continued Economic Development	0	0.0%
TOTALS	**12**	**100.0%**
ACCOMPLISH	**Total**	**% of Total**
Money	4	50.0%
Open and Honest Communication	3	37.5%
Shared Vision	1	12.5%
Solid/Proper Zoning	0	0.0%
Mitigate Hazards Within Facilities/Areas	0	0.0%
Get Youth Involvement/Input	0	0.0%
Flexible Regulations/Policies	0	0.0%
Coordination w/all Gov't Levels	0	0.0%
Community Involvement	0	0.0%
Celebrate Success	0	0.0%
Build Community Capacity	0	0.0%
TOTAL	**8**	**100.0%**

Source: Town Hall Meeting, Albert City- City Hall, February 9, 2006

TABLE 44: TOWN HALL MEETING RESULTS, LINN GROVE

POSITIVES	**Total**	**% of Total**

Good Place to Raise Children	7	18.9%
Bluebird Creek	7	18.9%
Dam Site	5	13.5%
Wildlife Protection Areas Set Aside	3	8.1%
Good Schools	3	8.1%
Good Churches	3	8.1%
Wind Power/Electricity	2	5.4%
Towns that Want to Work Together	2	5.4%
Parks/Campground	2	5.4%
BV Univ./ICCC	2	5.4%
Trumpeter Swans	1	2.7%
Natural Well/Little Sioux River	0	0.0%
Historical Sites	0	0.0%
Excellent Road System	0	0.0%
Adequate Shopping	0	0.0%
TOTALS	**37**	**100.0%**
IMPROVED	**Total**	**% of Total**
Road Striping	7	23.3%
Dam Improvements	7	23.3%
Communication Between Local/State/Federal Officials	5	16.7%
Additional Recreational Activities	5	16.7%
Better Lighted Intersections on County Roads	4	13.3%
Black Top Road To B.V. Park	2	6.7%
Water Quality (Lakes & Streams/Drinking)	0	0.0%
Sewer	0	0.0%
Places to Spend Money	0	0.0%
New/Updated Airport Guidance System	0	0.0%
TOTALS	**30**	**100.0%**
VISION	**Total**	**% of Total**
Activities for Youth & Children	6	27.3%
Safe Roads/Well Maintained	4	18.2%
Prairie/Resource Preservation/Restoration	4	18.2%
Hard Surfaced Roads to County Park	4	18.2%
Dam Site Improved	4	18.2%
Maintain and Develop Scenic Areas While Protection is Maintained	3	13.6%
Improved Raceway/Fairgrounds	1	4.5%
Roadside Beautification	0	0.0%
More Rec Areas	0	0.0%
More Places to Shop/Etc	0	0.0%
Improved Water Quality	0	0.0%
Disaster Resistant Structures	0	0.0%
TOTALS	**26**	**118.2%**
ACCOMPLISH	**Total**	**% of Total**
Work to Keep Small Town Feel in Cities	7	24.1%
Outside Funding Sources	7	24.1%
Cooperation	5	17.2%
Celebrate Success	5	17.2%
Youth Involvement	2	6.9%
Create Skilled Jobs	2	6.9%
Ways to Keep/Attract People	1	3.4%
Develop New Leadership	0	0.0%
Develop a Knowledge Base	0	0.0%
TOTALS	**29**	**100.0%**

Source: Town Hall Meeting, Linn Grove Council Chambers, February 9, 2006

TABLE 45: TOWN HALL MEETING RESULTS, BUENA VISTA COUNTY TOTALS

POSITIVES	POINTS	% of Total
Schools/BV University/IA Central CC	29	13.9%
Quality of Life/Good Place to Raise Children	14	6.7%

Good Roads	14	6.7%
Recreation-Storm Lake/Little Sioux River	12	5.7%
Wind Farm/Renewable Energy	11	5.3%
Good Parks	8	3.8%
Good Communication w/Hospital/Rescue Services	8	3.8%
BVC Law Enforcement	8	3.8%
Good Churches	7	3.3%
Bluebird Creek	7	3.3%
Friendly People/Character/Work Ethic	6	2.9%
Low Taxes	5	2.4%
Good Leadership	5	2.4%
Good Business Growth/Agri Business - Coop Expansion	5	2.4%
Family Oriented	5	2.4%
Ethanol Plant (Albert City)	5	2.4%
Dam Site	5	2.4%
USI BIO Plant	4	1.9%
Project Analysis	4	1.9%
Employment Opportunities	4	1.9%
County/City Collaboration for Services	4	1.9%
Clean Air/Clean Water	4	1.9%
BV Reg. Medical Center	4	1.9%
Wildlife Protection Areas Set Aside	3	1.4%
Space/Openness	3	1.4%
Good Water Quality (Lakes & Rivers)	3	1.4%
Towns that Want to Work Together	2	1.0%
Parks/Campground	2	1.0%
Good, Fertile Soils	2	1.0%
Diverse Population	2	1.0%
Trumpeter Swans	1	0.5%
Public/Private Schools	1	0.5%
Nature Trails	1	0.5%
Multi-Generational	1	0.5%
Low Crime Rate	1	0.5%
Lack of Traffic	1	0.5%
Fairgrounds	1	0.5%
Elevator	1	0.5%
Diverse Economy	1	0.5%
Diverse Customs/Cultures	1	0.5%
County Wide Bike Trail	1	0.5%
Availability of Rural Water	1	0.5%
Analysis/Tourism Attractions	1	0.5%
Ability to Get State & Federal Dollars	1	0.5%
Water For Fire Suppression	0	0.0%
Threshermen	0	0.0%
Service Organizations	0	0.0%
Regional Economic Development Strategy	0	0.0%
Positive Image	0	0.0%
Newspapers	0	0.0%
Natural Resources	0	0.0%
Low Population Density	0	0.0%
Location	0	0.0%
ISU Extension/4-H	0	0.0%
Historical Sites	0	0.0%
Growing/Stable Population	0	0.0%
Fire/EMS/Police	0	0.0%
Financial Institutions	0	0.0%
Engaged Population/Citizenry	0	0.0%
Assimilation of New Families	0	0.0%
Analysis Project	0	0.0%

Adequate Shopping	0	0.0%
TOTAL	**209**	**100.0%**
IMPROVEMENTS	**POINTS**	**% of Total**
More Mid/Upper Level Job Opportunities/Diversify/Pay	25	11.9%
Communication Between Cities/County	18	8.6%
More Ag Job Opportunities/Industrial	13	6.2%
Expand on Recreational Opportunities/Youth	10	4.8%
Roads/Striping/Wide Shoulders	9	4.3%
Dam Improvements	7	3.3%
Affordable Housing Needed	7	3.3%
Shared Vision and Goals	6	2.9%
Wastewater Treatment /Septics/Sewer	5	2.4%
Tax Incentives for New Home Construction	5	2.4%
Market County More - Web., ETC	5	2.4%
Communication/Education	5	2.4%
Communication Between Local/State/Federal Officials	5	2.4%
4-Lane Highway 20 & 71	5	2.4%
Snow Removal (Timely)	4	1.9%
Road Maintenance - No Respect for Personal Property	4	1.9%
More Shopping/Retail Opportunities	4	1.9%
More Community Input in Decision Making Process	4	1.9%
Hwys 3 & 6 (Infrastructures)	4	1.9%
Encourage Young Generations to Stay/Come Back	4	1.9%
Better Lighted Intersections on County Roads	4	1.9%
Rural Weather Emergency Alert System	3	1.4%
Negative Perception of Storm Lake	3	1.4%
Lights on Intersection	3	1.4%
Lack of Involvement	3	1.4%
Improve Water Quality (Streams/Rivers/Lakes)	3	1.4%
Expand Renewable Energy	3	1.4%
Balance of Livestock Operation & Housing (Where to Locate?)	3	1.4%
Animal Confinement/Air Quality	3	1.4%
Update Codes Relating to S.O.B.'s	2	1.0%
Safety Areas (Storm Shelters, Etc.)	2	1.0%
Package-type Sewer System	2	1.0%
Odor (Livestock)	2	1.0%
Main Streets of Small Towns/More Businesses	2	1.0%
Clean-up Abandoned House Locations	2	1.0%
Blacktop Around Lake	2	1.0%
Black Top Road To B.V. Park	2	1.0%
Bike/Pedestrian Trail Along Highway	2	1.0%
Better County Zoning (RE: Rural Housing)	2	1.0%
Access to 4-Lane Hwys - US20 & 71	2	1.0%
Tax Equity	1	0.5%
Space Needs in Courthouse	1	0.5%
Shortage of Public Access for Hunting	1	0.5%
Sanitary Landfill/Consistent Waste Collection	1	0.5%
Protection of Quality of Life	1	0.5%
Locating Undocumented Wells	1	0.5%
Improve Tourism Development	1	0.5%
Fairground Buildings Need Repair	1	0.5%
Conflicts in Land Uses/Annexations, Etc.	1	0.5%
Cellular Phone SVC	1	0.5%
Assistance to Minority Business Start-ups	1	0.5%
Upgrades of Emergency Mgmt/Response Capabilities	0	0.0%
Stereotypes of Rural Area & Economy	0	0.0%
Recognition of Community	0	0.0%
Quality of Housing/Rehab	0	0.0%
Promote Rural Water for Economic Dev. & Rural Housing	0	0.0%

Preservation of Historical Buildings	0	0.0%
Places to Spend Money	0	0.0%
Newspaper	0	0.0%
New/Updated Airport Guidance System	0	0.0%
Lower Taxes	0	0.0%
Lower Crime Rate	0	0.0%
Litter Control from Landfill	0	0.0%
Keep Young People	0	0.0%
Deer Population Control	0	0.0%
Day Care Facilities	0	0.0%
Better Voter Turnout	0	0.0%
Attention to Transient Work Force	0	0.0%
Access to Broadband	0	0.0%
Ability to Live in Country	0	0.0%
TOTALS	**210**	**100.0%**
VISION	**POINTS**	**% of Total**
More/Better Jobs/Technology	18	9.2%
Youth Involvement to Carry On	12	6.1%
County/City Cooperation & Regional Coop	12	6.1%
Hwy 20/71 4-Lanes	9	4.6%
Clean Water (Lake/Rivers) + Clean Air	9	4.6%
More Business and Industry	8	4.1%
Capitalize on Natural Resource Value of Little Sioux River	8	4.1%
More Affordable Housing for Persons of Low/Mod Income	7	3.6%
Completed Dredging Project	7	3.6%
Protect Natural Resources	6	3.1%
County Wide Bike Paths - Especially C65/LittleSioux/Rails2Trails	6	3.1%
More diversified Economy	5	2.6%
Safe Roads/Well Maintained	4	2.0%
Odor Free (Ag Production)	4	2.0%
More Complementary Businesses	4	2.0%
Hard Surfaced Roads to County Park	4	2.0%
Deer Hunting Lodge Opportunity	4	2.0%
Dam Site Improved	4	2.0%
Upper Level Housing/Home Enterprise Zone	3	1.5%
Shared Vision and Cooperation	3	1.5%
Recognized Identity & Reputation	3	1.5%
No Restricted Bridges or Culverts	3	1.5%
More Lake Rec. Opportunities/Festivals	3	1.5%
Maintain and Develop Scenic Areas While Protection is Maintained	3	1.5%
Keep/Bring Back Youth/Young Families	3	1.5%
Keep Semblance of Local Schools in Town	3	1.5%
Improving Primary/Secondary Education	3	1.5%
Growth/Population	3	1.5%
Everyone Working to Market the County/Tourism	3	1.5%
Better Acceptance of Ethnic Diversity	3	1.5%
Well Developed Businesses @ Hwy 7/7/ & 3/71	2	1.0%
Utilize Little Sioux River Corridor	2	1.0%
Storm Lake as the Regional Hub of HW IA	2	1.0%
Stable Housing Growth	2	1.0%
Maintain Quality of Life	2	1.0%
Less Ag Regulations	2	1.0%
Harmonious Co-Existence of Housing & Cafo's/Good Neighbor Policy	2	1.0%
Financial Capability of Maintaining Existing Roads	2	1.0%
Upgraded Airport	1	0.5%
Thriving Main streets	1	0.5%
Safe/Good Law Enforcement	1	0.5%
New Technology for Biomass	1	0.5%
More Wind Turbines	1	0.5%

Marked Drive Trail/Guided Tour	1	0.5%
Less Corporate Farming	1	0.5%
Involved in Raccoon River Project	1	0.5%
Improved Raceway/Fairgrounds	1	0.5%
Continued Assimilation of the Workforce	1	0.5%
Barn Quilts	1	0.5%
Assimilation of New Residents	1	0.5%
Agribusiness Growth/Dairy, Spin-off Businesses	1	0.5%
US 71 Properly Zoned for Growth	0	0.0%
Triple Percent of People Speaking more than 1 Language	0	0.0%
Traffic Congestion	0	0.0%
Tax Incentive for Rural Housing Development	0	0.0%
State of the Art Emergency OP Center	0	0.0%
Roadside Beautification	0	0.0%
Regional Center - Court System	0	0.0%
More Places to Shop/Etc	0	0.0%
More Cell Phone Towers	0	0.0%
Keep NW Part of County As Is	0	0.0%
Junk/Debris Removal	0	0.0%
Enhances Transport System/Facilities	0	0.0%
Disaster Resistant Structures	0	0.0%
Dependable Mass Transit	0	0.0%
Controlled Growth & Development	0	0.0%
Continued Economic Development	0	0.0%
Clean Air	0	0.0%
Casino	0	0.0%
Better Sanitary Services (AKA Trash Removal)/Recycling	0	0.0%
Anticipate K-12 Consolidation	0	0.0%
TOTALS	**196**	**100.0%**
ACCOMPLISH	**POINTS**	**% of Total**
Money $$$/Grants & Other Funding Sources	33	15.8%
Get More People Involved (Within & Between Communities)	21	10.0%
Develop Incentives-Communities/Housing/Jobs	19	9.1%
Working w/Other Cities & County (Cooperation)	13	6.2%
County Leaders/Adopt More of Regional Attitude	10	4.8%
Coordination of Stakeholders-Rural/Urban	9	4.3%
Work to Keep Small Town Feel in Cities	7	3.3%
Grant Writer/Regional	7	3.3%
More Employment	6	2.9%
Involvement of Political Officials	6	2.9%
Improve Technology/Availability/Utilization	8	3.8%
Young/Youth Involvement	5	2.4%
Celebrate Success	5	2.4%
Strong Leadership & Commitment	4	1.9%
Pre-Disaster Mitigation Planning/Funding	3	1.4%
Political Will	3	1.4%
Open/Positive Attitudes	3	1.4%
Open and Honest Communication	3	1.4%
More Community (Capacity) Involvement	3	1.4%
Have a Plan	3	1.4%
Friendly Gov't Structures/Taxes, Policies, Etc.	3	1.4%
Budgeting/Scheduling	3	1.4%
Advertise Community Assets	3	1.4%
Partnership w/BVU Extension Services	2	1.0%
Market Quality of Life in County/Cities/Rural Areas	2	1.0%
Identify and Protect Critical Resources/Areas	2	1.0%
Focus More Away from Storm Lake/At Cities	2	1.0%
Develop "Good Neighbor" Policy for County	2	1.0%
Create Skilled Jobs	2	1.0%

Assignment of Duties/Responsibilities	2	1.0%
"In-Sourcing" Jobs to Small Towns Rather than "Out-Sourcing to Foreign Countries	2	1.0%
Ways to Keep/Attract People	1	0.5%
Shared Vision	1	0.5%
Rec Center in Storm Lake	1	0.5%
Public Hunting Lands & Recreation Areas	1	0.5%
Promote County More	1	0.5%
Positive Attitude	1	0.5%
Encourage Local Investment	1	0.5%
Develop Social Programs (IE, Scholarships, Etc.)	1	0.5%
Develop Law Enforcement Capabilities (Surveillance Camera System, Etc)	1	0.5%
Constant Education Regarding Plans & Projects	1	0.5%
Communicate with Legislators (Keep Informed)	1	0.5%
Better Education of Minorities - RE: Area Values	1	0.5%
Agri Business & Complementary Business (Dairy)	1	0.5%
Term Limits for Supervisors	0	0.0%
Tax Breaks to Bring Industry in	0	0.0%
Solid/Proper Zoning	0	0.0%
Regional Economic Development Efforts	0	0.0%
Partnerships to Create Opportunities	0	0.0%
Partner w/ISU, ICCC, BCU	0	0.0%
Non-Partisan Politics	0	0.0%
Mitigate Hazards Within Facilities/Areas	0	0.0%
Maintaining Existing Industry	0	0.0%
Higher Ed Opportunities Continued	0	0.0%
Flexible Regulations/Policies	0	0.0%
Develop a Knowledge Base	0	0.0%
Celebrate Success	0	0.0%
Attitude Surveys/Needs Assessment for Broader Feedback	0	0.0%
Assist Developers w/Process Location/ETC	0	0.0%
TOTALS	**209**	**100.0%**

Source: Town Hall Meetings, Recap

GOALS AND POLICIES FOR BUENA VISTA COUNTY

The goals and policies that have been generated for Buena Vista County are organized into general categories. The categories are broad enough to allow many issues to fall within them, but narrow enough to allow a fairly clear distinction and separation. These categories are used for a logical organization of goals and policies. The categories are:

General Land Use—15 votes

Preservation of Open space

Improving conflicts in land use and annexation

Agricultural Land Use—12 votes

Balance of livestock operations and housing

Reduction of animal odors, etc.

Fewer agricultural regulations

Fewer corporate farms

Commercial Land Use—23 votes

Additional shopping opportunities, businesses

Thriving mainstreets

Industrial Land Use—28 votes

Coop Expansion

Additional Agribusiness

Residential Land Use—21 votes

Educational—62 votes

More affordable housing
Improvements of abandoned housing
Stabile housing growth

Environment –96 votes

Improved use of renewable energy
Clean water and air
Natural resource value of the Little Sioux River
Protection of natural resources

Economic Development—114 votes

More/better jobs and technology
Regional attitude
More diversification

Public Works—22 votes

Removal of restricted bridges and culverts
Wastewater treatment/septics/sewer
Timely snow removal

Health and Safety—122 votes

Quality of Life
Efficient emergency response, law enforcement
"Good Neighbor" policy

Implementation, Evaluation, and Review—159 votes

Public participation
Good communication between cities and the county
Shared vision and goals

Strong Schools (Buena Vista University, ICCC)
Quality public and private schools
Marketing of county assets and attractions

Water Resources—2 votes

Good rural water supply
Need to locate undocumented wells

Public Facilities and Taxes—51 votes

Expansion of recreational opportunities for youth
Tax incentives for new construction

Transportation—70 votes

Good Roads
Road Improvement (striping, widening, etc.)
Additional surfaced roads, expansion of existing highways

Parks and Recreation—27 votes

Good existing parks
Improve/create trail system
Additional recreation opportunities

When considering the following goals and policies, it may become evident that they may conflict with one another. In such cases, these conflicts should be discussed and the relative importance of one policy be weighed against another to determine the best course of action.

Goal #1 - Land Use

Buena Vista County should manage the land in a cost-effective and efficient manner while protecting the environment and natural resources, as well as maintaining and increasing land values. Guiding future growth and development in Buena Vista County towards a compact pattern of land uses based upon the efficient and economical expansion of public infrastructure will continue to maintain and improve the quality of life for Buena Vista County residents.

General Policies

1.1 A review and comment process will be required prior to the planning commission and County board public hearings for any proposed activity that should occur within County zoning jurisdiction.

1.2 The cost of required improvements, both on-site and off-site, to a subdivision that exclusively serve the property owners of the subdivision shall be borne by the developer or those property owners within said subdivision.

1.3 Designate areas in the Land Use Plan that address the anticipated future growth needs of the County.

1.4 Develop zoning and subdivision regulations that promote efficient land usage and long-term adequacy, while avoiding land use conflicts and inefficient extensions of public infrastructure.

1.5 Encourage the development of vacant lands located near cities by providing regulatory incentives that promote appropriate land uses.

1.6 Discourage and minimize leap-frog development outside of cities.

1.7 Buena Vista County should allow agricultural production in all areas in which agricultural uses are appropriate, and non-agricultural development in agricultural areas should be allowed in specifically designated areas which do not negatively impact agricultural uses.

1.8 County will support cities in development of subdivisions in transitional agriculture areas.

Agricultural Policies

1.9 Criteria should be developed to designate areas of Buena Vista County identified as "Prime Farmland". Special consideration for the use of this land should assist in the protection of these lands for traditional agricultural purposes.

1.10 Uses promoting the diversification of agricultural production by generating additional value to existing products should be encouraged to locate or expand within Buena Vista County.

1.11 Encourage low non-farm densities in prime farmland areas and other agricultural districts by establishing specific residential lot size requirements and proper separation distances between residential and agricultural uses.

1.12 Protect prime agricultural land and maintain the quality of groundwater.

1.13 Support livestock production and related agricultural businesses that are designed, operated, and located consistent with maintaining the health, safety, welfare of the natural resources of the county and its residents.

Commercial Policies

1.14 Encourage commercial developments close to the cities or major highways within the county.

1.15 Utilize frontage roads when commercial use loacte along major roads/highways.

1.16 Minimize the impact of future commercial growth in the cities by limiting commercial development to neighborhood commercial centers at predetermined major intersections.

1.17 Encourage controlled "strip" commercial development.

Industrial Development Policies

1.18 Industrial development is important to the economic vitality of Buena Vista County. The provision of adequate urban services is a major concern in an industry's location and operation. Industrial parks serve to consolidate industrial activities into a designated area in order to reduce incompatibility with surrounding land uses.

1.19 Industrial uses which are compatible with surrounding residential and are willing to bear the cost of maintaining high performance characteristics and attractive site and building layout and design, will be encouraged to locate or relocate in designated low impact industrial parks.

1.20 Industrial uses will be located so that adequate buffer space is provided between incompatible land uses.

1.21 The County will develop appropriate performance, design and specification standards and requirements for all existing and possible future industrial uses to guide their location or relocation in the County and within existing industrial areas of the County.

1.22 The county will encourage industrial development that is energy efficient. Energy conservation measures that will be promoted include, but are not limited to, efficient building, manufacturing, and heating practices; co-generation systems including the burning of wastes; and utilization of new and alternative systems.

1.23 The county will encourage industrial development which bases its products on renewable and indigenous raw materials.

1.24 The county will recognize and encourage small scale industries as viable alternatives to larger, conventional enterprises.

Residential Land Use Policies

1.25 Residential development should be separated from more intensive uses, such as agriculture, industrial, and commercial development, by the use of setbacks, buffer zones, or impact easements.

1.26 Encourage low non-farm densities in prime farmland areas and other agricultural districts by providing residential lot size requirements and proper separation distances between residential and agricultural uses.

1.27 Utilize information tools such as slopes, soil types, floodplain, road and bridge development and maintenance plans, when identifying areas for residential development.

1.28 Develop subdivision regulations that provide for a quality living environment while avoiding inefficient and expensive public infrastructure expansions.

1.29 The right of Buena Vista County property and landowners to the exclusive, uninterrupted use of their land should be protected through regulations that are sensitive to the effects of activities that are nuisance in nature.

1.30 New residential developments should be accompanied by a subdivision agreement, which provide for the maintenance of common areas, easements and drainage including low impact development plans.

1.31 Encourage new residential development to locate near urban centers or areas identified to accommodate higher density growth, especially when direct access to existing, hard-surfaced roads or highways can be accomplished.

1.32 Establish zoning and subdivision design standards that require buffers, and screening standards and functional usable green space, for new developments.

1.33 All proposed rural area development and facilities shall be appropriately, if not uniquely, suited to the area or site proposed for development.

1.34 All proposed rural area development and facilities shall not be located in any natural hazard area, such as a floodplain or area of geologic hazard, steep slope, severe drainage problems or soil limitations for building or sub-surface sewage disposal, if relevant; as an exception, development may be allowed on a case by case basis, subject to plans being developed by an engineer licensed in the State of Iowa; engineering documents that specify the specific measures needed to compensate for the site conditions present, and prevent erosion, flood damage, or structural failure from occurring; and alternate means of sewage treatment may be approved only if they will meet the requirements as outlined by the Iowa Department of Natural Resources.

1.35 All proposed rural area development shall be furnished with adequate access – when possible a minimum of two entrances and exits.

1.36 App proposed rural area development shall be furnished with adequate individual or community water supply, if required.

1.37 All proposed rural area development shall not be justified solely or even primarily on the argument that the land is less costly than better alternative sites.

1.38 No proposed rural area development shall require or substantially influence the extension of costly services and facilities normally associated with urban centers, such as municipal water supply and sanitary sewer, power, and gas, nor shall it impose inordinate additional net costs on mobile, centralized public services, such as police and fire protection, school busing or refuse collection.

1.39 Buena Vista County will recognize that the appropriate location of very low density residential development is in designated areas where commitments to such uses have already been made through existing subdivisions or development.

1.40 Buena Vista County will review and accommodate, wherever possible, any new or alternative development concepts or proposals, provided such concepts or proposals are consistent with and do not compromise in any way the established disposition of land uses on the Land Use Map or the goals and policies of the Plan.

Goal #2 - Education

Quality education is a vital component of positive growth. Although the County's role is limited, policies will be followed in locating development to insure cost effective use of existing facilities. Also, the county will coordinate with all school districts to insure adequate areas for future educational needs. Above all, the main goal is to encourage excellence in the public school curriculum and facilities.

Education Policies

2.1 Set development standards that coordinate reservation of land for future educational needs.

2.2 Cooperate with school systems in expanding public uses of educational facilities.

Goal #3 - Environment

The natural resources (soils, groundwater, surface water and air) and environment of Buena Vista County shall be protected and managed to insure long term quality, availability and sustainability for the current and future residents and industries of Buena Vista County. The goal of Buena Vista 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.

Environment Policies

3.1 Zoning regulations and design standards should be created to protect the environmental and natural resources of Buena Vista County through the encouragement of preservation and conservation practices.

3.2 A Surface Water Protection Area should be established to protect the unique character and environmental quality of the area surrounding the Little Sioux River and other rivers.

3.3 General land use regulations should require all development in the jurisdiction of Buena Vista County to demonstrate a positive, or at least neutral, impact upon the soil, groundwater, surface water, and air.

3.4 Federal requirements and regulations shall be followed when land use regulations are being developed. Buena Vista County regulations should, at a minimum, be as strict as federal standards, and where necessary, may be enforced in a manner stricter than federal guidelines.

3.5 Protect all water supplies and aquifers from development activities that may affect the quality and/or quantity of water. Development shall demonstrate a positive or, at least, a neutral impact on ground water supplies.

3.6 Identify with Iowa Department of Natural Resources, Farm Service Agency, United States Department of Agriculture, and County Conservation Board, possible sediment control regulations to minimize potential soil loss and/or contamination problems in specific areas of Buena Vista County.

3.7 Establish zoning and subdivision standards that support conservation of natural resources. This can be accomplished by the creation of Planned Unit Developments implementing the use of conservation easements and other tools.

3.8 Discourage conversion of designated prime agricultural land and soils to non-agricultural uses by targeting less productive agricultural soils (crops) for urban or non-farm uses. Establish a hierarchy of minimum lot sizes to encourage non-farm growth in the appropriate locations.

3.9 Encourage conservation of hillsides by establishing criteria and limiting development along specific slopes in the County.

3.10 Promote quality land management through the development of erosion control design standards for rural subdivisions and larger commercial and industrial developments.

3.11 Encourage the preservation of environmentally sensitive areas such as wetlands, wooded areas, waterways (streams, ponds, lakes, rivers, etc.), and other amenities. Preservation should occur through no

development, incorporation of these areas into conservation areas, and/or erosion control measures when these amenities are downstream from a proposed development.

3.12 Groundwater supplies will be protected from critical draw-downs or disrupted flows where municipal watersheds exist; surface water supplies will be protected from unusual increases in turbidity and sedimentation caused by farming, excavation or grading; and both ground water and surface water supplies will be protected from contamination by subsurface sewage disposal systems, sewage lagoons, and other sources of pollution

Goal #4 - Water Resources

Efficient use of county water resources is a benefit to all citizens, as water is an essential part of the livability of an area. Conserve and manage water resources efficiently in order to sustain and enhance the quantity and quality for human consumption and to abate flood, erosion and sedimentation problems.

Water Resources Policies

4.1 Buena Vista County will cooperate with federal and state agencies, the cities of the County, and the local soil and water conservation district to identify, conserve and develop water resources on a long-range, multiple-use basis in response to need, with full consideration given to the benefits, costs, potential uses and the carrying capacity of the resource.

4.2 Buena Vista County will participate in the FEMA National Flood Insurance Program to prevent flood-caused loss of life and property, by identifying and mapping the floodplains and floodways of the county, restricting land uses within the floodplains to those which are open and undeveloped, including forestry, agriculture, wildlife habitat, recreational areas and encouraging improved watershed management practices and the construction of watershed storage projects for flood control.

4.3 Buena Vista County will support soil and water conservation efforts to aid in erosion, sediment, and run-off control.

4.4 Buena Vista County will coordinate with and support city, regional, state and federal water-quality plans and programs so that high water quality will be achieved in the cities of the County, that sound watershed management practices will take place, and that improved treatment of point and non-point sources of water pollution will be achieved.

4.5 Buena Vista County will encourage the prudent use of all County resources and support the development of water conservation techniques and practices.

4.6 Buena Vista County will protect riparian vegetation from damage that may result from land use applications for development that is otherwise permitted outright or conditionally under County zoning regulations. Buena Vista County will need to review land use applications for development in riparian areas in an effort to mitigate or prevent damage to riparian vegetation that might result from the development.

4.7 Land use management practices and nonstructural solutions to problems of erosion and flooding are preferred to structural solutions. Water erosion control structures, including riprap and fill, should be reviewed by the appropriate authorities to insure they are necessary, are designed to incorporate vegetation where possible, and designed to minimize adverse impacts on water currents, erosion, and accretion patterns including low impact development practices.

4.8 Buena Vista County will cooperate with the U.S. Fish and Wildlife Department, the cities in the county, and the U.S.D.A. to identify, conserve, and protect fish and wildlife habitat; determine areas of critical imbalance and threats to particular species; and formulate and implement measures for the improvement of existing habitat and the creation of new habitat where needed.

4.9 Buena Vista County recognizes the need to conserve and protect fish and wildlife habitat in its planned implementation measures; and the following will be considered in any public or private land use determination subject to county review: the impact of filling or drainage of swamps or marshes; the damming of rivers and streams; the location and construction of highways and utility transmission lines; and any other land development activities which significantly interfere with the vegetation or soil cover or drainage patterns in critical habitat areas.

4.10 All identified sensitive wildlife areas will be classified as exclusively agricultural areas or open space. No major land use change, including, but not limited to road construction and recreational developments will, be permitted without approval of measures to limit undesirable impacts on sensitive wildlife areas.

Goal #5 - Economic Development

Buena Vista County should promote and encourage economic development necessary to support the needs of present and future Buena Vista County residents such that the Buena Vista County economy is stable and diverse. Buena Vista County should also maintain a rate and pattern of economic growth sufficient to prevent recurring high levels of unemployment and under-employment in the county, balance the real property tax base of the various cities and strengthen local economic bases.

Economic Development Policies

5.1 Agriculture and agricultural employment, including value-added agricultural businesses, should be promoted throughout Buena Vista County.

5.2 The recreational assets of Buena Vista County should be expanded and improved such that they may be promoted through tourism based endeavors, including hunting, fishing, and camping.

5.3 The youth of Buena Vista County should be encouraged to remain in Buena Vista County or return to Buena Vista County after completion of their post-secondary education. Economic development projects should be established to provide such encouragement. The youth of Buena Vista County should be involved in the identification and development of these projects.

5.4 Encourage, promote and develop economic development partnerships between local entities and private companies to assist existing and expanding business enterprises.

5.5 Support area historical, cultural and recreational activities. Buena Vista 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.

5.6 Encourage and promote the development of home-based businesses and telecommuting based upon high technology communication infrastructure.

5.7 Buena Vista County will encourage economic development projects which do not conflict with the agricultural character of the County.

5.8 Buena Vista County will encourage development along the U.S. 71 Highway corridor.

Goal #6 - Public Facilities and Taxes

The County sees a need to integrate public facilities and services in an effort to eliminate costs and conserve energy. Coordination with all jurisdictions and affected agencies is essential in the development and maintenance of adequate public facility systems. The expansion of public facilities is a major factor in directing development.

Public Facilities and Taxes Policies

6.1 Encourage the location of public and semi-public facilities in a manner consistent with the sector of the County they are intended to serve.

6.2 Encourage the protection of the Storm Lake Municipal Airport from adjacent incompatible land uses and/or activities that could impact the present and/or future use of the airport as an essential public facility, endanger the lives of people on the ground and/or promote inadvertent growth of incompatible land uses.

6.3 Continually evaluate the airport's physical and technological conditions to monitor and prepare for necessary upgrades.

6.4 Public facilities such as schools or churches should be located near populated areas.

6.5 Public facilities such as County yards and maintenance buildings shall be located in key areas of the county, which efficiently serves the public.

6.6 Support area historical and cultural activities.

6.7 The County should continue to work with the Iowa Lakes Regional Water System and Cherokee Rural Water System to expand rural water across the entire county, although the County Board or Supervisors shall not be the primary player in this activity.

6.8 Buena Vista County will coordinate with the cities within its jurisdiction to provide an orderly phasing of water, sanitary sewerage, storm drainage and other public services and facilities within the urban growth boundaries.

6.9 Public facilities and services for rural areas will be provided and maintained at appropriate levels.

6.10 Buena Vista County will coordinate with the cities, and appropriate local, state, and federal agencies in providing for the health and service needs of the public, particularly the needs of the disadvantaged, including the young, the elderly and the handicapped.

6.11 Buena Vista County will encourage the dedication of major drainage-ways such as wetlands, swales, intermittent creek basins and roadside depressions for the purpose of storm water collection.

6.12 The development of sanitary sewer systems will be supported where such systems conform to all applicable federal and state standards pertinent to the collection, treatment, and final disposal of effluent.

Goal #7 - Public Works

Buena Vista County shall pursue programs and facilities to insure adequate utilities will be considered and will be compatible with the county's land use policies. Goals include protecting current and future water well fields and aquifers; promote development that utilizes existing facilities and capacities; and develop new utility system facilities and capacities that support development goals.

Public Works Policies

7.1 Implement development and design standards that protect the area around municipal well fields located in the county through the Iowa Department of Natural Resources Wellhead Protection Program.

7.2 Utilize soil suitability data from this plan and the Buena Vista County soils survey when evaluating development proposals proposing septic system or lagoons for sewage treatment. Ultimately, decisions should be made based upon a professional soil analysis.

Goal #8 - Transportation

Development in Buena Vista County shall be guided to safely utilize existing public investment in roads, and programs to reduce road development or maintenance. The transportation goal of Buena Vista County is to develop and support an efficient road system to serve current and future circulation and access needs. Provide and encourage an efficient, safe, convenient transportation and communication system, including road, rail, waterways, public transit and air, to serve the needs of existing and projected urban and rural development within the county. The county will also accommodate the regional movement of people and goods, recognizing the economic, social and energy impacts of the various modes of transportation.

Transportation Policies

8.1 When new development is contemplated, due consideration must be given to the carrying capacity of the existing road system in the area, and development should be discouraged from occurring in areas where the road system is insufficient to handle any additional traffic load.

8.2 Improve, develop, and maintain well-traveled roads with hard surfacing.

8.3 Right-of-way and pavements shall be sufficiently wide and of sufficient strength to accommodate anticipated future traffic loads.

8.4 Commercial signage should be limited to major arterials, shall be kept to a minimum, and shall be low profile.

8.5 Encourage the on-going replacement of older, dilapidated bridges throughout the county

8.6 Develop a plan of education/action to prevent and cleanup roadside dumping in the rural areas of the County.

8.7 Continue working with the Iowa Department of Transportation and public input to upgrade highways in and through the county by either resurfacing or widening of existing State and County Highways.

8.8 Develop land use policies that work strongly with existing and proposed transportation systems and upgrades. The regional transportation needs must be addressed primarily in respect to the utilization of the county's arterials as state thoroughfares.

8.9 Due primarily to the increasing traffic load and traffic hazards on all county roads, there is a need to control access points for future development.

8.10 All transportation-related decisions will be made in consideration of land use impacts including but not limited to adjacent land use patterns, both existing and planned, and their designated uses and densities.

8.11 Buena Vista County will encourage bicycle and pedestrian traffic as an element of the transportation system by coordinating with the cities within the county to develop an integrated system of safe and convenient bicycle and pedestrian ways to complement other modes of transportation.

8.12 Buena Vista County will require new development to limit access points on highways designated as arterials when alternative access points are feasible and to minimize direct access points onto arterial right-of-ways by encouraging the utilization of common driveways.

8.13 Transportation needs for the disadvantaged, such as the low income, the handicapped, and the elderly, will be considered in the development of a county transportation system.

8.14 All transportation-related decisions will be made in support of the efficient and economic movement of people, goods, and services throughout the region, and will be based on the location and adequacy of facilities for such goods and services.

Goal #9 - Health and Safety

Buena Vista County's goal is to continue to support health care, fire protection and law enforcement programs by exploring programs and alternative services to insure optimum service levels and public costs.

Health and Safety Policies

9.1 Regulation of land use developments affecting the health, safety and general welfare of the public.

9.2 Regulate nuisances and poorly maintained properties. This includes the continued efforts to regulate junk cars, junkyards and dilapidated/deteriorated residences/farm yards throughout the County.

9.3 Establish regulations that protect County residents from the secondary effects of adult entertainment.

Goal #10 - Parks and Recreation

Buena Vista County should provide adequate, park and recreation opportunities for the residents of Buena Vista County and the State of Iowa. These facilities should be a combination of expanding of existing facilities and the establishment of newer facilities.

Parks and Recreation Policies

10.1 Park and recreation facilities should be designed to accommodate the particular needs and interests of area residents while protecting, preserving, and conserving the environmental character and quality of the area.

10.2 Promote recreation as a continuing means of economic development for Buena Vista County.

10.3 Set standards that require or promote dedication of parks and open space.

10.4 Encourage recreational amenities offering year round enjoyment.

10.5 Work with developers of future rural subdivisions to create conservation areas through cluster subdivisions and conservation easements. These conservation areas should be connected from subdivision to subdivision when possible.

10.6 Buena Vista County will cooperate with all governmental and recreation agencies within the region to identify open space and scenic resources, to determine resident and non-resident recreation needs, and to formulate and implement measures for open space preservation and use.

10.7 Buena Vista County will seek to offer greater opportunities for water-based recreation on the Little Sioux River and its tributaries, Storm Lake, and Raccoon River.

10.8 Buena Vista County will recognize the development of an integrated bicycle and pedestrian trail system to provide recreational opportunities and to link open space, Buena Vista County communities and park areas.

10.9 For the purpose of implementing recreation programs and development, Buena Vista County will investigate funding alternatives such as tax levies, bonding grants in aid, user fees and subdivision ordinance stipulation.

Goal #11 - Implementation, Evaluation, and Review

Changing needs and conditions will necessitate future review, evaluation, and updating of the Comprehensive Development Plan and its supporting documents. Intergovernmental coordination of all planning activities affecting land uses within the county is necessary to assure an integrated comprehensive plan for Buena Vista County.

Implementation, Evaluation, and Review Policies

11.1 Buena Vista County will continue to implement an ongoing citizen involvement program that provides County residents opportunity to be involved in all phases of the planning process.

11.2 Buena Vista County will review any development concepts or proposals which conflict with the Land Use Map, goals or policies in light of changing needs and conditions and in keeping with established procedures of Plan evaluation, amendment, and update.

11.3 Buena Vista County will undertake a major update of the Comprehensive Development Plan and review of all supporting documents every ten years to ensure that an adequate factual basis for planning decisions is maintained.

11.4 Buena Vista County will encourage federal, state, and regional agencies and special districts to coordinate their planning efforts with those of the county.

ACHIEVE BUENA VISTA COUNTY

INTRODUCTION

Regardless whether people live in a large growing urban area or a small declining rural county, there will be changes in land uses throughout the planning period within any planning jurisdiction. The purpose of the Achieve Chapter is to provide a general guide to direct changes in land use and transportation over time. The resulting changes in land uses and transportation networks should be capable of coexisting with a minimum number of conflicts. This Chapter must reflect the existing conditions and be flexible in order to meet the needs of its citizens as well as their vision for the county's future.

Buena Vista County's jurisdiction extends to the corporate limits of each community. Therefore the county will need to work hand-in-hand with each community to ensure future land uses which are designated will benefit both the community and the county. Cooperation between jurisdictions is especially important east of the City of Storm Lake and Lakeside. Buena Vista County will need to work with each community to ensure the interest of all three jurisdictions are achieved.

The Achieve Chapter provides the basis for the formulation of land use regulations and the application of zoning districts. For this reason, it is imperative to formulate a plan tailored to the needs, desires, and environmental limitations of the planning area. The Achieve Chapter should promote 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 agricultural areas have been formed to guide the development of Buena Vista County's Achieve Chapter.

FUTURE LAND USE ELEMENTS

Buena Vista County's Achieve Chapter includes existing land use, future land use, transportation, and the county land use management policy (CLUMP). All of these elements are integrated in some form or another, to effectively evaluate development decisions.

- Existing Land Use (Envision Section)
- Existing Transportation (Envision Section)
- County Land Use Management Policy
- Future Land Use and Transportation

Principles and Concepts of the Buena Vista Achieve Chapter

- 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 quality of life of the County residents should be protected and preserved.
- Allow for changes in farming practices and the scale of agricultural production should be encouraged when the use is compatible with existing land uses. Negative impacts on incompatible land uses, environmentally

sensitive areas and issues impacting property values or the quality of life in the rural areas of the County should be kept to a minimum.

- Land use policies, which are to be implemented in the Future Land Use Plan, should be minimized to preserve the freedoms and the property rights enjoyed by the County residents. This plan should effectively address the basic protection of the existing land uses, property values, the local environment and quality of life. Development of future land uses that are inconsistent with these basic protections should be discouraged.
- Decisions about land use affect transportation systems and vice versa

COUNTY LAND USE MANAGEMENT POLICY (CLUMP)

Introduction to CLUMP

The CLUMP system has been developed as a broad policy that acknowledges existing land use patterns, existing and future market demands, and manages these factors in relation to one another. CLUMP establishes a long-range management policy that provides guidance for future development.

CLUMP was devised to identify and examine existing development trends within Buena Vista County including a review of two critical elements of the existing land use fabric within the County:

- Existing Land Use patterns and locations, and
- The density of residential development within the unincorporated areas of the County.

CLUMP balances the demand for urban and non-urban development with the preservation and conservation of agriculture and the fiscal responsibilities to provide services either at the County or the municipal level. CLUMP utilizes principles found within the "Smart Growth" movement. According to the Urban Land Institute's publication Smart Growth: Myth or Fact, a *major myth* is that *"Smart growth is a code word for no growth".* However, as the ULI points out, a *major fact* is that *"Smart growth recognizes that growth and development are both inevitable and beneficial"*.

> ***"The goal of smart growth is not "no growth" or even slow growth. Rather, the goal is sensible growth that balances our need for jobs and economic development with our desire to save our natural environment"***
> -Parris Glendening, Governor State of Maryland

CLUMP was developed on the belief that development pressures and demands exist and that the best approach is to acknowledge and accommodate these pressures through diligent planning. However, these pressures must be managed and channeled to areas that are in the process of developing, or areas that can accommodate this development over the long term.

CLUMP Policy Areas

The CLUMP concept centers on three policy areas: **Urban Reserve, Transitional Development**, and **Agriculture**. These areas generally identify different levels of development based upon proximity to existing urban centers or smaller developments; proximity to major transportation routes; existing land use densities; and potential land uses to be allowed in the future. The intent is to concentrate each of the different policy considerations into areas based upon these factors. In addition, intense development (major commercial centers, densely populated subdivisions, etc.) should be encouraged to locate within or adjacent to the existing communities of Buena Vista County. Ultimately, the CLUMP concept is to encourage growth and development within the unincorporated areas of Buena Vista County using a well-considered management approach

Urban Reserve Policy Area

The Urban Reserve Policy Area is intended to accommodate the following policies:

- Higher density development generally near urbanized areas /communities
- Location of higher intensity uses, commonly near major roadways
- Potential growth areas adjacent to the smaller communities

The Urban Reserve Policy Areas are generally located throughout Buena Vista County. The locations are as follows:

- The existing communities of Linn Grove, Sioux Rapids, Rembrandt, Marathon, Albert City, Truesdale, Alta, Storm Lake, Lakeside, and Newell.

The proposed land uses for the Urban Transition policy areas are:

- Industrial
- Commercial
- Residential, including single family residential
- Civic
- Parks / Recreation

When making future land use and zoning decisions, the policy requires any of these use types to be located within an appropriate policy area. These areas should allow for ample development opportunities while allowing for a controlled growth policy. All future development of this type should be located in the designated areas in order to minimize future sprawl and haphazard development.

Transitional Development Zone

The Transitional Development Zone policy area is intended to accommodate the following policies:

- Less dense types of developments generally within or near rural areas of the County that have already developed,
- Near the smaller communities of the County
- Near major roadways
- Near present acreage development or unincorporated areas of the County

Buena Vista County's Transitional Development Zone area has been established north of Linn Grove and Sioux Rapids, at the intersection of Highway 71 and Highway 3, between Alta and the city of Storm Lake, south of Storm Lake, southeast of Lakeside, and northwest of the city of Storm Lake.

The proposed land uses for the Transitional Development Zone policy areas are:

- Village and Rural Residential
- Transitional Agriculture
- Mixed uses
- Mixture of Agriculture and Agri-Businesses
- Civic
- Recreation
- Conservation

This policy requires any of these use types to be located within the policy area when making future land use and zoning decisions unless overlap uses are allowed in another policy area. Future development, especially the smaller commercial uses and rural residential should be designed in ways to minimize impact on surrounding uses (i.e. cluster development, development away from environmentally sensitive conditions). Key factors determining the Transitional Development Zone locations were the existing environmental factors near the Little Sioux River, the density of existing residential development, (particularly around Storm Lake), and commercial potential at the intersection of Highway 71 and Highway 3. The environmental factors, including groundwater vulnerability and areas near the Little Sioux River (topography and surface water quality), require any land use and zoning changes to the maps must consider the availability of groundwater on the site(s) and the impact on adjacent properties. All future development of this type should be located in the designated areas in order to minimize future sprawl and haphazard development.

Agriculture Policy Area

The Agriculture policy area is intended to accommodate the preservation of agricultural uses and Low Density Residential development, primarily farmsteads and residences connected to an existing farming operation. The Agriculture policy area is the remaining portions of Buena Vista County is not included in the Urban Reserve or Transitional Development Zone areas.

The proposed land uses for the Agriculture policy areas are:

- Agriculture
- Transitional Agriculture
- Mixture of Agriculture and agri-businesses
- Civic
- Recreation
- Conservation

Similar to the other CLUMP policies, only these use types are to be located within an Agriculture policy area. These areas have been identified based upon their lack of development and the ability to preserve the agricultural base of

Buena Vista County. All future development of this type should be located in the designated areas in order to minimize future sprawl and haphazard development.

FIGURE 27: CLUMP

FUTURE LAND USE GENERAL CATEGORIES

Agricultural Uses

The predominant factor for Buena Vista County's economy is intensive agricultural production. In order to abide by the principles and general land use concepts presented, the future land use in the rural portions of Buena Vista County should be left predominately in agricultural production, which is the primary existing land use. The use of land for crop production should be encouraged as a means of strengthening the local economy. Crop production in the county is not greatly influenced by the county's topography except for areas adjacent to the Little Sioux River to the north. Where there are steep slopes, crop production will be minimized; except, where the topography has been terraced to accommodate said production activity.

The use of land for livestock production should also be encouraged as a means of enhancing the economy; however, such production activity should be limited to where soil types and the landscapes have a limited risk of environmental degradation, including air quality and surface and groundwater contamination. Confined livestock feeding operations should be carefully located in order to avoid the potential for incompatibilities between land uses due to the production of odor, dust, or other characteristics. These incompatibilities can negatively affect the value and marketability of neighboring properties. Avoiding the degradation of natural resources including groundwater, surface water, and air quality and soil productivity should also take a priority when looking at the placement of these uses.

Farmsteads associated with agricultural production should continue to be supported as necessary and subordinate to agricultural production. These residential uses shall require a means of access through the continuation of roadway systems, public facilities, and services.

Environmental amenities, such as rivers, streams, wetlands, and Storm Lake, are critical to protecting and preserving the wildlife and water quality in the County. Confined livestock feeding and development of commercial or industrial uses in these environmentally sensitive areas should be closely monitored to decrease the risk of contaminating surface water and wetland areas. Due to the dependence upon groundwater for the majority of domestic uses, areas with elevated groundwater levels should be protected throughout the county.

Non-Farm Residential Development (Acreages)

Acreages, or non-farm residences, should be encouraged as an approach to economic and population growth in the appropriate areas. These uses provide additional residential choices for existing and future citizens. However, such development should avoid encroachment upon prime agricultural lands. These uses should be located in areas where proper access is available and where waste disposal systems can function properly without environmental degradation. This type of development should also be in close proximity to existing communities to alleviate County costs on infrastructure and services.

Non-farm rural residential uses should be developed either as individual housing sites or as residential subdivisions. Such development should be evaluated in terms of environmental limitations of the land, impact on prime farmland, marketability, and land use compatibility, as well as the impact on county services. Such uses, whether they occur as individual housing sites or as residential subdivisions in the rural areas of the County, should generally be limited to locations on or near improved county roads and/or major highways within the County. Non-farm 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).

Policies regarding non-farm rural development will allow the County to avoid the need for unnecessary improvement and expansion of the County road system, as well as, certain services impacted by said development. An exception to this limitation would be the development of non-agricultural housing around scenic areas in the County where major roadway access already exists.

Commercial and Industrial Uses

Opportunities for commercial and industrial areas in non-urban areas of the county are desirable for economic development in Buena Vista County. The locations of these uses should be reviewed carefully due to increased amounts of vehicular traffic, especially truck traffic. These future developments should be located along major highway cooridors which can support increased traffic. The existing and extensive network of paved roadways in the county provides the means to support such development.

Renewable energy sources such as wind turbines and bio-fuels should continue to be developed in the agricultural areas of the County. Wind power generation is a considerable means of economic development for rural areas of the County. Bio-fuel production in the county provides and important resource for the world's economy and new jobs locally.

However, these uses can produce potentially hazardous materials or otherwise undesirable materials should be monitored. It is critical to properly locate such uses in the County. When and if they are proposed, limits on the potential risks to the environment, as well as, adjoining or nearby property owners should be considered in order to minimize the impacts now and in the future.

Recreational Development

Opportunities for future recreational development should continuously be pursed. The Little Sioux River valley and Storm Lake offer numerous outdoor amenities. It is important to add to the existing inventory of recreational uses that add to the image of the county and increase the opportunity for economic development. These policies will aid in the enhancement of the quality of life for the citizens of Buena Vista County. The policies will aid in developing tourism opportunities within the County. It is important, however, to acknowledge the need to attract people, both

local citizens and citizens from outside the County, to such recreational areas. Development of recreational uses should take into consideration the need for proper access to these areas, as well as, proper advertisement to ensure proper utilization.

THE FUTURE LAND USE PLAN

The Future Land Use Plan for Buena Vista County has been established based upon all the land use concepts and policies discussed previously. Information gathered from public input, existing developmental patterns, and the current market are key components which are the base of the future land use plan. Primary land use categories to accommodate the expansion of existing and future development uses of the land are described below, these land use areas are:

- Agricultural
- Transitional Agricultural
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Industrial
- Public/Quasi-Public
- Parks/Recreation
- Conservation Overlay

The intention of the Future Land Use Plan is to protect the existing land uses and the environmental quality, as well as to promote pubic health, safety, and welfare of the Buena Vista County residents. Among all existing land uses agriculture is the most important to the local economy. Preservation and protection of this predominant activity and the activities established in the county to support agriculture are vital to future of Buena Vista County. This includes the protection of the residentially developed areas, while encouraging economic expansion in both the agricultural and non-agricultural sectors of the local economy. This expansion would occur through development of new and/or expanded land uses compatible with the existing uses, environmentally acceptable, and respects and supports the quality of life desired by the residents of Buena Vista County.

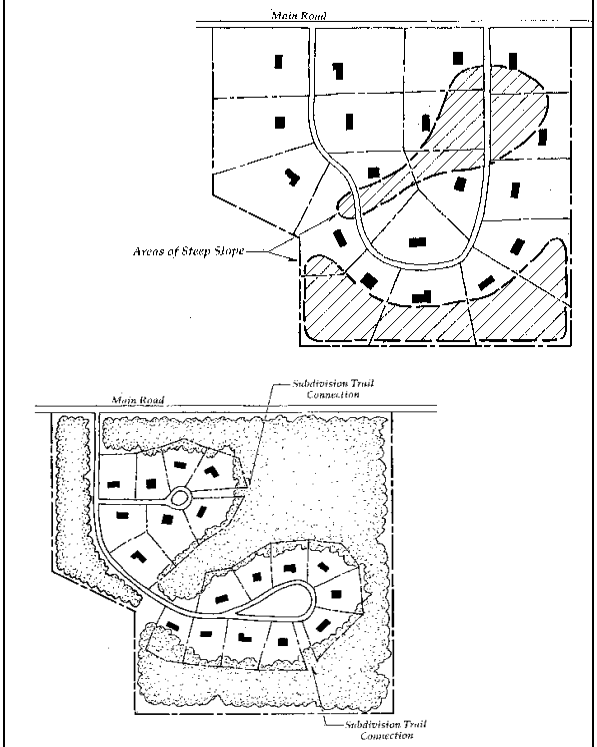
Agricultural

As shown in Figure 28, the majority of land in of the County is designated with the continuation of agriculture represented by the existing farm activities in the area.

As stated in the Environmental Section of this Plan, there are areas within Buena Vista County where the characteristics of the geology, hydrology, topography, and soils are more sensitive to higher intensity uses.

Transitional Agricultural

The Transitional Agricultural land use district is intended as a transitional agricultural land use district which is located in the close proximity of cities and other development areas where the land may eventually be suitable for future urban developments. This future land use area is suitable for both Transitional Agriculture and Low Density Residential uses as areas are rezoned depending upon the County Land Use Management Policy. It also recognizes an area that is next in line to be developed within the rural areas of the County.



An example of a Cluster Subdivision with the typical approach above.
Source: Randall Arendt

Residential Use Areas

The residential development areas are built around a three tier process based upon anticipated levels of density. The tier system has a direct connection to the zoning that may be applied to a specific piece of land or an entire residential subdivision. The primary principle that guides the tier system is the availability of infrastructure including water and roads. The following sections are a description of the three land use categories found within this tier system.

Residential Land Use areas in Buena Vista County are covered by three different districts dealing with varying levels of residential density. As mentioned, Low Density Residential land uses are allowed within a Transitional Agricultural land use area.

Low Density Residential

The recommended density for this land use designation is a minimum of three acres per unit. This area has been designated in areas north of Linn Grove and Sioux Rapids, around Rembrandt and Truesdale, northeast and south of Storm Lake, between Storm Lake and Alta, and around Alta. A small area of Low Density Residential has been designated by Newell to the east of the city. An example of a typical Low Density Residential land use area would be a cluster development that works to incorporate the natural amenities of the area. A portion of the development site would allow single family residential and the remaining portion of the site would be left undeveloped. City services could either be or not be provided within this land use designation but are not likely.

Medium Density Residential

The next highest development density of residential is medium density residential with a density that ranges from three to 10 units per acre. This would be a common density found throughout the existing portions of Buena Vista County communities. This density would allow lots for single family dwellings anywhere from 15,000 square feet to 7,500 square feet lots. City services such as water and sewer shall be provided.

A traditional single-family development constructed around existing trees stands.

Medium Density Residential development will allow for a greater number of homes than the Low Density Residential area, by providing more useable open space or specific amenities as a tradeoff. This density is intended to encourage variations to the standard detached single-family environment. The area will include predominantly single-family detached dwellings, with some occasional townhouse and condominium developments as well as some two- to four-family dwellings mixed in to the subdivision. In this way, these areas can provide some opportunity for affordable housing in such a way that it is incorporated into an overall mixed-use residential neighborhood. Most dwellings will be one or two story, and will maintain a typical residential scale and character.

Subdivisions should be designed using principles of environmental conservation and clustering, when appropriate. When clustering is used in subdivision design, the same number of dwelling units can be realized while natural features are preserved. The areas being protected can be used as natural open spaces, linear parks, or trails. This should affect property values in a positive way as people are drawn to live in areas that provide natural amenities.

This district is intended to provide character through allowing a number of alternative housing opportunities within a neighborhood setting. Because of the higher concentration of residents in some of these areas, open space and linear parks should be used in conjunction with this area to provide visual interest and contrast with the more densely developed residential form.

Multi-family units similar to these have a good residential scale

Another beneficial affect that accompanies cluster development is an overall increase in open space without having to increase the park system. Density bonuses can be used to encourage developers to preserve natural space within their developments, while still developing approximately the same number of lots.

High Density Residential

This Land Use area is intended to accommodate denser residential development. One area has been designated for High Density Residential west of Highway 71 to the east of Lakeside.

It is anticipated that this land use district will basically accommodate large scale developments, specifically apartment complexes. These areas should be located so they:

- Located on the perimeter of a city within Buena Vista County.
- Act as a buffer between more intensive uses, (i.e. Commercial and Industrial) and the Low Density and Medium Density Residential Areas
- Create a buffer between low density residences and intensive transportation residences.
- Be located along a Collector or Arterial street, as indicated on the Transportation Plan Map.
- The developed density of these areas should be 10-35 or more housing units per acre.

Public/Quasi-Public

The primary uses within the public land use areas are both active and passive recreation, which are largely owned and operated by Buena Vista County, the State of Iowa, or the federal government.

Industrial

This area is intended to accommodate smaller less intensive manufacturing companies to large-scale heavy industrial outfits such as agricultural processing facilities. Two such facilities have been proposed, a bio-diesel plant east of Storm Lake and an ethanol plant two miles west of Alta. The county will need to be selective regarding what of operations locate in these areas within the county. The county also must take into consideration the impacts of the industry on the area including both positive and negative aspects. Various impacts would include transportation, environmental, sewer, water, among others.

FIGURE 28: FUTURE LAND USE

LAND USE SUMMARY

The information provided within this Comprehensive Development Plan, including the Future Land Use Plan Map, is meant to be a living 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 references be made to the information provided within this document prior to making decisions about future land uses in Buena Vista County. As developmental patterns change the future land use map should be updated to reflect the intentions of the county.

The County should utilize the Future Land Use Plan as a guide for future land development within the County to protect existing land uses throughout the County's jurisdiction, as well as protect the citizens residing in or near the communities of the County. Adherence to the land use policies outlined will assist the County in avoiding conflicts between incompatible land uses. The concept of lessening the future impact upon the public infrastructure (roads) and tax base in the County will assist in preserving vital tax dollars and allowing for fiscally responsible developments in the County for years to come.

The future land use map and accommodating plan represents a generalized county-wide view of where future development should be. It is important to utilize the graphic data provided in the environmental chapter of this plan (Figure 11 through Figure 26) in conjunction with the Future Land Use Map, in order to properly locate future land uses. In addition, the need for on-site investigation will be necessary, especially when larger land use developments, such as agricultural processing plants, are scheduled for the rural areas of the County.

TRANSPORTATION SYSTEM PLAN

Introduction

Transportation networks bind communities together as well as providing a link to the outside world. Adequate circulation systems are essential for the safe and efficient flow of vehicles and pedestrians, and accessibility to all parts of the county for delivery from farm to market. The Transportation Plan will identify future improvements planned and those necessary to provide safe and efficient circulation of vehicles within the Buena Vista County, including major projects that ensure implementation of the Land Use Plan.

Transportation Planning and Land Use

Land use and transportation create the pattern for future development. An improved or new transportation route generates a greater level of accessibility and determines how adjacent land may be utilized in the future. In the short term, land use shapes the demand for transportation. However, new or improved roads, as well as, county and state highways may change land values, thus altering the intensity of which land is utilized.

In general, the greater the transportation needs of a particular land use, the greater its preference for a site near major transportation facilities. Commercial activities are most sensitive to accessibility since their survival often depends

upon the ease potential buyers can travel to this location. Thus, commercial land uses are generally located near the center of their market area along highways or at the intersection of arterial streets.

Industrial uses are also highly dependent on transportation access, but in a different way. For example, visibility is not as critical for an industry as it is for a retail store. Industrial uses often need access to more specialized transportation facilities, which is why industrial sites tend to be located near railroad lines or highways to suit individual industrial uses.

Existing Transportation Routes in Buena Vista County

Buena Vista County offers many alternative methods of transportation, whether for passengers or cargo. Compared to other counties in Iowa, Buena Vista County has a much higher amount of paved county roads. The major road system includes US Highway 71, Iowa Highways 3, 7, 10, and 110.

Street and Road Classification System

The Iowa Legislature has defined several road classifications. (Iowa Code Ann. § 306.3) These classifications are used to define typical traffic patterns and jurisdictional responsibility. The classifications area as follows:

- **"Area service"** or **"area service system"** means those secondary roads that are not part of the farm-to-market road system.
- **"County conservation parkways"** or **"county conservation parkway system"** means those parkways located wholly within the boundaries of county lands operated as parks, forests, or public access areas.
- **"Farm-to-market roads"** or **"farm-to –market road system"** means those county jurisdiction roads which serve principal traffic generating areas and connect such areas to other farm-to-market roads and primary roads. The farm-to-market road system includes those county jurisdiction roads providing service for short-distance intracounty and intercounty traffic or providing connections between farm-to-market roads and area service roads, and includes those secondary roads which are federal aid eligible. The farm-to-market road system shall not exceed thirty-five thousand miles.
- **"Interstate roads"** or **"interstate road system"** means those roads and streets of the primary road system that are designated by the Secretary of the United States Department of Transportation as the national system of interstate and defense highways in Iowa.
- **"Municipal street system"** means those streets within municipalities that are not primary roads.
- **"Primary roads"** or **"primary road system"** means those roads and streets both inside and outside the boundaries or municipalities which are under department jurisdiction.
- **"Public road right-of-way"** means an area of land, the right to possession of which is secured or reserved by the state or a governmental subdivision for roadway purposes. The right-of-way for all secondary roads is sixty-six feet in width, unless otherwise specified by the county board of supervisors of the respective counties.

- **"Road"** or **"street"** means the entire width between property lines through private property or the designated width through public property of every way or place of whatever nature if any part of such way or place is open to the use of the public, as a matter or right, for purposes of vehicular traffic.
- **"Secondary roads"** or **"secondary road system"** means those roads under county jurisdiction.
- **"State park, state institution, and other state land road system"** consists of those roads and streets wholly within the boundaries of state lands operated as parks, or on which institutions or other state governmental agencies are located.

Jurisdictional Responsibility

Depending on the classification of a particular road, various government agencies may have jurisdiction control over that road. (Iowa Code Ann. §306.4) The Iowa Code provides these guidelines to establish the responsibilities of the counties over their roadways:

- Secondary roadways fall under the jurisdiction of the County Board of Supervisors.
- Roads and streets within any state land, including parks, are within the jurisdiction of the government agency that exercises control over such state land. However, any roadway that is an extension of a primary or secondary road, which both enters and exits the state land at separate points, will come within the concurrent jurisdiction of the controlling agency and agency that exercises jurisdiction over the primary or secondary road.

Roads and streets within any county park or conservation area are within the jurisdiction of the county conservation board. However, any roadway that is an extension of a primary or secondary road, which both enters and exits the county park or county conservation area at separate points, will come within the concurrent jurisdiction of the county conservation board and the agency that exercises jurisdiction over the primary or secondary road.

Transportation Financing Issues

The Iowa Department of Transportation (IDOT) annually establishes a Five-Year Transportation Improvement Program. The Iowa Transportation Commission most recently approved the 2006-2010 plan on November 1, 2005. The Five-Year plan is developed to inform Iowa citizens of the planned investments in aviation, railroad, trails, and highway improvements. Regular meetings held around the state annually provide citizen input to the transportation planning process. The Five-Year Transportation Improvement Program is established based on existing federal and state programs, on estimates of funds expected to be available and on the estimated costs for construction, maintenance, and other work proposed to be accomplished. The Five-Year program is subject to modification subject to disaster, changes in available funding, or other factors.

Iowa Department of Transportation Proposed Improvements

According to the 2006-2010 Iowa Highway Program, there are no scheduled improvements for Buena Vista County.

General Development

Figure 29 displays the Existing and Future Transportation Plan for Buena Vista County. Current roadways have been classified into four categories, including major arterial, other arterial, major collector, and minor collector. In addition to the identification of existing roadways, future roads have also been identified as either future arterial or future collector.

Other proposed improvements have been identified on Figure 29 including the widening of US Highway 71 to four lanes, a number of turn lane/signalization/signage improvements, potential split-grade intersections, and geometric improvements.

Trail Development

The City of Storm Lake has developed a five-phase bike trail development system that extends out into the county. The proposed trail routes and Buena Vista County recreational areas are shown in Figure 30.

FIGURE 29: FUTURE TRANSPORTATION

FIGURE 30: ENVISION IOWA RECREATION PLAN

IMPLEMENT BUENA VISTA COUNTY

IMPLEMENT BUENA VISTA COUNTY

Successful development plans involve a great deal of work. This section of the plan contains the inspiration of the many county officials and residents who have participated in the planning process. However, the ultimate success of this plan remains in the dedication offered by each and every resident.

There are numerous goals and objectives in this plan. Its recommended to review the relevant goals during planning and budget setting sessions. It's also recommended that the County select three elements of the plan for immediate action; the goals of highest priority which becomes the Action Plan.

Action agenda

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 primarily responsible for implementing the goals and policies in Buena Vista County.

Support Programs for the Action Agenda

Four programs will play a vital role in the success of Buena Vista County's plan. These programs are:

1. Zoning Regulations--updated land use districts can allow the community to provide direction for future growth.

2. 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.

3. Plan Maintenance--an annual and five-year review program will allow the community flexibility in responding to growth and a continuous program of maintaining the plan's viability.

Plan Financing

The Implementation Plan is a reiteration of the Goals and Policies; however, the Goals and Policies have been prioritized by the importance to the community. This prioritization was undertaken during the comprehensive planning process with the Planning and Zoning Commission and the Plan Review Committee. The information represents potential projects, which need to be addressed by the county and key participants (see Goals and Policies section).

COMPREHENSIVE PLAN MAINTENANCE

Annual Review of the Plan

A relevant, up to date plan is critical to the on-going planning success. To maintain both public and private sector confidence; evaluate the effectiveness of planning activities; and, most importantly, make mid-plan corrections on the use of community resources, the plan must be current. The annual review should occur during the month of January.

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

- Whether the plan is current in respect to population and economic changes; and
- The recommended policies are still valid for the County and its long-term growth.

The Planning Commission should hold a public hearing on this report in order to:

1. Provide citizens or developers with an opportunity to present possible changes to the plan,
2. Identify any changes in the status of projects called for in the plan, and
3. Bring forth any issues, or identify any changes in conditions, which may impact the validity of the plan.

If the Planning and Zoning Commission finds major policy issues or major changes in basic assumptions or conditions have arisen which could necessitate revisions to the Comprehensive Plan, they should recommend changes or further study of those changes. This process may lead to identification of amendments to the Comprehensive Plan and would be processed as per the procedures in the next section.

Plan Amendment Procedures

It is anticipated that each year individuals and groups may come forward with proposals to amend the Comprehensive Plan. It is recommended that those proposals be compiled and reviewed once a year at the Annual Review. By reviewing all proposed amendments at one time, the effects of each proposal can be evaluated for impacts on other proposals and all proposals can be reviewed for their net impact on the Comprehensive Plan.

Unanticipated Opportunities

If major new, innovative development opportunities arise which impact several elements of the plan and which are determined to be of importance, a plan amendment may by proposed and considered separate from the Annual Review and other proposed Comprehensive Development Plan amendments. The County Zoning Administrator should compile a list of the proposed amendments received during the previous year; prepare a report providing applicable information for each proposal, and recommend action on the proposed amendments. The Comprehensive

Plan amendment process should adhere to the adoption process specified by Iowa law and provide for the organized participation and involvement of citizens.

Methods for Evaluating Development Proposals

The interpretation of the Comprehensive Development Plan should be composed of a continuous and related series of analyses, with references to the goals and policies, the land use plan, and specific land use policies. Moreover, when considering specific proposed developments, interpretation of the Comprehensive Development Plan should include a thorough review of all sections of the Comprehensive Development Plan.

If a development proposal is not in conformance or consistent with the policies developed in the Comprehensive Development Plan, serious consideration should be given to making modifications to the proposal or the following criteria should be used to determine if a Comprehensive Development Plan amendment would be justified:

- the character of the adjacent neighborhood
- the zoning and uses on nearby properties
- 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 community 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
- consideration of county staff recommendations