Chapter I.

Project Description and Process

VOTE FOR CLEARWATER COUNTY.

When you get to where the county division questions are on your ballot, be certain to mark it thus:

For the creation and organization of the proposed new county of,

| Clearwater, Yes, | |X| |

Its assesed valuation over one million, |$1,000,000.|

Area Thirty Townships.   Population 12,000

Project Description and Process

The Framework Plan for Clearwater County was developed to state the goals for land use in Clearwater County for the next twenty years. The Plan reflects the hard work put in by the project Steering Committee over a series of six meetings from May 1999 through January 2000. One of the tasks of the Steering Committee was to describe what Clearwater County should be like in twenty years. One of the clearest statements by the Steering Committee, expressed in many ways, is that in general Clearwater County residents like the County the way it is. This plan suggests ways to improve the County, but to a large extent it expresses the sentiment that we like the County the way it is.

The development of the plan was funded under a contract with the Northern Counties Land Use Coordinating Board (NCLUCB). NCLUCB is an association of ten counties in northern Minnesota whose mission is to provide leadership and support on regional issues of comprehensive land use and resource management that meet the social, environmental and economic needs of the people of the region. NCLUCB encourages governments to make land use and resource management decisions based on sound scientific data and community input.

The process of developing the plan included creating a project Steering Committee comprised of representative of various geographic areas, townships, cities, lake associations, County officials, and residents. A list of Steering Committee members is included on the *Acknowledgements* page at the beginning of the Plan.

Over a series of meetings, these residents accomplished the following tasks: they provided their visions for what they would like Clearwater County to look like in twenty years; they learned about the economics, land ownership, demographics, and natural resources of the County; they identified priority issues; and they developed a series of broad land use goals and more specific objectives for implementing the goals.

The tasks within the framework planning process were designed to answer the questions:
C   What is the County like now - Tasks: **background studies**
C   What do we want the County to be like in twenty years - Tasks: discussing **visions and prioritizing issues.**
C   How do we get from where we are now to where we want to go? - Task: developing land use **goals and objectives.**

Background studies on demographics, land ownership, natural resources, and economic development were compiled in both written and mapped forms. This information provided a base of reference as to the County's current status.

The project Steering Committee participated in exercises that discussed **visions for the County and prioritized issues.** The notes from these exercises are included in Appendix A to this report.

The themes touched on most often in vision statements were:
C   Farms - fewer or more in the future
C   More housing needed - growth issues
C   Economic development
C   Tourism
C   Natural resources including forest land and agricultural land

The top priority issues identified by the Steering Committee included:
C   Water quality issues
C   Agricultural lands
C   Promote the family farm way of living
C   What can we do to make the area more attractive to young professionals
C   Commercial development with controls
C   Focus on tourism
C   We like it the way it is!!!!

After reviewing background materials, discussing visions and priority issues, the Steering Committee reviewed **broad land use goals and more specific objectives** drafted by the consultants that addressed the priority issues and reflected the visions. The goals and objectives are included in Chapter III. Framework Plan.

Chapter II.

Background Information

Clearwater County
Demographic Summary Profile

General Population Trends

The Minnesota State Demographer estimated Clearwater County to be home to 8,452 people in 1995, a decrease of 4.6% over its 1960 population of 8,864. The State Demographer projects a decrease of 482 people from 1995 to 2025, a 6% decrease.

Woods and Poole, a private population forecasting company, paints a similar picture for Clearwater's future, projecting a 1% decrease in the county's population from 1995 to 2020. Woods and Poole uses different projection methods than the State Demographer, relying more heavily on regional economic forecasts.

Households, Families and Age

According to the U.S. Census Bureau, Clearwater County was home to 2,240 families and 3,064 households in 1990. A family is two or more people living together who are related by blood, marriage or adoption. A household is defined as any place of residence. The number of households has remained nearly level since 1990, increasing slightly from 3,064 in 1990 to 3,080 in 1995; an increase of 16 households or 0.5%.

Household size has decreased slightly in recent years, from 2.8 in 1980 to 2.65 in 1990. The number of households with persons under 18 years of age decreased from 1,212 in 1980 to 1,022 in 1990. The State Demographer projects the next 25 years will witness an increase in married couple households with children and a strong increase in people over 65 living alone in Clearwater County.

Age

The population of Clearwater County residents over 55 is becoming a greater portion of the total population. The County's population of people under 18 years old is projected to drop from 2,590 to 1,860 between 1995 and 2025. According to the U.S. Census Bureau, the median age in the county rose from 33.87 in 1970 to 39.4 in 1997. The median age is the middle age; half the people in the county are older and half are younger than the median age.

Birth Rates and Death Rates

For the past few decades Clearwater County witnessed a declining birth rate and an increasing death rate. Especially dramatic is a 37.6% drop in the birth rate from 1980 to 1994.

Births to Unmarried Mothers

Another significant trend is a recent surge in the portion of total births that are to unmarried mothers. This portion jumped from about 16.2 percent in 1980 to about 32.3 percent in 1994. This trend generally reflects the trend for the state as a whole.

Race and Hispanic Origin

In 1990, 90% of Clearwater County's population was white; 7.6 percent was American Indian, Eskimo or Aleut; 0.1 percent was Asian or Pacific Islander; and people of Hispanic and other racial background make up 0.2 percent.

Income and Poverty

According to the U.S. Census Bureau, median household income in Clearwater County in 1990 was $17,752, 42% lower than the state median income of $30,909. Median household income is the middle income; half of the household incomes in the county are higher and half are lower.

Per capita personal income is the total income divided by the number of people in Clearwater County. According to the Federal Bureau of Economic Analysis, per capita personal income in Clearwater county was $14,592 in 1995, while the state average was $25,699.

According to the Minnesota Extension Service, as a state Minnesota had an increase in people receiving Aid to Families with Dependent Children (AFDC) of 12.8% from 1986 through 1991 and a drop of 8.1% from 1991 to 1995. In contrast, Clearwater County had a decrease in the number of people receiving AFDC of 11.2% from 1986 to 1991 with another decrease of 26.4% from 1991 to 1995.

Clearwater County
Economic Summary Profile

This summary describes the general economic background of Clearwater County including historic economic growth trends. Basic industries and the economic geography are described. Agriculture is also profiled as an economic force in Clearwater County.

General Economic Background

Government is the single most prominent source of jobs and earnings in Clearwater County, accounting for 35% of the jobs and 35% of the wages in 1997. The vast majority of these jobs are in local and county government offices and schools. For example, in the city of Bagley, about 300 people are employed in the Clearwater County offices and 155 in the elementary and secondary schools. The next most significant industries, as measured by numbers of jobs and earnings of employees, are manufacturing and services. Fifteen percent of jobs and 17% of all earnings are attributed to the manufacturing sector. In Clearwater County, one-third of the manufacturing jobs are associated with lumber and wood products. The services sector, which includes employment in areas such as lodging, recreation, health care, and non-financial business services, comprise 17% of the jobs and 10% of the wages earned in the county.

The Minnesota Department of Economic Security (DES) tracks wages and number of jobs for covered employment (employment covered by unemployment insurance requirements) by county and city in Minnesota. The chart below shows the prominence of government/school jobs in Clearwater County.

Total Wages by Industry, 1997

Industry	Wages in thousands of dollars
Gov/Schools	~17,600
Services	~5,300
FIRE	~1,300
Retail Trade	~3,200
Wholesale Trade	~2,700
TCPU	~2,900
Manufacturing	~8,500
Construction	~7,600
Agriculture	~1,000

Source: Minnesota Dept. of Economic Security
Jobs include only those jobs covered by unemployment insurance.

DES data on total wages paid by Clearwater County businesses support a similar conclusion regarding the prominence of government jobs in Clearwater's economy, as shown in the following chart. While the highest annual average wages in 1997 were in the construction and wholesale trade sectors, $43,000 and $44,500 respectively, these sectors employ relatively few individuals in Clearwater County. In comparison, the average annual wage for manufacturing and government sectors in 1997 were $23,500 and $22,000, respectively. The average annual wage in the service sector were $13,500. The county-wide average annual wage for all industry sectors was $21,400 in 1997.

Number of Jobs by Industry Type

Clearwater County Industries	Number of Jobs by Year				
	1993	1994	1995	1996	1997
All Industries	2,054	2,152	2,153	2,216	2,353
Agriculture	71	68	48	52	55
Construction	131	129	146	152	178
Manufacturing	232	276	290	331	354
Transport., Communication, Utilities	66	82	91	109	87
Wholesale Trade	57	64	62	65	62
Retail Trade	334	332	317	330	347
Finance, Insurance, Real Estate	61	68	64	64	66
Services	351	378	381	377	391
Government	752	755	754	737	814

Source: Minnesota Dept. of Economic Security
Jobs include only those jobs covered by unemployment insurance.

Historic Economic Growth

The most notable area of job creation between 1993 and 1997 occurred in the service industry. DES calculates the industries with the greatest growth in private employment, these are shown in the chart on the next page. The greatest number of jobs were created in services such as health care, automotive service, and social services. The manufacturing business of lumber and wood products also added jobs, as did wholesale trade and membership organizations. It is worth noting that government sector jobs also increased during this same period but are not represented in this chart since these jobs were added in the public sector. Sixty two jobs were added in the government sector between 1993 and 1997. The following chart displays the number of jobs created between 1993 and 1997 and the percent change these new jobs represented in each industry.
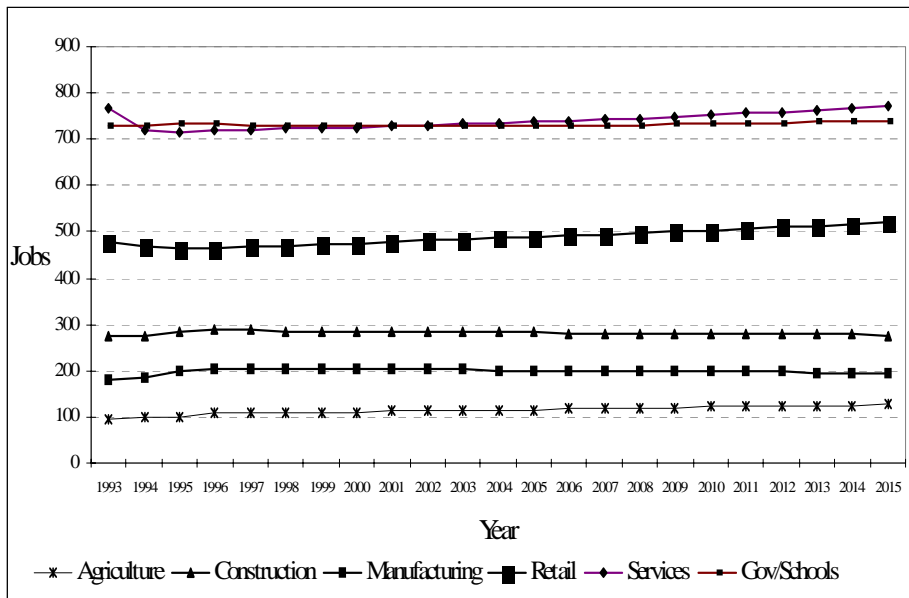
Number of Jobs Created between 1993-1997

	Employment 1993	1997	Absolute Change	Percent Change
Health Services	178	204	26	15%
Automotive dealers & service stations	36	61	25	69%
Lumber and wood products	85	105	20	24%
Membership organizations	34	49	15	44%
Wholesale trade, nondurable goods	43	54	11	26%
Social Services	58	67	9	16%
Hotels and other lodging places	11	18	7	64%

Source: Minnesota Dept. of Economic Security

Woods and Poole Economics, a private data and economic forecasting business, provides county-level economic and demographic forecasts. Woods and Poole forecast future economic growth in Clearwater County from current local and regional trends. The historic data used by Woods and Poole is from a different source than DES data — the number of jobs shown in the Woods and Poole estimates differ slightly from DES' count of covered employment.
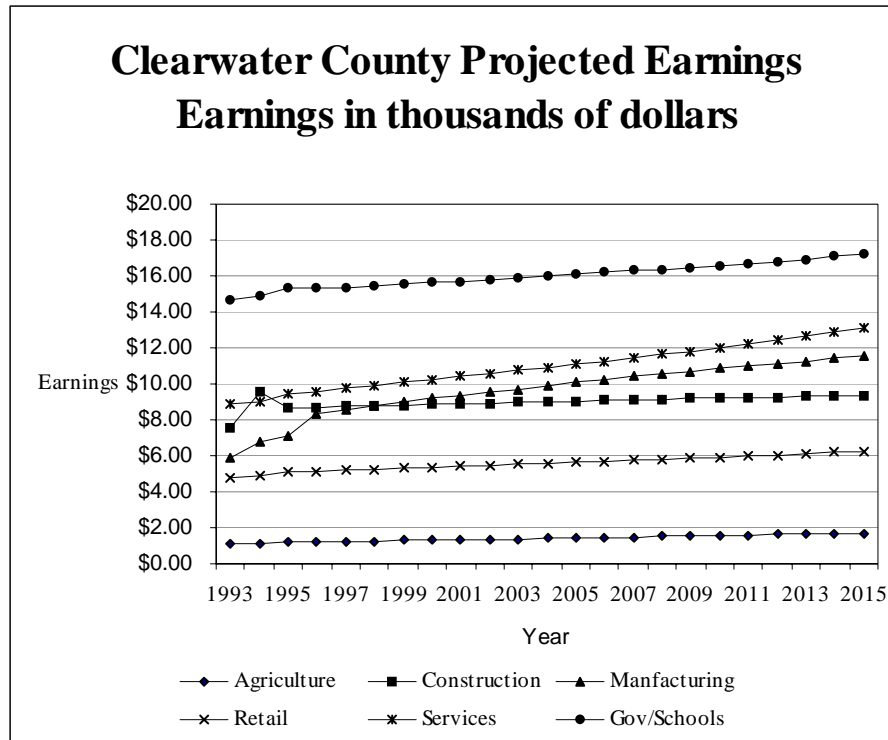
Historic and Future Job Growth

Source: Woods and Poole

The Woods and Poole historic data reflect similar trends noted in the DES economic data; state and local government is the leading category of jobs and earnings, followed by the service sector. Future projections

by Woods and Poole indicate that government and service sectors will lead the county in jobs and earnings. No individual sector is projected to experience marked growth or decline over the next 15 years.

Clearwater County Projected Earnings
Earnings in thousands of dollars

Farming in Clearwater County

DES statistics do not take into account non-covered farm economic activity; that is, only agricultural employment and wages considered for unemployment insurance are included DES' summaries. However, economic growth and decline of family farming in Clearwater County can be estimated by statistics calculated by the Minnesota Department of Agriculture and the US Department of Agriculture's 1992 and 1997 Census of Agriculture.

According the USDA Census, land in farms in Clearwater County increased slightly between 1992 and 1997 as did the average size of farms; however, the number of full time farms declined 18% from 351 to 287 over the same time period. The value of agricultural products sold decreased 19% between 1992 and 1997.[1] The net cash from agricultural sales also declined during this period. In 1992, the average cash return per farm was $10,552, while in 1997 it was $6,181.

[1] Livestock sales accounted for 55% of the market value of agricultural products sold and crops sales accounted for 45%.

County Profile, USDA 1997 Census of Agriculture.

Economic Base

The major industries in Clearwater County are not typical "basic" industries. Basic industries are traditionally manufacturing businesses or companies that produce a product for re-sale in markets outside the local economy. Basic industries "export" goods and "import" dollars into the local economy. While manufacturing is typically considered a basic industry, it accounts for less than 20% of the jobs and earnings in Clearwater. Within the manufacturing sector, about one-third of the jobs are associated with lumber and wood products.

The majority of Clearwater's industries, services and government, are non-basic and circulate dollars within the local economy. Some fraction of the service industry does support tourism in the county, which brings dollars in from the outside, in addition to circulating dollars within the county economy.

Economic Geography

The Minnesota Department of Trade and Economic Development (DTED) tracks employment in Minnesota counties. In Clearwater County, total employment is about 3,300. However, jobs are not evenly distributed across the county. Bagley is the largest city in Clearwater County, with a population around 1,400. According to DTED, major employers within Bagley account for about 800 jobs, which constitutes roughly 25% of the total employment in Clearwater County. The other major employment center is Bemidji, located about 25 miles from Bagley in Beltrami County. Bemidji is a regional job center, attracting a flow of workers from Clearwater County and other surrounding areas.

Clearwater County
Natural Resources Summary Profile

This summary briefly describes the general physical environment of Clearwater County and discusses the use of the environment. The major topics discussed include topography and soils, agriculture, water and wetland, wildlife and recreational opportunities.

Topography and Soils

Clearwater County has a variety of landscapes changing from north to south by topography and soils. The north and northwestern part of the County was historically part of Glacial Lake Agassiz. This area is flat with poorly drained peat soils. Deep peat can be found in this area. Bordering these peat soils are nearly level, sandy soils. Moving south across the County to the central region the terrain consists of rolling to steep glacial moraines and outwash plains. This area of the County consists of forested and agricultural areas. Along the Clearwater River in the east central part of the County are sand and gravel areas. The southern area of the County contains loamy soils developed under forest cover. The terrain is irregular with some steep slopes. This information was derived from the 1997 USDA Soil Survey of Clearwater County.

Agriculture

According to a 1987 land use survey by the Clearwater County Soil and Water Conservation District 150,000 acres are used as cropland, hayland, or pasture in the County. Nearly 76% of this total, or about 118,000 acres, is harvested cropland. Approximately 31,400 acres is idle or pasture land. The main agricultural products produced in Clearwater County include wheat, oats, corn, and barley, with significant beef and dairy operations. Minor crops including sunflowers, rye, and flax are also grown. Over 8,500 acres are used to grow wild rice.

Water and Wetlands

Clearwater County is home to several significant waterways that define its history. In 1882, Henry R. Schoolcraft found the source of the Mississippi River at Lake Itasca in the southeast corner of the County. Defining the northeast boundary of the County is Lower Red Lake. Open water comprises 29,797 acres in the County, including other significant lakes throughout the central and southern areas, and rivers. The Clearwater River flows through the center of the County. The County contains 109,968 acres of wetlands (marsh, fens, shrub swamp, and swamp), much of this located in the northern end of the County where historic Glacial Lake Aggassiz was located. Clearwater County bound-

aries cross seven watersheds. Clearwater County has adopted shoreland and floodplain ordinances to regulate land uses in areas within 1000' of shorelands. Clearwater County has also adopted the Mississippi Headwaters uniform zoning ordinance for this river.

Forest Resources

Forestry is the prevailing land cover in Clearwater County. According to the USDA, there are approximately 322,000 acres of forested land within the County. Of this total about 289,000 acres is considered commercial forest land and 33,000 acres is noncommercial forest land. The majority of Clearwater County's noncommercial forest land, about 22,000 acres, is located within Itasca State Park. The remaining 11,000 is nonproductive. Of the commercial forest land, 46% is privately held by individual landowners. The remaining 54% is managed by County, State or Federal government or by private industry. The largest holding of public commercial forest land is held by the County, approximately 67,000 acres.

Clearwater County forests are comprised primarily (about 83%) of hardwood trees. Aspen is the most common cover type in the County. Other northern hardwood species found are sugar maple, American basswood, paper birch, northern red and white oaks, American elm, balsam, poplar, and ash. Conifers found in the County include red pine, jack pine, eastern white pine, white spruce, black spruce, northern white cedar, tamarack, and balsam fir. According to the 1990 Forest Statistics for Northern Minnesota, Clearwater County's forests are composed of 143,800 acres of aspen; 14,300 acres of paper birch; 7,300 acres of oaks, 19,400 acres of elm, ash, and soft maple; 31,100 acres of sugar maple and basswood; 19,600 acres of balsam poplar; 5,600 acres of jack pine; 6,900 acres of red pine; 900 acres of white pine; 11,400 acres of balsam fir; 6,500 acres of black spruce; 7,800 acres of northern white cedar; and 10,600 acres of tamarack.

Wildlife

Because of the large number of forested lands in Clearwater County, the majority of wildlife are forest or forest edge species (USDA, 1997). These include: deer, black bear, ruffed grouse, squirrels, rabbits and hares. Other upland species found in the County include: wolf, coyote, fox, skunk, raccoon, porcupine, red-tailed hawk, bald eagle, common loon, great horned owl, barred owl, gray jay, blue jay, and red-winged black birds.

Recreational Use of the Natural Environment

With its many lakes, rivers and forests, Clearwater County provides visitors and residents with varied recreational opportunities. Itasca State Park and Long Lake Park are located within Clearwater County and are popular vacation destinations. Itasca State Park is one of Minnesota's most visited parks. Clearwater has an extensive trail system for snowmobiling. Snowmobiling has emerged not only as a recreational opportunity but also as an economic engine fueling the development of trails throughout the County. The fields and forests of Clearwater County provide hunters with deer, ruffed grouse, ducks, geese and many other hunting opportunities.

Chapter III.

Framework Plan

Introduction to the Clearwater County Framework Plan and Map

The Clearwater County framework plan was developed to provide the basic guidelines for future development and resource management in Clearwater County. This framework plan sets broad goals for Clearwater County based on the visions for the county and the priority issues chosen by the project Steering Committee. This Chapter of the Clearwater County Framework Plan presents:

C   A framework map showing the geographic distribution of the priority issues chosen by the Steering Committee (see Appendix A. for a record of the issues discussion by the Steering Committee);
C   General comprehensive planning goals and more specific objectives based on the vision themes for the County (see Appendix A. for a record of the visions and SWOT discussions by the Steering Committee); and
C   Suggested monitoring "indicators" that can be measured and used to assess the County's progress towards its goals.

The recommendations in this Chapter were created based on the results of background studies and the visioning and issue discussions of the Steering Committee. The planning framework map on the following page illustrates where land uses and issues occur throughout the County.

The visioning themes discussed most often by the Steering Committee and addressed in the framework goals include:
C   Farms - fewer or more in the future
C   More housing needed - growth issues
C   Economic development
C   Tourism
C   Natural resources including forest land and agricultural land

The top priority issues identified by the Steering Committee overlap to a great degree with the visioning themes. These issues which are illustrated on the framework map include:
C   Water quality issues
C   Agricultural lands
C   Promote the family farm way of living
C   What can we do to make the area more attractive to young professionals
C   Commercial development with controls
C   Focus on tourism
C   We like it the way is!!!!

Insert Framework Map

Clearwater County
Framework Goals and Objectives

1. ***Agriculture Goal*** - Encourage agriculture (timber, small grains, beef, etc.) as a viable, important part of Clearwater County's economy, and encourage farming as the primary land use in the historically agricultural areas of the County.

    a. Encourage and support development and marketing for agricultural products.
    b. Pursue economic development opportunities for local, value-added processing of agriculture and forest products.
    c. Educate and assist producers in complying with state environmental regulations.

2. ***Water Quality Goal*** - Protect and enhance the water quality of lakes, rivers and groundwater within Clearwater County to ensure the economic and non-economic enjoyment of lakes and rivers by residents and visitors.

    a. Encourage the development of programs to monitor water quality.
    b. Provide leadership, education and technical support to private property owners to improve water quality.
    c. Encourage land use practices that have a positive impact on water quality.
    d. Encourage development that minimizes detrimental impacts on water quality.
    e. Continue to enforce current ordinances that protect water quality such as the shoreland, floodplain, ISTS and Mississippi Headwaters Area ordinances.

3. ***Natural Resources Goal*** - Encourage the sustainable use of natural resources such as timber, water and agricultural soils so that these resources remain available to future residents for continued economic and non-economic use.

   a. Support the education of landowners and resource managers, private and public, about sustainable practices.
   b. Establish and implement a process for public input on the impacts of public harvest practices on adjacent private land and on the local economy, including tourism.
   c. On County managed forest land implement sustainable management practices, for example an uneven-age forest and buffer strips.

4. ***Economic Development Goal*** - Increase the diversity and number of employment opportunities in Clearwater County to make the County a more viable place for current residents, young people, and new residents.

   a. Pursue a quality of life that will attract and retain businesses and employment.
   b. Promote the retention and expansion of existing businesses and the development of businesses that add-value to existing agricultural and forest products.
   c. Support access to telecommunications technology to expand the opportunity to attract new businesses.
   d. Encourage resource-based businesses and industries including agriculture, forestry and tourism.

5. ***Private Property Rights Goal*** - Protect the rights of private property owners from undue governmental regulation.

    a. Conduct all County planning activities with a fair and open process that provides opportunities for input from all County residents and property owners.

    b. New programs and regulation must be developed with clearly stated, equitable provisions that relate directly to the implementation of adopted County land use policies.

    c. Administer and enforce land use regulations in a fair, consistent, and equitable manner that respects the due process rights of property owners.

6. ***Transportation Goal*** - Provide a safe, convenient transportation system throughout Clearwater County, and provide adequate connections for the transportation of commercial and agricultural goods to regional and state-wide markets.

    a. Integrate the County and local road system with planned state highway improvements.

    b. Prioritize improvements and maintenance of existing roads over construction of new roads.

    c. Investigate needs for year-round 10 ton roads and schedule upgrades where needs are greatest.

    d. Support existing and future public transportation systems where feasible and practical.

7. ***Public Lands Goal*** - Allow multiple use (timber harvest, trails, hunting, fishing, etc.) of public land; and limit new public land acquisition and provide opportunities for local control to protect the tax base of Clearwater County.

    a. Work with public landowners and managers to ensure the continued and expanded multiple use of public lands.

    b. Establish a dialogue with state and federal agencies about the local goal of limiting new land acquisition.

8. ***Community Development Goal*** - Encourage a small town charac-
ter in the cities of Clearwater County, and the predominately rural
character of the remainder of the County.

   a. Encourage new development in towns and already developed
      areas of the County.
   b. Support town planning goals that support and do not conflict
      with County goals.

9. ***Housing Goal*** - Support affordable housing opportunities within
Clearwater County.

   a. Support public and private actions that provide a variety of
      housing choices.
   b. Encourage housing maintenance and rehabilitation.

10. *Commercial/Industrial Goal* - Promote commercial and industrial development in areas of Clearwater County that are served by water and sewer utilities.

    a. Designate sites for commercial and industrial use that are accessible from major roadways, served by water and sewer, and minimize environmental impacts.

    b. Encourage and support new infrastructure development for expanded commercial and industrial sites.

11. *Tourism Goal* - Support the continuation and expansion of tourism and recreational opportunities within Clearwater County as part of a diverse local economy.

    a. Encourage the balanced and sustainable use of resources that support both extractive and recreation based industries.

    b. Support economic development efforts directed at expansion of tourism and recreation based businesses.

    c. Support the development of trails and recreation sites that will attract non-resident visitors.

12. *Governmental Cooperation Goal* - Promote cooperation in the making of land use, natural resource and economic development decisions among all interested governmental agencies and Indian tribes, including: Clearwater County, townships, cities, state agencies, federal agencies, White Earth tribe, and Red Lake tribe.

Clearwater County
Framework Plan Indicators

The goals and objectives are the heart of the Framework Plan. Goals are often stated in general terms, and reflect community values rather than quantitative measurements. County residents and other stakeholders may find it difficult, therefore, to measure progress toward the goal. To satisfy the need to measure progress, the County needs to identify "indicators" that blend the quantitative nature of scientific measurement with the value-driven nature of goal-setting. Indicators are measurable quantities or events that are linked to the County's goals. By tracking the changes in the indicators County residents and stakeholders can assess whether the County is progressing toward the stated goal.

The NCLUCB grant funding the Clearwater County framework plan requires that indicators be developed as part of the framework plan. The framework plan identifies a number of potential indicators below grouped by goal.

Appropriate Use of Indicators

In selecting and using indicators, the County should keep in mind the following:

C *The indicators are not the goal.* An increase in the number of jobs in the County does not meet the goal of increased economic opportunity if new jobs merely displace a slightly smaller number of higher-paying existing jobs. The number of jobs could increase, while living wage jobs are declining. Encouragement, incentives, or regulation undertaken by the County should acknowledge the goal (economic opportunity), not the indicator.

C *An individual indicator is not a complete assessment of progress toward a goal.* Indicators are the first line of measuring progress. Individual indicators may show a lack of progress, even though additional investigation reveals that progress is being made. For example, a decrease in the ratio of jobs to the County's adult population may occur because most of the people who migrated into the County were of retirement age. The indicator may incorrectly be interpreted to mean that economic opportunity was decreasing. In this instance, a more appropriate indicator might be selected, or the indicator might be measured in a more appropriate manner (for instance, the ratio of jobs to working-age adults).

C *Indicators should be used as a group.* A single goal should have more than one indicator. A single indicator can present an incorrect picture of change in the County. Evaluating progress toward a goal must acknowledge how all indicators are changing, rather than focusing on a single indicator.

Clearwater County Framework Plan - Potential Indicators

Potential indicators for each of the Clearwater County Framework Plan goals are listed below. Indicators may examine different elements of the goal, recognizing that each goal crosses multiple issue areas in the County. Land use goals, for instance, may affect economic development, sensitive area protection, water quality of rivers and lakes, and regulation or encouragement of development.

Goal 1. Agriculture Goal - Encourage agriculture (timber, small grains, beef, etc.) as a viable, important part of Clearwater County's economy, and encourage farming as the primary land use in the historically agricultural areas of the County.

Indicators
C Acres of land in active agriculture;
C Number of full- and part-time farms;
C Gross farm revenues;
C Ratio of farm property valuation to commercial/industrial property valuation;
C Number of agricultural products manufacturing or processing businesses.

Goal 2. Water Quality Goal - Protect and enhance the water quality of lakes, rivers and groundwater within Clearwater County to ensure the economic and non-economic enjoyment of lakes and rivers by residents and visitors.

Indicators
C Number of fish species with consumption limits;
C Diversity of fish species in lakes and rivers;
C Number of septic systems or new septic permits within lake or river subwatersheds;
C Level of targeted urban and agricultural pollutants in priority lakes and rivers;
C Miles of waterways or lakes with buffer zones;
C Water clarity, sediment and nutrient loading level;
C Percentage of impervious surface within targeted watersheds;
C Regular updating of the Clearwater County Local Water Plan detailing programmatic efforts to monitor water quality, and provide technical support;
C Number of variances or conditional use permits issued under shoreland, floodplain, ISTS, and Mississippi Headwaters area ordinances.

Goal 3. Natural Resources Goal - Encourage the sustainable use of natural resources such as timber, water and agricultural soils so that these resources remain available to future residents for continued economic and non-economic use.

Indicators
C Acres of forest land certified under a third party sustainable forestry program (Forest Stewardship Council, American Pulp and Paper's Sustainable Forestry Initiative, or other program);
C Number of agricultural acres enrolled in soil management or conservation programs;
C Creation of and continuing existence of educational programs on sustainable land practices;

C Number of tourism-based businesses.

Goal 4. Economic Development Goal - Increase the diversity and number of employment opportunities in Clearwater County to make the County a more viable place for current residents, young people, and new residents.

Indicators
C Average annual wages for jobs in the County;
C Creation of a living-wage benchmark wage, and monitoring the number of living wage jobs in the County;
C Ratio of jobs to households;
C Number of cities with local internet access, or with high-speed telecommunications access;
C Growth of jobs in selected industries.

Goal 5. Private Property Rights Goal - Protect the rights of private property owners from undue governmental regulation.

Indicators
C Number of attendees at public meetings;
C Number of condemnations to acquire public land;
C Number of parcels whose land value declines;
C Ratio of public lands to private lands.

Goal 6. Transportation Goal - Provide a safe, convenient transportation system throughout Clearwater County, and provide adequate connections for the transportation of commercial and agricultural goods to regional and state-wide markets.
C Miles of year-round 10-ton roads;
Indicators Ratio of miles of new roads to reconstructed or resurfaced roads;
C Number of accidents on designated regional routes or county roads;
C Number of trips provided by transit.

Goal 7. Public Lands Goal - Allow multiple use (timber harvest, trails, hunting, fishing, etc.) of public land; and limit new public land acquisition and provide opportunities for local control to protect the tax base of Clearwater County.

Indicators
- C Number of acres of land in public ownership;
- C Number of public land acres with recreational use restrictions;
- C Creation and continuing existence of a citizen advisory council to meet with and advise state and federal agencies which have land holdings in the County;
- C Tourist or recreation-related spending in the County;
- C Creation and implementation of a public lands plan for County and other local public lands defining multiple use goals;
- C Number of acres of public lands open to hunters.

Goal 8. Community Development Goal - Encourage a small town character in the cities of Clearwater County, and the predominately rural character of the remainder of the County.

Indicators
- C Vacancy rate of existing commercial space;
- C Ratio of dollar value of capital improvements to value of existing commercial space;
- C Number of meetings between County staff and city or township officials.

Goal 9. Housing Goal - Support affordable housing opportunities within Clearwater County.

Indicators
- C Number of housing units;
- C Ratio of single-family homes to townhouses or multi-family housing units;
- C Rental vacancy rate;
- C Number of residential renovation loans provided in the County;
- C Complete a housing survey and track the number of substandard housing units;
- C Creation of an ad hoc or formal coordinated planning efforts between the County and cities or townships.

Goal 10. Commercial/Industrial Goal - Promote commercial and industrial development in areas of Clearwater County that are served by water and sewer utilities.

Indicators
C Vacant space in designated industrial parks or areas with industrial quality infrastructure;
C Creation of a capital improvements plan identifying areas for industrial infrastructure improvements;
C Public dollars spent on industrial infrastructure in existing industrial zones.

Goal 11. Tourism Goal - Support the continuation and expansion of tourism and recreational opportunities within Clearwater County as part of a diverse local economy.

Indicators
C Miles of recreational trails;
C Number of tourism-oriented businesses;
C Number of overnight visitors to the County;
C Completed or recently updated inventory of unique natural and cultural resources.

Goal 12. Governmental Cooperation Goal - Promote cooperation in the making of land use, natural resource and economic development decisions among all interested governmental agencies and Indian tribes, including: Clearwater County, townships, cities, state agencies, federal agencies, White Earth tribe, and Red Lake tribe.

Indicators
C Creation of an ad hoc or formal coordinated planning efforts between the County and cities, townships, state agencies, and/ or federal agencies.
C Number of joint planning or program efforts with the White Earth or Red Lake tribes.

Chapter IV.

Geographic Information Systems Report

Clearwater County Geographic Information Systems (GIS) Report

GIS Applications and Benefits

A Geographic Information System (GIS) is a collection of hardware and software tools used to collect and analyze spatial data (e.g. topography, forest cover types, population density) in a problem solving environment. A GIS is extremely useful for applications common to local government, such as operation of public works, maintenance of property records, forestry and recreation resource management, dispatch of emergency vehicles, planning, zoning, and tax assessment. In fact, GIS offers benefits to virtually all functions of local government.

Potential benefits for Clearwater County include:

Shared resources - More and more federal, state, and local public agencies are collecting spatial data that is suitable for inclusion in a GIS. Agencies such as the U.S. Census Bureau and the Minnesota Department of Transportation have been assembling digital data sets that can be used by the county. A GIS allows the County to utilize this information without having to bear the cost of creating it.

Reduced costs - Studies have proven that GIS technology, if properly utilized, will eventually reduce the cost of many common County activities.

Improved communication - a networked information system will help to streamline work flows and assist management effectiveness.

Survey of GIS Datasets for Clearwater County

Representatives from County departments were contacted for existing data inventories and were interviewed about GIS datasets and their current use. The two departments specifically reviewed were the Management Information Systems, and Lands and Forestry.

Clearwater County has a minimal number of GIS data layers available. Table 3.1 lists the data layers that the county has on its computer network in vector format and usable with the software PC ArcInfo and ArcView. Table 3.2 lists image data.

Table 3.1   **Existing GIS data in Clearwater County**

Data set	Description	Source
Hydrography	Lakes, rivers, streams	Assumed to be from the Mn/DOT Basemap
Wetlands	Wetlands	National Wetland Inventory
County Forest Inventory	The Forest Inventory data set is an ArcCad polygon coverage that encompasses the County Memorial Forest Land and Tax Forfeited Trust Lands of Clearwater County	Clearwater County
Federal Forest Inventory	Uncertain	Clearwater County
Political and administrative boundaries	Municipalities, Red Lake Reservation, Commissioner Districts, School Districts	Minnesota Department of Transportation (Mn/DOT), Clearwater County
Roads	Township, state, county, and federal highways, some forest roads	Minnesota Department of Transportation (Mn/DOT) and Clearwater County
Parcels / Ownership	Land ownership for 12 out of 22 townships	Clearwater County
Public Land Survey	Section corners, township, range, and section lines and 40 acre (quarter/quarter) lines	DNR Division of Minerals

Table 3.1 continued Existing GIS data in Clearwater County

Data set	Description	Source
WCA Project	Wetland Conservation Program project data set is an inventory of point features with attributes. The features represent locations of wetland projects or activities that requested assistance from the Clearwater County Wetland Conservation Program's Water Resource Conservationist.	Clearwater County
Utilities	Pipelines, powerlines, railroads	Mn/DOT Basemap
Wood ducks	Inventory of point features with attributes. The features represent locations of wood duck houses installed by the County Land Department.	Clearwater County
Eagles Nests	Inventory of eagles nests observed by Foresters of the County Land Departments.	Clearwater County
Drainage Ditches	Public ditches in the County.	Clearwater County
Long Lake Park	Information on the Long Lake Park Campground.	Clearwater County
Survey Pipes/Monuments		Clearwater County
Pine Plantations	Individual pine plantations on County land.	Clearwater County

Table 3.1 continued Existing GIS data in Clearwater County

Data set	Description	Source
DNR Fish Rearing Ponds	Location of known DNR fish rearing ponds in the County.	Clearwater County
Gravel Pits	Location of gravel pits managed by the County.	Clearwater County
Lake Access	Location of lake access in County.	Clearwater County
Osprey Nests	Location of known Osprey nests on County land.	Clearwater County
Heron Rookeries	Location of known heron rookeries on County land.	Clearwater County

Table 3.2 Image data

Data set	Description	Source
USGS	Digital version of the	USGS
Topographical Maps	USGS paper topo maps (Digital Raster Graphics - DRG's)	
Aerial photos	1991 black and white digital ortho quarter quadrangles (DOQQ's)	USGS

Table 3.3 Data available but not in the county's possession

Data set	Description	Source
Ownership	Broken down by public administrative categories and some private	Mn/DNR
Land Cover	General land cover classes	Land Management Information Center (LMIC)
Soils	Soil types	NRCS
Landform	Geomorphology classes	Mn/DNR
State Forest Inventory	Forest cover types for state managed land	Mn/DNR
Watersheds	Major/minor watersheds	Mn/DNR

There are many additional datasets that are currently available that have not been listed in the table above. From the discussions with the County staff regarding ability levels and existing task assignments, these other datasets can be investigated in the future, e.g. for specific applications.

Table 3.4 Data layers with potential value to the County

Parcels - with the ability to incorporate data from Assessor and 911 emergency addressing
Hypsography (Topography in contours)
Permit Records
Comprehensive Plan and Zoning
Recreation - Snowmobile trails, hunting trails, open space designated for recreation activities
Easement locations - utility easements, private easements across county land
Aerial photography of a more recent vintage and color infrared

Health care and emergency response facilities
Summary of Hardware and Software Systems

Access to GIS is primarily in the offices of the Management Information Services (MIS), the Assessor's office, Lands and Forestry Department, and the Environmental Services Department. All of these offices have ArcView available for use. However, it is the MIS staff that is most familiar with this GIS software and spends the most time creating new data sets, printing maps, or updating existing datasets.

There are a mixture of older and newer computers within the County. The data is accessible from a network server. There are certain data sharing issues that will be rectified with the installation of an NT server, which is expected to be installed in January 2000.

The GIS software that is available for use includes ArcView 3.0 and 3.1, PC ArcInfo. The Highway Department has AutoCADD.

General Assessment of Conditions

The impediments to the Clearwater County staff using GIS fully in every day activities are a) the lack of knowledge about the software and b) the time investment it will take to bring individuals to a level of proficiency (or comfort level) and; c) the difficulty of operating GIS software on a sporadic basis, yet trying to make it an effective tool in implementing county policy.

Access to the GIS data should be set up as straightforwardly as possible with custom designed interfaces for specific user applications that reduce the initial learning investment, the frustration level, while increasing the level of comfort and productivity. Eventually, departments may prefer to have access to the creation of visual products (maps), and would like to be in a position to create their own data, update, and add to existing data.

The status of existing data in Clearwater County can be summarized as needing to be upgraded. Much of the data is not up-to-date, and the information about the origins of the data is incomplete. There are also gaps in the datasets as far as providing a comprehensive view of the county. One example of this is the forestry data: Clearwater County has the county forest inventory, but not the state forest inventory which could provide valuable information regarding the management of forests for the county as a whole.

Training Needs

The county departments have a minimal amount of digital data available for creating maps and generating analyses such as determining acres of a certain timber type located within 1 mile of a state forest road. Most county personnel could utilize some form of geospatial data to accomplish much of their work. Individual departments have purchased computer hardware and software to support these functions. However, personnel have not undergone training to take advantage of these valuable digital data sets.

The primary goal of implementing GIS technology is to improve efficiency by improving access to information that is currently stored as paper documents. To this end, training in retrieving existing data and generating maps and drawings is a recommended alternative.