REDWOOD COUNTY, MINNESOTA
COMPREHENSIVE PLAN
(FINAL DRAFT DOCUMENT)

BIKO ASSOCIATES INCORPORATED

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ACKNOWLEDGEMENTS

This plan was prepared with input provided by citizens of Redwood County, members of the Redwood County Comprehensive Plan Steering Committee (Redwood County Board and Planning Commission), and Redwood County staff

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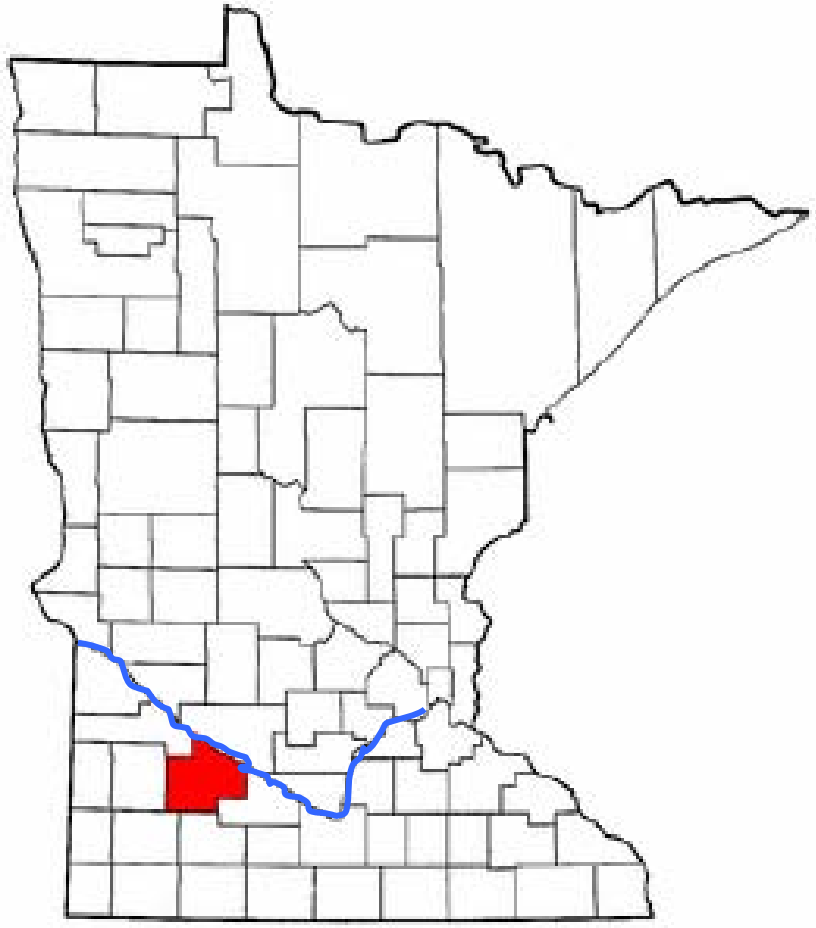

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INTRODUCTION

WHAT IS A COMPREHENSIVE PLAN?

A comprehensive plan is a document that provides a policy framework to guide land use planning and development activities, typically over a 20-year period. Unplanned development often results in conflicting, incompatible land uses and undesirable impacts on natural resources. A comprehensive plan, which is based on community-identified goals, objectives, and visions for the future, articulates policies that address issues such as: a) type of land use, b) location of land use, and c) intensity (amount) of land use that can be supported by natural systems and human-made infrastructure systems.

The Redwood County Comprehensive Plan reflects priorities and decisions made by citizens, residents, business owners, and other Redwood County stakeholders over a 23-month planning process. The Comprehensive Plan identifies a vision for how development and programs will shape Redwood County 20 years hence. A key outcome from the Redwood County planning process was identification of six geographic policy areas, which are referred to as Landscape and Land Use Zones. The vision for each land use zone is reflected in a series of goals that help identify how the vision becomes reality. The goals are further defined by policies; intermediate steps that guide the day-to-day decisions of elected and appointed officials charged with overseeing programs, land use regulations, and management of public and private resources. Finally, the plan provides a series of recommended strategies with which County officials and staff can bring the vision closer to reality. The strategies identify the priority actions, programs, regulations, ordinances, and cooperative efforts that can be implemented to achieve the policies, goals, and the vision.

WHAT IS THE AUTHORITY OF A COMPREHENSIVE PLAN?

The Comprehensive Plan is the legal basis for land use controls. The State of Minnesota gives counties authority to adopt comprehensive plans under Minnesota Statutes Chapter 394. Counties exercise authority under this statute to promote the "health, safety, morals, and general welfare of a community." Counties may develop a comprehensive plan and implement the plan through a variety of means. This includes adopting official controls, such as zoning ordinances, an official zoning map, and other ordinances, as well as establishing incentive programs, educational programs, and changing spending priorities. Land use ordinances and programs must be consistent with the adopted comprehensive plan. The vision, goals, and policies included in the Redwood County Comprehensive Plan will be implemented through a variety of means. Many implementation tools, methods and techniques are included in the plan. These tools direct the changes in existing ordinances and the adoption of new ordinances and programs.

HOW SHOULD THE COMPREHENSIVE PLAN BE USED?

The Comprehensive Plan was developed over 23 months. Work on Redwood County's vision, goals, and policies does not, however, end with the plan. The plan is the foundation for the day-to-day activities of County officials and staff and should be a highly used reference, as it will provide justification for specific actions. Elected officials, appointed officials, and County staff should have easy access to the plan and should explicitly reference it in land use decisions. Yet, the plan must also live, adapt, and evolve. County officials should periodically review the

plan's priorities and check in with residents, businesses, and stakeholders in order to keep the plan current. Reviews and updates should be conducted at regular intervals, assessing the County's progress toward the vision and the validity of the vision under unforeseen events and circumstances. Redwood County's Comprehensive Plan should continue to reflect the community's priorities, to engage the vision of a wide range of stakeholders, and to provide a meaningful foundation for County actions.

PROCESS FOR DEVELOPING THE PLAN

In preparing this update to the 1970 Redwood County Comprehensive Plan, conducting one-on-one interviews with community stakeholders was the first step. Twenty-eight (28) interviews were conducted over a three-day period between December 12 and 14, 2005. Stakeholders who were interviewed included county and township officials and agency staff, business people, farmers and economic development professionals.

A meeting was held on Wednesday, December 14 with members of the County Board and Planning Commission to discuss findings from two days of outreach and gauge their priorities. In addition, board members and commissioners were canvassed to collect pictorial and other data outside of Redwood Falls. The purpose of this exercise was to collect preliminary data to guide development of the new plan.

After data collection and analysis, public meetings were held in Wabasso on March 9, 2006 and on September 26, 2006. At the meetings, attendees discussed ideas, issues and concerns regarding land use in the county. A public hearing to consider adoption of this plan was held by the Redwood County Planning Commission on August 16, 2007. The County Board adopted the plan on November 6, 2007.

Based on this process, this document sets forth the goals, policies, and suggested strategies to assist Redwood County in achieving its preferred vision. The comprehensive planning process is illustrated on the following page.

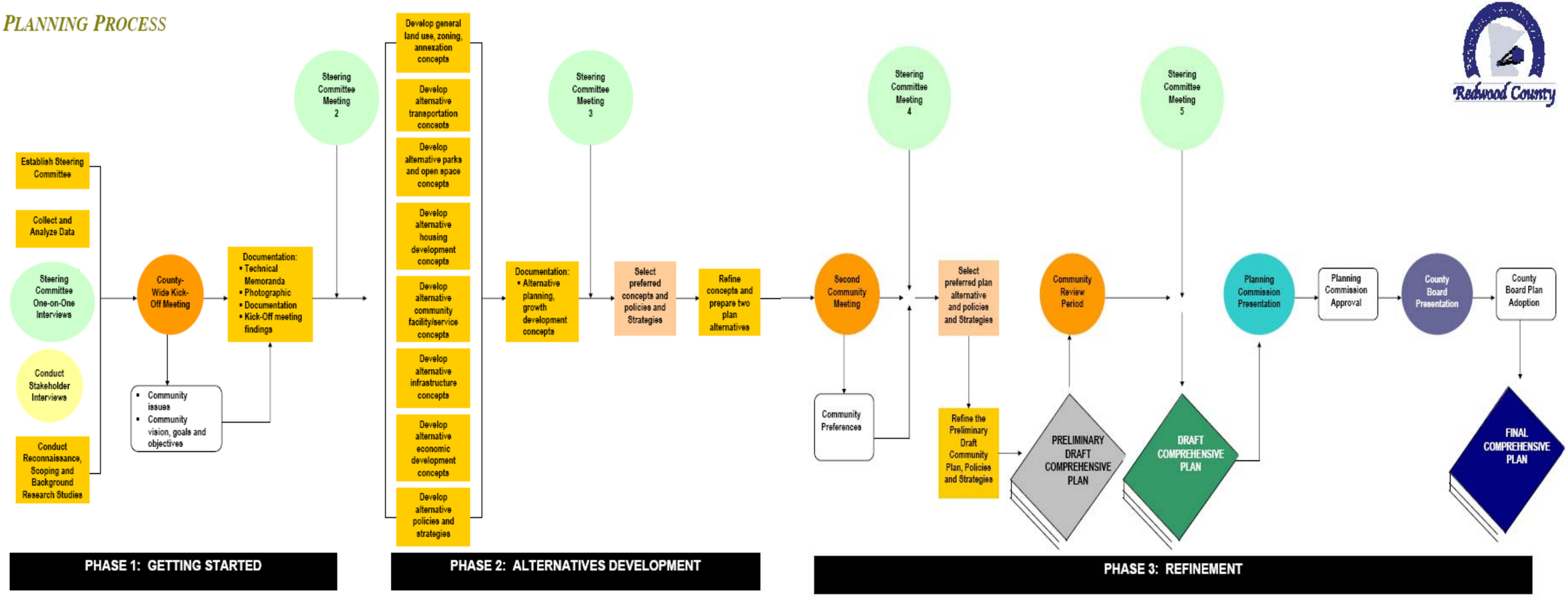
As shown in the illustration, the planning process consisted of three phases, Getting Started, Alternatives Development, and Refinement.

Phase 1, Getting Started included:

- Establishing a Steering Committee (the Steering Committee was developed to include the County Board and the County Planning Commission.)
- Collecting background data
- Conducting interviews with stakeholders
- Conducting a physical reconnaissance of the county
- Facilitating a March 9, 2006 kick-off meeting where planning issues were identified and information was provided to define a vision for the future and
- goals and objectives to guide land use and future growth and development

Phase 2, Alternatives Development, was conducted after background research was completed on the county's demography and socio-economics trends (population, household, and income data taken from the US Census), existing land use patterns, transportation system, park and open space systems, community facilities and infrastructure, and economic and business development trends. Findings from the research provided a foundation for the identification of six policy areas, which are referred to as Landscape and Land Use Zones.

PLANNING PROCESS



The six zones were developed as a land-based framework on top of which future growth and development could be conceptualized. The concepts were presented to the Steering Committee during Phase 2 and were refined to reflect realities of growth and development in an agricultural county.

Phase 3, Refinement was started with a community meeting, which was held on September 26, 2006. This meeting gave community members an opportunity to react to the six zones and comment on land use regulations that could potentially be applied within each zone. Based on comments received at the community meeting and further input from the Steering Committee, a preliminary draft comprehensive plan was developed for review by the Steering Committee between November 10 and December 12.

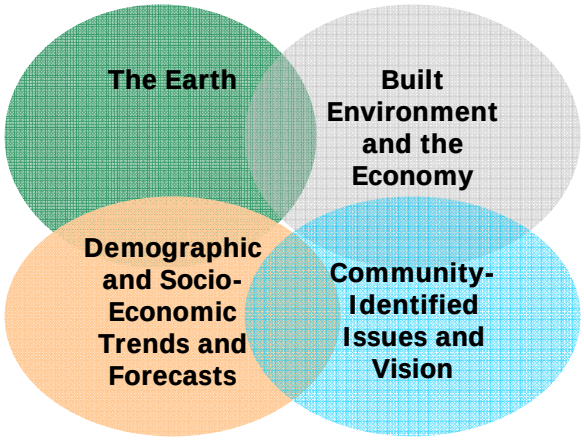
Comments from the Steering Committee's review influenced development of the draft comprehensive plan, which was made available for community review during the months of July and August. A public hearing on the draft plan was held on August 16, 2007.

The final plan was presented to the County Board for adoption on November 6, 2007.

APPROACH TO PLAN DEVELOPMENT

The approach that was followed to develop the Redwood County Comprehensive Plan was based on four key elements:

- The Earth
- The Built Environment and Economy
- The County's Demographic and Socio-Economic Trends and Forecasts
- Community-Identified Issues and Vision



The approach to preparing the Redwood County Comprehensive plan consisted of four important elements.

The Earth

Respecting nature is an approach to planning and designing communities that has been recognized for many years. Within modern history, the concept of planning and designing with, not against, nature has best been articulated by Ian McHarg. In his seminal work, *Design With Nature,* McHarg explains how sustaining nature is the same as sustaining ourselves.

With its predominant rural character, it is easy to take nature for granted in Redwood County. Sometimes even those who work the land forget that agricultural fields are not the natural state, and that agricultural fields would be prairie with wetlands, sloughs, and prairie potholes were it not for drainage ditches. As will be explained, the county is 99 percent homogeneous and, at the surface, appears to be a flat agricultural field without topography.

The long term challenges for a credible plan that acknowledges the importance of nature are to address the "what, where, and how much" questions of human growth and development. Specifically, the plan should ask and attempt to answer the following questions:

1) What is appropriate development for the county?
2) Where should human growth and development occur?
3) How much human growth and development can occur while doing as little damage as possible to the Earth?
4) How can human growth and development occur in a manner that sustains rather than drains the rural environment?
5) Over time, is it possible to remedy damage that has been done in the past?

Built Environment and the Economy

Another element in the approach to preparing the comprehensive plan is balancing respect for the natural environment with the realities of the built environment. Redwood County is an agricultural community where traditional agriculture is the economic engine that sustains communities, industries, businesses, and individuals. Reversing already in place agricultural traditions and practices would have a devastatingly negative impact on the economy and people's lives, if changes were not made gradually over time and with sensitivity.

In addition to agricultural enterprises, the built environment consists of existing cities, community facilities, businesses, and infrastructure (including transportation) systems. These are essential to the health and prosperity of the county and its residents.

The plan's challenges are to determine how to:

1) protect past investments in the built environment and
2) use the existing built environment as a platform upon which future growth and development can be built.

Demographic and Socio-Economic Trends and Forecasts

Perhaps the most surprising finding from the analysis of demographic data is that despite recent drops in the county's population, increases in population are forecast to occur over the next 20 years.

Analysis suggests that the population growth will occur in two areas: 1) all ages of non-European Americans and 2) European Americans who are currently between the ages of 25 and 54. In the year 2020, people who are currently between 25 and 54 will be 37 to 66, and in the year 2030, these people will be 47 to 76. These two findings indicate both a promising future and a challenging future for the county. On the promising side, families will be moving to Redwood County, and existing communities and infrastructure systems will be used and enjoyed.

On the challenging side, there are at least three issues to address. For one, youth in the European American community are deciding to leave the county, and strategies should be articulated in the plan to encourage them to stay in contradiction to the forecasted trend.

The newcomers will need places to live. At this time there is no comprehensive housing development program in the county. Establishing programs and policies to support housing development is the second challenge.

Finally, it is likely that newcomers to the county will not have the required financial resources to enter traditional agriculture where the costs of land, machinery, and equipment are prohibitive. Therefore, it is not a foregone conclusion that traditional agriculture will continue to be the county's only economic engine.

The plan's challenge is to address employment opportunities for the newcomers, who are likely to come from small-scale agricultural and factory work traditions.

Community-Identified Issues and Vision

Issues to address in the plan and the vision to guide policies for growth and development in the county were developed with input from the community and the Steering Committee. The vision addresses each of the points that have been discussed: protecting the environment and ecology of the county, building on and sustaining the existing built environment, and determining how to ensure that the rural environment and lifestyle continue to offer opportunities for existing residents and newcomers to the county.

REDWOOD COUNTY HISTORY

Redwood County History and Background

Redwood County is located in the southwest region of Minnesota. As of the 2000 Census, the population was 16,815. The county seat is Redwood Falls. There are 15 cities in the county. The Lower Sioux Mdewakantowan Indian Reservation is entirely within the county. According to the US Census Bureau, the county has a total area of 874 square miles with 873 square miles of land and one square mile of water. The Redwood River, the Cottonwood River, and the Minnesota River are the principal waterways in Redwood County.

Redwood County was first established in 1862, and is one of the largest counties in southern Minnesota with 26 townships. The population in 1900 was 18,000 and during this period children in Redwood County attended 116 different school districts.

Recent population statistics reveal the changes that have occurred in the county. The 1940 population was 22,290. Since then, the population has been decreasing.

- 1950 -- 22,127;
- 1960 -- 21,718;
- 1970 -- 20,024;
- 1980 -- 19,341; and
- 1990 -- 17,254.)

Redwood County was created on February 6, 1862 by the passage of a bill within the Minnesota State Legislature – this bill gave the County the borders it still has today. The population count taken through the Federal Census of 1870 showed that 1,829 people called Redwood County home.

The Old Agency Stone House, the oldest building in the county, was built in 1861. This structure is located about 8 miles east of Redwood Falls and is the site of the oldest cemetery in Redwood County. It is the site of the Sioux Uprising in 1862, a conflict between the Dakotas (Mdewakantowan, Sissetowan, Wahpeto-wan, and Wahpekute people) and the United States government.

The first saw mill was built on the Redwood River in 1855 by the United State government. The first court house (a wooden structure) was built in 1873 and replaced in 1891 with the present brick one. Additions to the court house were constructed in 1963, 1967 and 1970. The Redwood County courthouse is located in the eastern portion of the Redwood Falls Central Business District. The structure is well preserved even though it was originally constructed in 1891. During the summer of 1969, a major expansion project was initiated to increase office space for existing County functions as well as to provide needed space for the County Human Services Department.

Steamboat travel started up the Minnesota River in 1850, and reached Redwood County in 1853, bringing in supplies and people and carrying out wheat from what was originally called Riverside, then North Redwood, and now Redwood Falls. In 1881, Riverside became the birthplace of Sears.

Communities within Redwood County that developed based on railroad decisions were laid out in patterns that are still recognizable today. The relationships between railroad track, passenger depot, freight house, grain elevator, and commercial streets are readily identifiable within southwestern Minnesota towns and are usually familiar to most people who have traveled in midwestern America.

The railroads came into the southern part of the county in 1873 and to Redwood Falls in 1878. The northern part of the county was served in 1884. In 1899, the railroad extended from Sanborn to Vesta, through Wabasso, and on to Marshall by 1901. Currently, there are two railroads operating within Redwood County. These include the Minnesota Valley Regional Railroad Authority (MVRRA) with operations by Minnesota Prairie Line, which runs in the northern portion of the county, and the Dakota Minnesota and Eastern (DM&E) Railroad, which runs in the southern portion of the county. The MVRRA enters the county just west of the City of Belview, then passes through Delhi and the northern portion of Redwood Falls and leaves the county just east of Highway 71. The DM&E railroad enters the county one mile south of U.S. Highway 14 adjacent to County State Aid Highway (CSAH) 20 then follows CSAH 20 through Walnut Grove and continues through Revere, Lamberton and Sanborn.

During periods of early Redwood County history, immigrants finding their way from overseas were often met with difficult circumstances. The founding father of the Redwood Falls community, Colonel Sam McPhail, aided the initial developments by locating claims for land seekers in 1863 (the first group of families arrived in 1864). In addition, Colonel McPhail served as the editor of the first newspaper, was the first road overseer of the county, built the first building in the county, and was the first financial director of the county.

THE EARTH

NATURAL ENVIRONMENT

The most prominent example of the natural environment in Redwood County is the Minnesota River Valley. As nearly all of the remaining land within the county has been altered to create agricultural fields and cities, only pockets of remnant natural environments exist elsewhere along river and stream corridors or woodlots. For the most part these other areas are so limited in scale that they lack potential for establishing future benefits based on recreation or tourism. Evidence presented in the plan shows the intensity of non-natural land uses within the county; the largest of which would be areas drained for agricultural use.

Public input received during the planning process stressed the importance of natural areas to the quality of life for the county and the desire to expand the potential for resource-based recreation and tourism. A concentration of effort toward environmental preservation, enhancement and interpretation is needed to reduce further loss of habitat and the potential for future recreational use geared toward natural systems.

GEOLOGY, TOPOGRAPHY, AND SOILS

Geology

According to the Redwood County Comprehensive Water Plan, a thick mantle of glacial drift covers almost all of Redwood County. Along the Minnesota River Valley in the northeast portion of the county, glacial drift is absent and Precambrian rock formations are exposed. The thickness of the drift is highly variable ranging in depth from less than 100 feet in the west central portions of the county to more than 150 to 250 feet in the rest of the county. The drift has sand and gravel lenses, which serve as local aquifers.

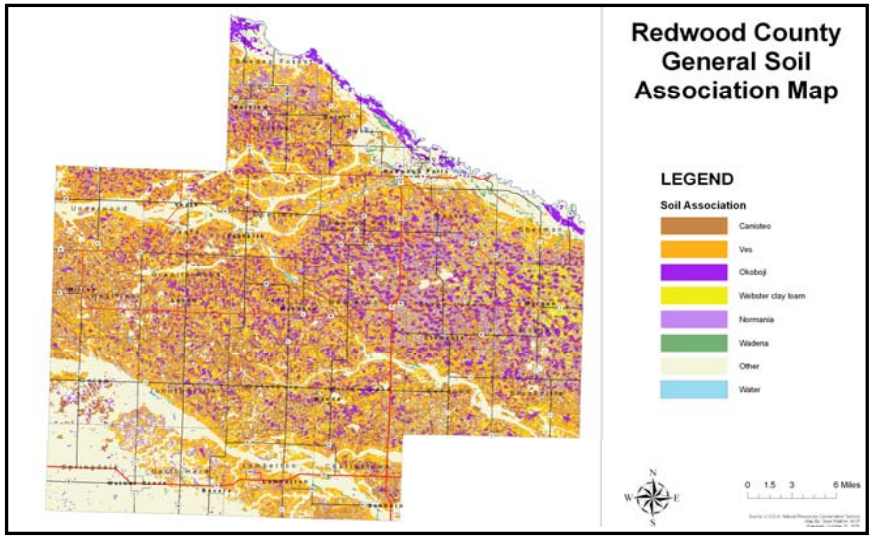
Cretaceous bedrock and sandstone lie beneath the glacial drift throughout much of the county. In the southwest part of the county, the cretaceous formation is 10 to 400 feet thick; it thins out to the east and west and is absent in the areas along the Redwood River from Seaforth to the western border of the county.

Topography

Redwood County is primarily a glacial till lowland with an average elevation of 1,100 feet above sea level. A predominant feature of the extreme southwestern portion of the county is the Coteau des Prairies, which ascends to an elevation of approximately 1,450 feet. Many tributaries of the Cottonwood River originate in this region, which is characterized by steep slopes and deep ravines. The rapid decrease in elevation from the Coteau to the lowland areas of the Cottonwood River leads to serious annual flooding during times of snow melt and heavy rainfall. North of the Cottonwood River the terrain is nearly level.

Soils

There are eight generalized soil areas within Redwood County. The Canisteo and Ves Associations make up the largest percentage (36 percent) of the county's soils. The Okoboji Association makes up the second largest percentage (20 percent) within the county. The smallest generalized soil area is the Wadena Variant-Rock outcrop-Copaston Association, which



makes up only about 1 percent of the county and is found in permanent pasture or woodland. Each association is comprised of several major soils and two or more minor soils. These associations define a unique natural landscape with distinctive patterns, relief and drainage.

Aggregate Deposits

Gravel Pits:

Existing gravel pits and untapped gravel deposits are present in the county. It is important to consider future deposits when contemplating future development patterns, both from the perspective of the value of extracted gravel and the value of other land uses.

"Resource sterilization" occurs when the development of a resource is precluded by another existing land use. For example, aggregate resources that exist under a housing development or shopping center commonly will not be extracted. If extraction were to occur, it would not be possible without the additional cost of buying the housing development or the shopping center. From the perspective of an adjacent land use, gravel pits may not be good neighbors. The presence of a gravel pit (with its noise, dust, and heavy vehicle traffic) next door to or across the road from a residential subdivision, for example, could have a negative impact on the value of the residences.

Hard Rock Mining:

Hard rock (granite) is present in Redwood County, and the most accessible outcroppings are within the Minnesota River Valley. Geologists report that these granite outcroppings are among the oldest in North America and the world.

Hard rock mining has been viewed in two ways. On the one hand, it is seen as an economic resource that can be tapped to benefit and expand the economy. For example, the railroad industry in the county could benefit from hard rock mining, because hard rock is a product that can be exported.

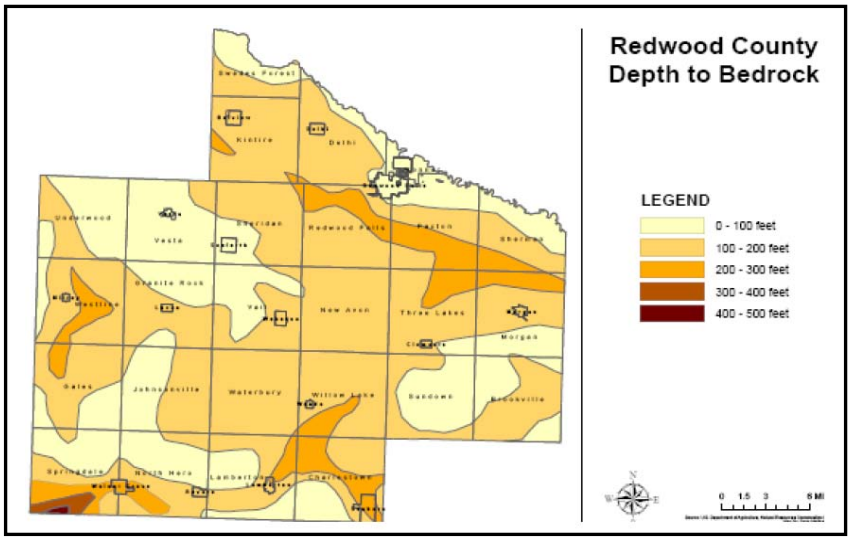
Others see the granite outcroppings within the Minnesota River Valley as a valuable natural resource that should be protected, both from the perspective as a base for the tourist industry and as a spiritual sanctuary.

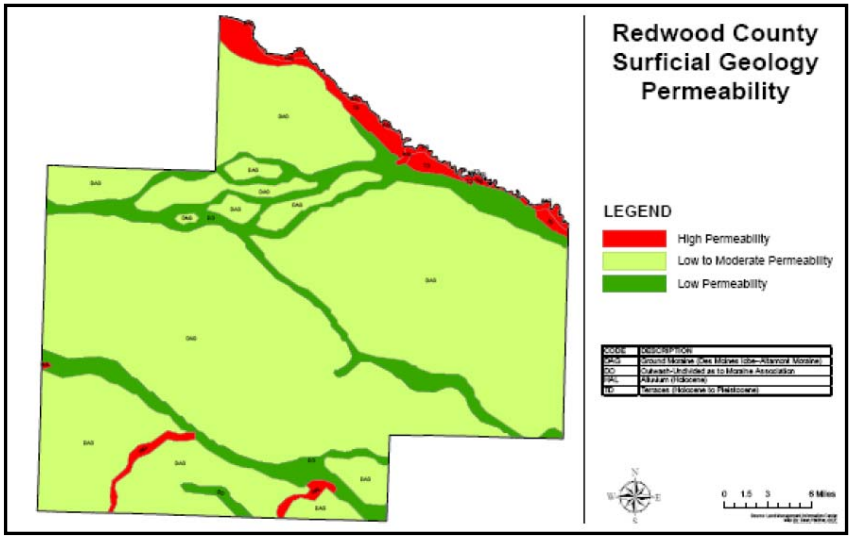
Aggregate Resource Protection in Minnesota:

During 1984, Minnesota Statute 84.94 was enacted to protect aggregate resources; to promote orderly and environmentally sound development; to spread the burden of development; and to introduce aggregate resource protection into local comprehensive planning and land use controls. The legislation initiated county-level identification and characterization of aggregate resources and directed county planning authorities to use the information to consider the protection of identified aggregate resources in their planning decisions.

During 1998, the Minnesota Legislature created the "Aggregate Resources Task Force" to examine issues concerning the need for and use of the state's aggregate resources. The Task Force's Final Report (Aggregate Resources Task Force, 2000) made a number of recommendations designed to facilitate the task of extracting aggregate resources. The actions recommended are typical of those used for sustainable resource management and include: 1) Best Management Practices, 2) reclamation standards, 3) mine planning and permits, 4) native prairie conservation, 6) aggregate planning and protection, 7) registration of commercial aggregate deposits with the State Department of Natural Resources, 8) aggregate resource mapping, 9) leasing aggregate reserves by State Department of Transportation, 10) compensating host communities, 11) incentives for recycling, and 12) encouraging transportation of aggregates by bulk carriers.

The last section of the plan, which outlines policy objectives, discusses hard rock mining and includes implementation steps that will, hopefully, bring balance between the economic and environmental concerns.





MAJOR WATERSHEDS AND DRAINAGE BASINS

Three major watersheds exist in the county. They include the Minnesota River (Granite Falls and Mankato), the Redwood River, and the Cottonwood River. The largest watershed in Redwood County is the Cottonwood River Watershed, which contains approximately 460.8 square miles or 53 percent of the surface area of Redwood County. Eventually the Cottonwood and Redwood Rivers drain into the Minnesota River.

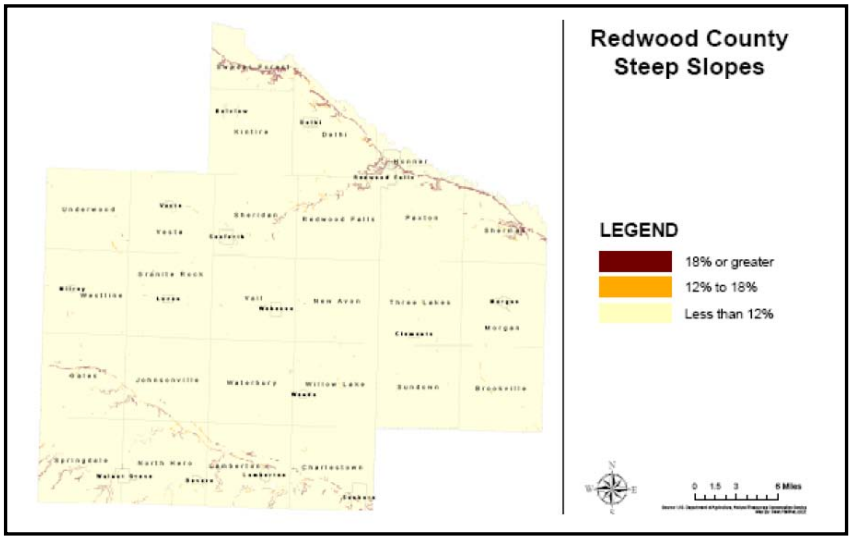
Water

According to the U.S. Census Bureau, Redwood County has a total area of about 874 square miles, of which a small percentage is water.

Surface Water:

Surface water includes lakes, rivers, streams and ponds. The data do not indicate whether drainage ditches are included in the surface water calculations. Lakes include the following:

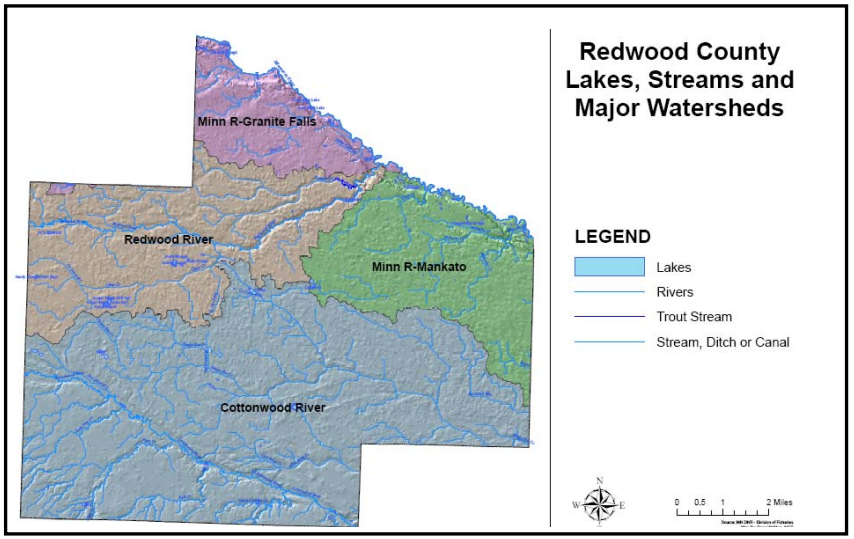
- Daubs Lake in Vail Township
- Gales Lake in Gales and Westline Townships
- Iverson Lake in Swedes Forest Township
- Long Lake in Swedes Forest Township
- Lake Laura in Springdale Township
- Lake Redwood in Redwood Falls
- Tiger Lake in Honner Township
- Willow Lake in Wanda



Lakes:

Redwood County does not have a large number of lakes. Nearly all the natural occurring lakes within Redwood County have been drained. The primary lakes remaining include Lake Redwood and Lake Laura, which are the results of impoundments on the Redwood River and a tributary of Plum Creek.

No matter how or when these lakes were formed, the age of the lakes can be greatly affected and the aging process of the lakes can be negatively impacted by the actions of human intervention. One of the largest problems experienced by lakes because of human activity is the increased level of nutrients. Excess nutrients spur the development of nuisance or problem algae, which, over time, can choke off beneficial vegetative life, reduce water quality, starve out desirable fish



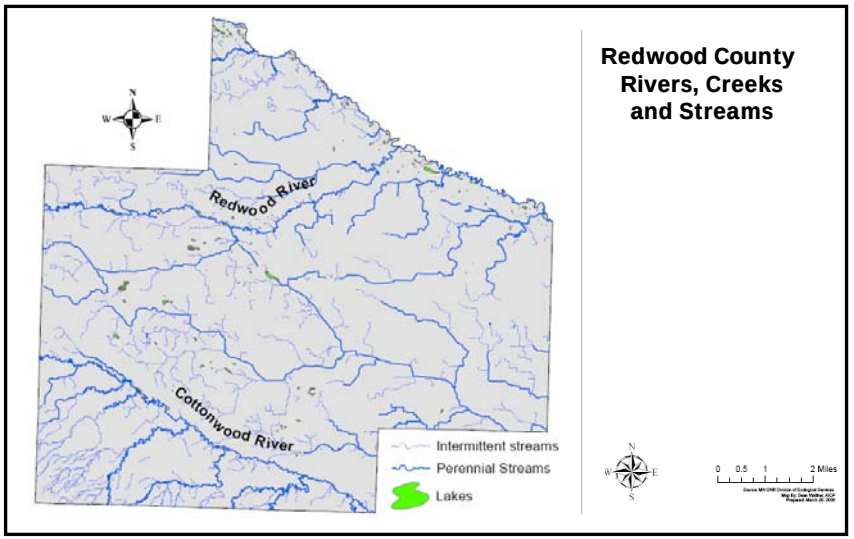
populations, and increase the occurrence of winterkill and summer kill.

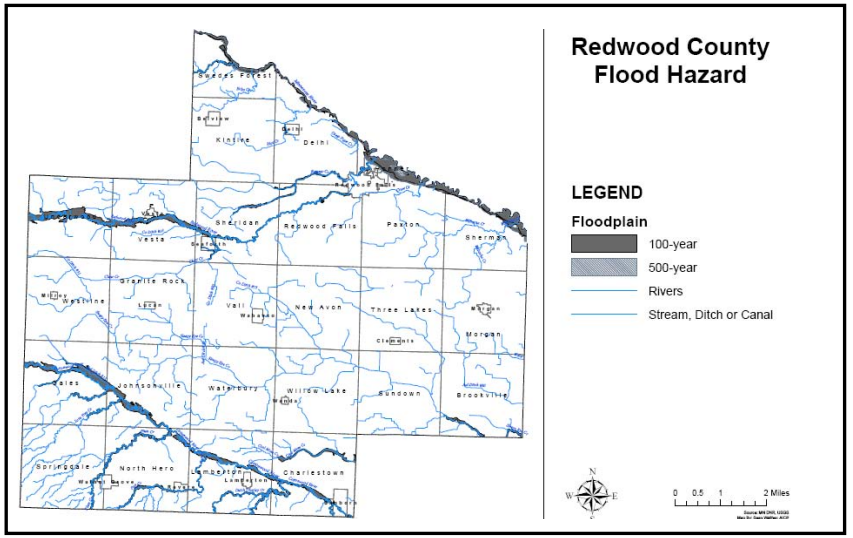
Sources of increased nutrients in lakes include: municipal sewage discharge, leaching from septic tanks, feedlot runoff, excessive applications of nitrogen and phosphorous to cropland, erosion of nutrient rich soil, improper manure disposal, and finally, over fertilization of residential lawns. Pollutants have the potential to interchange between land, lake, and ground water, affecting drinking water or industrial water quality, as well as fishing, recreation, and human health.

The filling of lakes by gradual sedimentation or soil erosion is also of concern. Eroded soils move into surface waters including wetlands, lakes, and rivers and contribute to degraded water quality. This, in turn, reduces the amount of sunlight that can reach aquatic plants. As a result, the aquatic plant communities are reduced, and the nutrients that would have been ingested by those plants are released and become available to support nuisance (unwanted) algae growth.

In addition, soil particles carry nutrients such as phosphorus, which further contributes to nutrient loading in lakes and rivers. Other contaminants such as agricultural chemicals are also carried into surface waters through soil erosion. Finally, the basic public values of the impacted basins are jeopardized as they become silted in at accelerated rates. Lakes and wetlands can be literally filled in by erosion. The principle means of reclaiming these valued water bodies would be the extremely expensive and ecologically disruptive process of dredging.

Rivers:
Rivers in Redwood County include the Minnesota, Redwood, and Cottonwood Rivers. The watersheds of the Redwood and Cottonwood Rivers eventually drain into the Minnesota River.





Drainage Ditches:
Redwood County has constructed and maintains approximately 520 miles of open drainage ditches and 1,105 miles of county and judicial drainage tile.

Wetlands:
Originally, wetlands were located throughout nearly the entire county. With the advent of intensive agriculture practices and the application of land drainage techniques, many of the wetlands located on lands that were flat and suited to agricultural use have been drained. Because of this, there are now relatively few wetlands in the flat till plain areas of the county. The exact amount of wetlands drained throughout Redwood County since the days of early European settlement is unknown, but it is estimated that about 90 percent of the county's original wetlands have been drained and those lands are now used for agricultural purposes. (Redwood County All Hazard Mitigation Plan, 2004) Most of the county's remaining wetlands are identified in the National Wetlands Inventory. This inventory classifies all wetlands into eight different wetland types. Wetlands are differentiated by depth of water and vegetation.

OVERVIEW OF AGRICULTURAL LAND COVER

Agricultural Land Cover

Table 1, in the next column, documents the historic agricultural land use or cover for the years 1994, 1997, 2004 and 2005

Table 2, prepared by the Minnesota Land Management Information Center, summarizes land cover from 2002. The table reinforces the importance of agriculture in Redwood County. According to the information, in 2002, 90.4 percent

TABLE 1
REDWOOD COUNTY AGRICULTURAL LAND USE (in acres)

Total County Area	**564,184**			
	1994	**1997**	**2004**	**2005**
CRP land (acres)	17,925	6,035	NA	NA
Corn (acres)	226,200	238,200	240,400	240,000
Sweet corn	0	0	7,000	0
Soybeans (acres)	229,100	223,200	213,000	213,700
Sugar beets (acres)	0	0	4,600	0
Wheat (acres)	3,900	3,800	3,400	3,400
Oats (acres)	6,300	1,600	1,200	1,300
Hay (acres)	11,200	10,400	8,500	8,400
Total Crop Land	476,700	477,200	478,100	466,800
Percent in Crop Land	84.4	84.6	84.7	82.7
Source: Minnesota Agriculture Statistics Service				

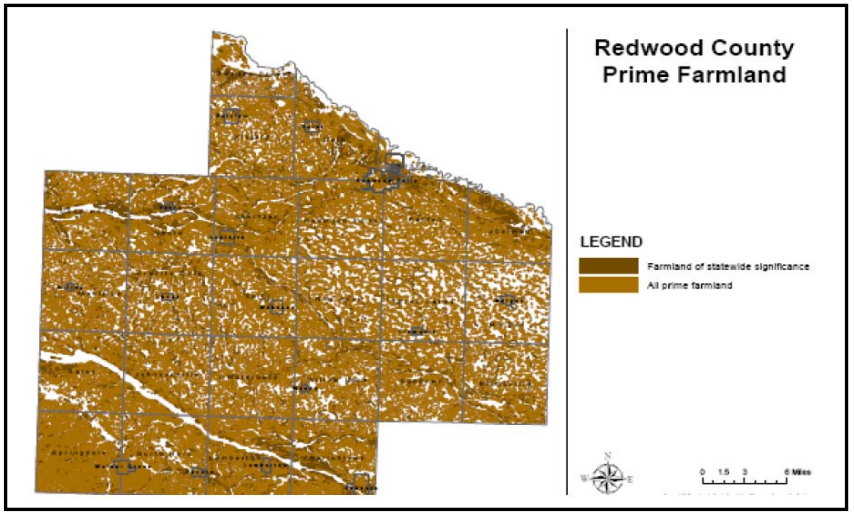
(Table 2) of the land in the county was utilized for crop production, as compared to 84.6 percent in the year 1997 (Table 1).

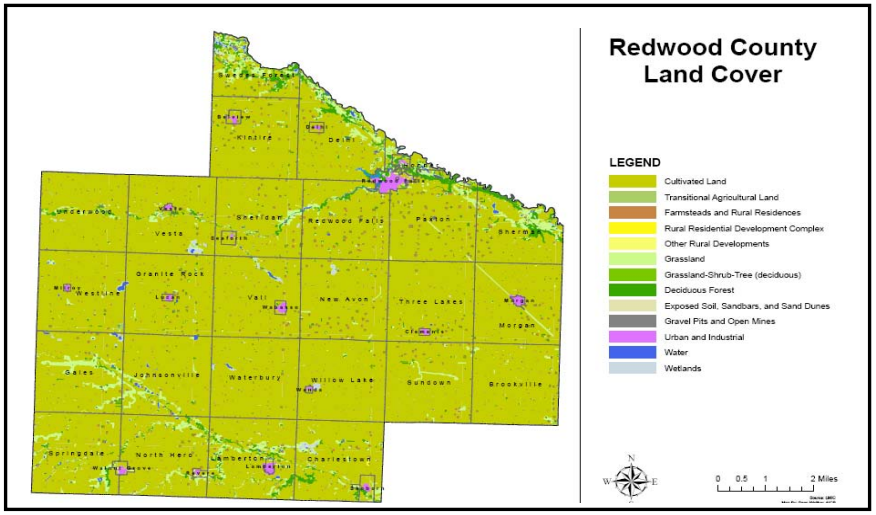
Additional information prepared by the Center shows that the number of farms in Redwood County increased from 1,163 in 1997 to 1,198 in 2002. During this period as well, the average size of farms in the county increased from 433 acres to 455 acres, and the average age of farmers in the county increased from 48.6 to 51.1.

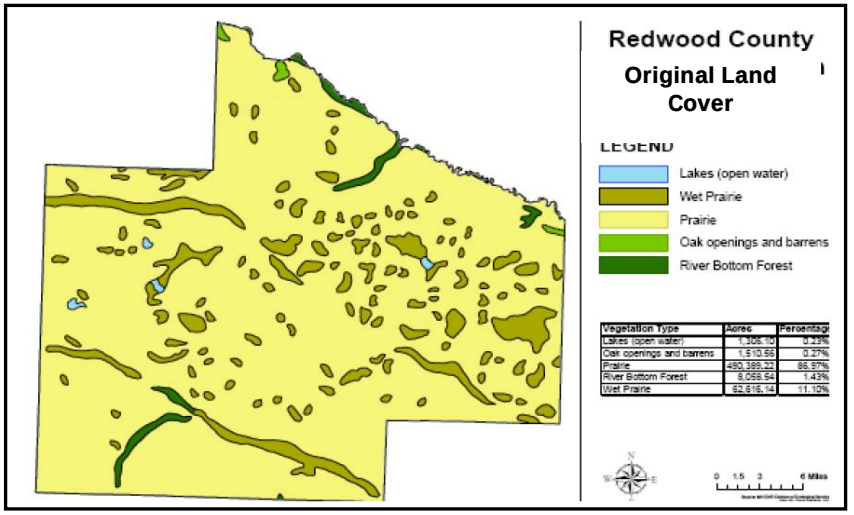
Despite the increase in the number of farms between 1997 and 2002, other sources of data indicate that the overall trend is toward fewer yet larger farms. In 1987, there were 1,435 farms in the county, 514,462 acres were in crops, and the average farm size was 359 acres. The county lost 18 percent of its farms between 1987 and 1997, and it is doubtful that the county will ever regain them.

TABLE 2
2002 DEVELOPED LAND COVER DESCRIPTION

Land Use Category	Percent of County
Urban and Industrial	0.6
Farmstead and Rural Residences	1.2
Rural Residential Development	< 0.1
Other Rural Development	0.1
Cultivated Land	90.4
Transitional Agricultural Land	< 0.1
Grassland	3.7
Grassland Shrub	< 0.1
Grassland Shrub-Tree Complex	3.2
Water	0.3
Wetlands	0.2
Gravel Pits/Open Mines	< 0.1
Exposed Soil	< 0.1
Total	100.0
Source: Land Management Information Center	







ENJOYMENT OF THE NATURAL ENVIRONMENT

Unaltered, natural areas are limited in Redwood County. The vast majority of land in the county has been drained to accommodate agriculture. Practically all that remains of the natural environment is the Minnesota River Valley and other water-related environments along other rivers, streams, and creeks. These well-hydrated areas provide environments where trees and forests can thrive and wildlife can be sustained.

It should be stated from the beginning that among the major underpinnings of this comprehensive plan, are two base-level assumptions:

1. The natural environment is a precious resource and, where possible, it should be protected and preserved.
2. It is precious because it **is**. It does not have to possess wondrous beauty, nor must its harvesting or extraction result in an economic gain.

For example, wildlife, as ecology, is part of the natural environment. One could ask, "Is wildlife precious? Should it be protected? Why should it be protected?"

Because society has been sensitized to environmental and ecological concerns, a majority of people would feel that wildlife is precious and should be protected. When asked why, a majority of people would state that it needs to be protected to: a) ensure that it will be here for the enjoyment of future generations and b) because it exists and it has a right to continue, irrespective of future human generation. It is doubtful that there are many people who feel wildlife is only worth protecting if its appearance is pleasing to humans or it can be associated with an economic value.

From a scientific perspective, some elements of the natural environment are "rechargers." This is most evident with wetland systems, which purify surface water that percolates down through the soil as it is discharged into lakes and rivers. Again, from a scientific perspective, the natural environment includes vegetation, which provides both food and cover for wildlife.

Predominant tree species in the Minnesota River Valley and the shore land areas along the county's other rivers and lakes include cottonwood, box elder, elm, river birch, oak, basswood, silver maple, and others. There is no fear that we'll run out of or deplete these species of trees. Nevertheless, the plan calls for their protection, because they are an important link in the ecology of the River Valley. Without them, wildlife in the River Valley would suffer.

Some of the wildlife in the Minnesota River Valley and in areas near the other rivers and lakes include:

- waterfowl,
- songbirds,
- eastern wild turkeys,
- raptors (hawks, eagles, owls, etc.),
- opossum,
- shrews and moles,
- rabbits,
- weasels,
- raccoons,
- river otters,
- minks,
- badgers,
- foxes,
- squirrels,
- skunks,

- deer,
- turtles,
- coyotes,
- prairie skinks,
- snakes,
- salamanders, and
- toads and frogs.

Not all of these species are hunted or even of any particular interest to wildlife enthusiasts, photographers, or hikers. Nevertheless, it is a base-level underpinning of this plan that they, and the environment that sustains them, should be protected and preserved.

Wildlife

Hunters enjoy a wide variety of opportunities in the county. The most popular game species are pheasant, turkey, waterfowl and deer. The most common waterfowl species include the Canada goose, mallard, teal, wood duck and pintail. Fall migration brings several other species of waterfowl to the county. Pheasant populations have increased dramatically in the southwest portion of Minnesota with consecutive mild winters beginning in 2001. Whitetail deer are common throughout the county. Hunting in the county is open for shotgun, muzzleloader, and archery seasons.

Fishing

Fishing opportunities exist in the various lakes and rivers in the county, with the Minnesota River being the most important to anglers. While expensive and potentially ecologically disruptive, current attempts to restore the depth of the water in Lake Redwood, by dredging sediment, should have a positive impact on the community. These efforts should benefit fishing resources in the most visible and accessible lake in the county.

Redwood County has one designated trout stream; Ramsey Creek, which is a tributary to the Redwood River just west of Redwood Falls. This creek is managed for Brown Trout by the Minnesota Department of Natural Resources (DNR). Trout streams are identified in state statutes as bodies of water that are to be kept clean for trout propagation and public fishing. DNR efforts are often best spent improving land management practices in watersheds surrounding trout streams. This is particularly true in cases where natural trout reproduction has been impeded by excessive watershed erosion and sedimentation.

Recreation Plans

The Minnesota River and its valley are a key component to future recreational plans for the county. It is the area in the county with the greatest potential for recreational diversity, and its landscape is a dramatic contrast to the relatively flat topographic relief experienced in the remainder of the county. Cooperation with Renville County and the Minnesota DNR are vital to realizing the potential of this corridor. Renville County is immediately north of Redwood County and shares the Minnesota River Valley. The DNR is the state agency that is authorized to protect the Minnesota River Valley and other riparian systems. The DNR is in the process of developing a trail plan for the Minnesota River Valley.

The DNR is also planning the Casey Jones Trail along Plum Creek from Walnut Grove to Redwood Falls. This multi-use trail will offer residents and visitors the opportunity to explore Redwood County in a way few experience it today. Great potential exists to capitalize on this and other trail corridors to expand the economic benefit of recreation and tourism.

Tourism

A key component to the future of tourism in the county is marketing. Tourism offers a means to expand economic

opportunities in the county. County assets, both natural and built, form a strong foundation for the promotion of tourism. The Minnesota River Valley and important historic features like the Gilfillan Historic Farm Estate offer the basis for an increasing tourist trade. Another key component is the importance of the Jackpot Junction to the future of tourism for the entire county. Jackpot Junction may be an initial magnet to get people to the county, and attractions within the county have the potential to hold visitors for more than a trip to a casino.

BUILT ENVIRONMENT AND THE ECONOMY

COMMUNITY FACILITES AND SERVICES

Courthouse

The Redwood County Courthouse is located in downtown Redwood Falls. This facility has undergone a series of modifications over the years and has been targeted for major renovation or reconstruction. Recent action by the County Board has set a course to investigate the construction of a new County Judicial Center in Redwood County. Design and programming for this facility will help to alleviate operational and financial issues that are present in the current Courthouse.

County Sheriff's Office and Jail

These facilities are inadequate to handle the current and projected needs of the Sheriff's department. Age of the facility, the need to upgrade technology, connections to the County Courthouse, jail size and cooperating coordination with surrounding jurisdictions are just a few of the reasons that a new office and jail are being slated for construction.

An ongoing study is being utilized by the County Board to choose the best course of action for both the Sheriff's Office and the Courthouse.

Community Facilities

Community facilities are an important component of land use planning and hazard mitigation activities. All aspects of community development, redevelopment, and recovery are directly related to current and future infrastructure decisions. Facilities whose operations are important to the normal functioning of the community are briefly profiled and discussed below. The profiles identify locations that serve as integral parts of the community in terms of everyday life and provide a sense of place and identity for Redwood County. The following profiles will be important for matching county resources against areas identified as hazard-prone in order to assess community vulnerabilities and hazard mitigation goals and priorities.

Schools:

Although there are several different school districts that have jurisdiction within Redwood County, only six districts, Cedar Mountain (Morgan), Lamberton (Redrock Central), Milroy, Redwood Valley, Wabasso, and Walnut Grove, have facilities operating within the county. Each school district is committed to quality education and tries to ensure that adequate facilities are available for the educational and recreational needs of their students. Schools include elementary, junior high, and senior high.

The Belview Learning Center (Belview), St. John's Lutheran School (Redwood Falls), St. Michael's (Morgan), and St. Anne's (Wabasso) also operate within the above-mentioned school districts. The Milroy Area Charter School and Eci Nompa Woonspe Charter School are two charter schools that operate within the county.

Important Community Facilities:
Important public and semipublic facilities in Redwood County include libraries, parks, fire service, ambulance service, emergency rescue service, post office, and various churches, community organizations and cemeteries. These locations provide both public services and create an important sense of community character.

The following list of facilities constitutes public facilities that are owned by the county. The listed facilities are located in Redwood County.

- Courthouse Building
- Law Enforcement Building
- Maintenance Garages (throughout the County)
- Plum Creek County Park
- Highway Garage/Engineer's Office
- Recycling Facility/Portable Recycling Sheds
- Museum
- Household Hazardous Waste (HHW) facility
- County landfill

In addition, the following also exist in the county:

- Native American Community (Lower Sioux Mdewankantowan Oyate)
- Wildlife Management Areas
- Fairgrounds

Historic Resources:
The following historic and culturally significant sites have been registered with the State Historical Society (information provided by the National Register of Historic Places):

- Anderson, J.A. House, Lamberton
- Bank of Redwood Falls, Redwood Falls
- Birch Coulee, Lower Sioux Indian Community
- Chicago North Western Depot, Lucan
- Chollar, Henry D. House, Redwood Falls
- City Blacksmith Shop, Lamberton
- Clements State Bank, Clements
- Commercial Hotel, Wabasso
- District School No. 8, New Avon Township
- Gilfillian, Paxton Township
- Honnor-Hosken House, North Redwood
- Land and Loan Office, Belview
- Lower Sioux Agency, Sherman Township
- Lower Sioux Interpretive Center
- Milroy State Bank, Milroy
- Minneapolis and St. Louis Depot, Belview
- Odeon Theatre (Hall), Belview
- Ramsey Park Swayback Bridge, Redwood Falls
- Redwood Falls Carnegie Library, Redwood Falls
- Revere Fire Hall, Revere
- Saint Cornelia's Episcopal Church, Lower Sioux Indian Community
- Scenic City Cooperative Oil Company, Redwood Falls

TRANSPORTATION SYSTEM

One of the most critical elements of the built environment is the county's transportation system. Within Redwood County the transportation system consists of roads, para-transit service, railroads, airports, and recreational trails. Roads in the county are under federal, state, county, township, and municipal jurisdictions. The para-transit service is provided by Western Community Action and operates throughout the entire county.

Two freight railroads operate in the county. The first, the Dakota Minnesota and Eastern (DM&E) operates in the southern part of the county and owns its track and right-of-way. The second, the Minnesota Prairie Line, operates in the northern part of the county on track that is owned by the Minnesota Valley Regional Railroad Authority (MVRRA). The county's local municipal airport is located in Redwood Falls. Finally, recreational trails in Redwood County are under the jurisdiction of county and municipal governments and the DNR.

The Road System: Spatial Organization and Jurisdiction

The road system in Redwood County is spatially organized along a north/south and east/west grid that is largely defined by section lines. Only two roads in the county, Trunk Highway (TH) 19 and TH 67 significantly depart from the grid and are oriented diagonally, although TH 19 is largely an east/west road.

Regional Roads:

The roadway system in the county is spatially organized to serve major population and employment centers. Redwood Falls, the county seat, is located in the northeast corner of the county, and is served by major regional roads, US 71, TH 19, TH 67, County State Aid Highways (CSAHs) 1, 17, 25, 31, and 101. Smaller cities in the county, Belview, Clements, Delhi, Lamberton, Lucan, Milroy, Morgan, Revere, Sanborn, Seaforth, Vesta, Wabasso, Walnut Grove, and Wanda, are served by regional roads that fall under US, state, and county jurisdictions. All but two of the smaller cities are served by at least two intersecting, regional roads. The Cities of Morgan and Wabasso are the exceptions, with each being served by three regional roads.

US and State Highways:

Both the US and state highways are under the jurisdiction of the Minnesota Department of Transportation (Mn/DOT). The agency provides federal funding to all roads regardless of title, including CSAHs.

Mn/DOT adopted an Interregional Corridor (IRC) Plan January 2000 as part of the State Transportation Plan. The emphasis of the IRC system is on providing efficient connections between regional trade centers. The goal of the IRC system is to enhance the economic vitality of the state by providing safe, timely, and efficient movement of goods and people. The corridors tie the state together by connecting people with jobs, distributors with manufacturers, shoppers with retailers and tourists with recreational opportunities.

The IRC classification system has categorized US 71, US 14, and TH 19 in Redwood County as Regional Corridors, because these roads link major cities in the county with larger regional centers in southern Minnesota (Mankato, Marshall, New Ulm, Owatona, Rochester, Waseca, and Willmar) and I-90. The minimum performance targets established for Regional Corridors is 55 miles per hour. The IRC roads are Redwood County's principal arterials.

County Roads:
While US and state highways are located and designed to meet interregional and regional travel demands, the county's road system is located and designed to serve regional and sub-regional travel needs. Redwood County's road system is comprised of CSAHs and County Roads (CRs). Roads under county jurisdiction are tentatively selected to become CSAHs by the County Board. They are approved for CSAH designation by the Minnesota Department of Transportation (Mn/DOT) Commissioner.

CSAHs are maintained by the county and financed through the CSAH Fund. Typically, the county's share of operations and maintenance costs for the CSAHs is 20 percent, with 80 percent coming from the State's CSAH Fund.

CRs are roads under county jurisdiction that do not meet the above criteria. Because travel demand on the CRs is not as high as it is on CSAHs, CRs may be paved or unpaved. They are maintained entirely by the county, without aid from the state.

Township Roads:
Township roads provide linkages between the county's townships. Traffic volumes on these roads are low, and, as a result, they can be either paved or unpaved. Because they operate like local streets in an urbanized area, providing access to adjacent land uses, they will be the most numerous roads in the county, accounting for the greatest percentage of lane-miles.

Municipal Roads:
Municipal roads (city streets) are roads that are under municipal jurisdiction. They operate within city boundaries and connect neighborhoods with activity centers and trip attractions. In communities where the population exceeds 5,000, some city streets are eligible to receive state aid. These Municipal State Aid (MSA) streets must directly and/or reasonably be linked to the state's road system.

Only Redwood Falls, with a population of 5,340, is eligible to designate city streets as MSA streets. South Washington Street, portions of Cook Street, and Swain Street are examples of MSA streets in Redwood Falls. Table 3, below, details miles and lane-miles of roadway in Redwood County, by jurisdiction. The term "lane-mile" describes the length of a road multiplied by the road's number of lanes.

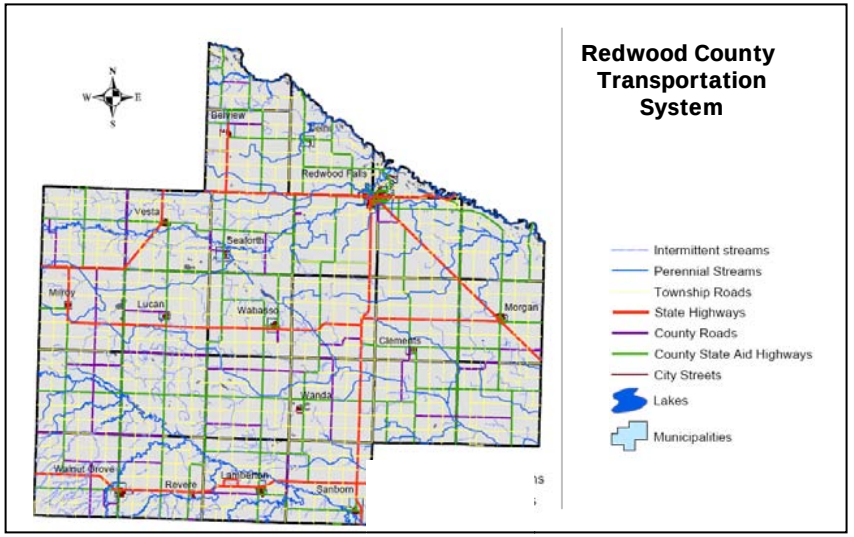


TABLE 3
ROADWAY MILES AND LANE-MILES, BY JURISDICTION

ROAD OR STREET TYPE/ JURISDICTION	Approximate Miles of Road or Street	Approximate Lane-Miles of Road or Street	Percent of Road or Street in the County
US Trunk Highway	48.911	98.221	2.86 %
Minnesota Trunk Highway	87. 902	176. 084	5.13 %
CSAH	390.751	783.142	22.84 %
CR	123.123	246.246	7.18 %
Township Roads	971.729	1,943.458	56.68 %
Municipal (City) Streets	83.944	167.246	4.88 %
MSA	7.327	14.654	0.43 %
Total	1,713.687	3,429.051	100.00 %

"Lane-miles" are calculated by multiplying the length of the road by the number of lanes.
(Source: Mn/DOT Traffic Data and Analysis Section)

Functional Classification

Roadway functional classification is a system of classifying roads by distinct criteria: a) the road's planned level of mobility versus its planned level of accessibility and b) the roads' spatial geographic location. A jurisdiction's effort to functionally classify its roadway system is the first step in the process of: 1) identifying funding sources for roadway construction, maintenance, and improvements and 2) defining design criteria and specifications and alignment location. Each of the three jurisdictions (federal, state, and county) will typically assign its roads to one of the four functional classifications:

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

Each functional class has a different level of importance given to the functions of mobility and accessibility. Larger road facilities, like principal and minor arterials, are intended to provide high levels of mobility. Collectors, on the other hand, are located and designed to provide decidedly less mobility than arterials, while increasing accessibility to adjacent land uses. Local roads, while not part of the county's functional classification system, exist to provide the lowest level of mobility and the highest level of land use accessibility.

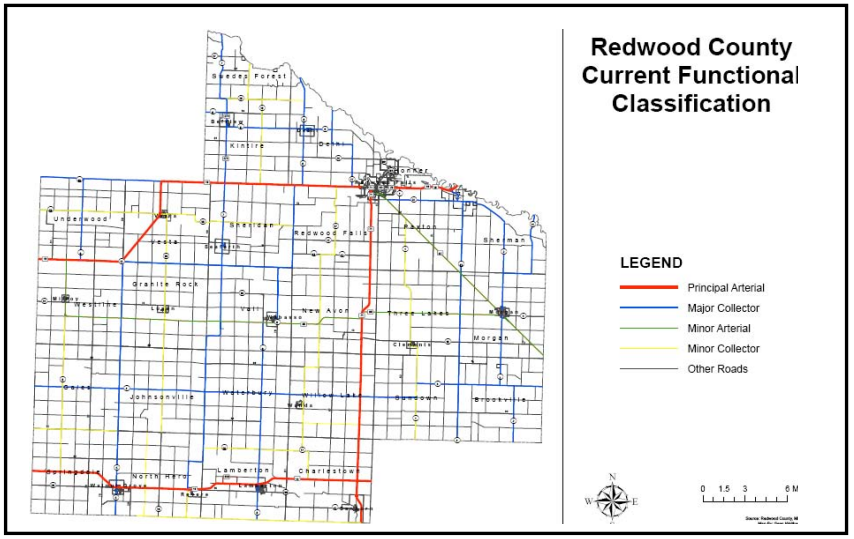
In addition to mobility and accessibility, additional criteria are used to functionally classify roads. These criteria include the following:

- trip-making service,
- location and spacing between similar facilities,

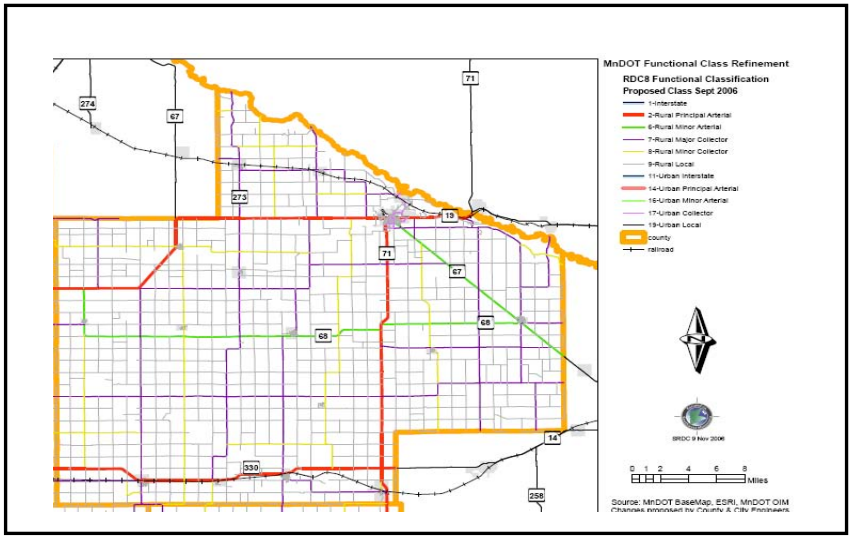
- typical right-of-way,
- typical daily traffic volumes,
- average speed,
- typical number of lanes,
- level of continuity,
- linkages to the regional roadway system.

Redwood County's current roadway functional classifications, shown in the top, right illustration, are based on requirements provided in the Intermodal Safety Transportation Efficiency Act (ISTEA) of 1991. Mn/DOT is presently proposing updates to functional classification across the state to reflect current travel demand and patterns and highway system usage and greater parity between similar areas statewide. A preliminary draft update of Redwood County's functional classification plan is shown in the bottom, right map. Guidance for the updates will be based on the following functional definitions:

- Arterials:
  - direct, relatively high speed service,
  - longer trips,
  - large traffic volumes, and
  - mobility emphasized and access limited.
- Collectors:
  - bridge between arterials and local streets,
  - link small towns to arterials, and
  - collect traffic from local roads.
- Local streets:
  - direct access to homes, farms, and private property, depending on the timing of Mn/DOT's activities, the county's functional classification system update may be discussed in the comprehensive plan. As stated, functional classification bears on roadway funding (new construction and operations and maintenance) and prioritization of funding support.



Redwood County: Current Functional Classification



Redwood County: Proposed Functional Classification

Travel Demand and Capacity

Vehicle-Miles of Travel:

Data from Mn/DOT on annual, vehicle-miles of travel (VMT) in the county are presented below in Table 4. VMT data is a very reliable indicator of travel demand. As shown in Table 4, the overall trend indicates flat growth in total VMT between 2001 and 2004. The data also show that where there may have been an increase in VMT in one year, there was almost an equal decrease in VMT in the next year or the next two years.

The most significant finding from the data is that use of regional roads (federal, state, CSAHs, and CRs) is either decreasing just slightly or steady. At the same time, the data show steady increases in the usage of both the township roads and the municipal streets.

Average Daily Traffic Volume:

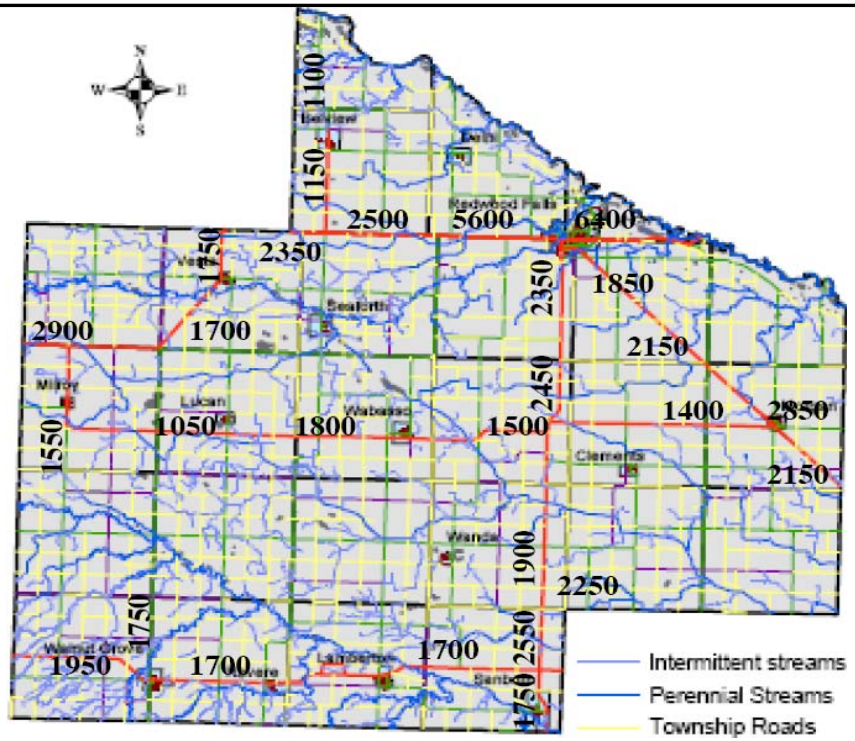
Another indicator of travel demand is Annual Average Daily Traffic (AADT). AADTs are prepared for the county by Mn/DOT every four years. The next set of traffic counts for Redwood County is due in 2007. Mn/DOT counts traffic on its own roads every two years.

Maps on the following page, present historic AADTs (Year 2000) and the most current AADTS (Year 2004). By comparing the 2000 and 2004 traffic volumes, it is shown that traffic volumes did not change appreciably within this four-year period.

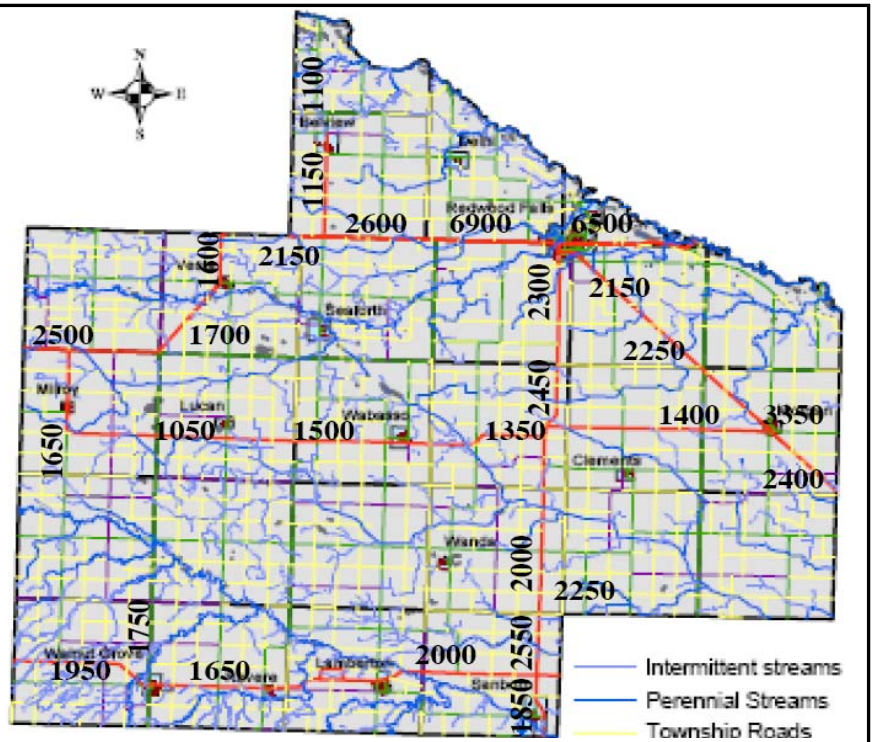
TABLE 4
COMPARISON OF ANNUAL VEHICLE-MILES OF TRAVEL

ROAD OR STREET TYPE/ JURISDICTION	2001 VMT	2002 VMT	2001 - 2002 Annual Growth	2003 VMT	2002 - 2003 Annual Growth	2004 VMT	2003 - 2004 Annual Growth
US Trunk Highway	35,534,210	33,274,495	- 6.35 %	33,639,860	1.00 %	36,061,980	7.20 %
Minnesota Trunk Highway	75,635,665	75,608,655	- 0.04 %	76,443,045	1.10 %	70,895,664	- 7.26 %
CSAH	70,812,555	75,723,995	6.94 %	67,840,360	- 10.4 %	69,859,884	2.98 %
CR	3,022,200	3,293,760	8.99 %	2,490,395	- 24.4 %	2,428,410	- 2.49 %
Township Roads	18,401,110	19,257,400	4.65 %	20,870,335	8.38 %	21,042,804	0.83 %
Municipal (City) Streets	14,212,735	15,085,450	6.14 %	15,769,825	4.54 %	15,878,178	0.69 %
MSA	2,704,265	2,494,410	- 7.76 %	2,215,185	- 11.2 %	2,298,480	3.76 %
Total	220,322,740	224,738,165	2.00 %	219,269,005	- 2.43 %	218,465,400	- 0.37 %

Source: Mn/DOT Traffic Data and Analysis Section



2000 Average Daily Traffic
Source: Mn/DOT



2004 Average Daily Traffic
Source: Mn/DOT

Crash Data

Crash data from Mn/DOT was used to prepare Table 5, which compares the number of crashes (traffic incidents) occurring in Redwood County between 2000 and 2005. As shown in the table, the number of incidents has not substantially changed. One exception, however, is 2001 where 234 incidents were investigated and reported. This is to be compared to other years in the survey period where the number of incidents ranged between 169 and 199.

In addition to maintaining records on the number of crashes that have occurred, Mn/DOT keeps records on the rate of crash occurrences. The crash rate describes the number of incidents that have occurred per million vehicle miles of travel. Table 6 presents the 2004 crash rates for Redwood County.

The overall average crash rate for the State of Minnesota was 1.62 in 2004. As shown in Table 6, Redwood County's average crash rate for 2004 was 0.82. Generally this indicates that crashes statewide occur about twice as frequently as they do in the county. Within the county, however, the crash rates on municipal streets and MSA streets were higher than the overall state average.

TABLE 5
AUTOMOBILE CRASHES IN REDWOOD COUNTY

ROAD OR STREET TYPE! JURISDICTION	2000	2001	2002	2003	2004	2005
US Trunk Highway	26	36	27	28	36	28
Minnesota Trunk Highway	61	69	54	66	52	42
CSAH	64	76	66	59	57	58
CR	2	3	4	5	0	0
Township Roads	7	9	15	7	1	7
Municipal (City) Streets	18	32	26	26	29	23
MSA	7	9	7	8	5	11
Total	**185**	**234**	**199**	**199**	**180**	**169**

Source: Mn/DOT

TABLE 6
2004 REDWOOD COUNTY CRASH RATE

ROAD OR STREET TYPE JURISDICTION	2004 VMT	2004 Crashes	2004 Crash Rate
US Trunk Highway	36,061,980	36	1.00
Minnesota Trunk Highway	70,895,664	52	0.73
CSAH	69,859,884	57	0.82
CR	2,428,410	0	0.00
Township Roads	21,042,804	1	0.05
Municipal (City) Streets	15,878,178	29	1.83
MSA	2,298,480	5	2.18
Total	**218,465,400**	**180**	**0.82**

Source: Mn/DOT

Planned Roadway Improvements

Roadway improvement plans for Redwood County are documented in the Redwood County Highway Department's Five Year Plan. The current plan covers the period from 2005 through 2009. The projects that have been included in the plan address road resurfacing and bridge replacements. Thus far, funding for the 2005 to 2009 period has been estimated as follows in Table 7.

In addition to the above projects, which are focused on maintenance and minor improvements, the County is facing two growing transportation issues on the east side of Redwood Falls. This first issue includes realigning CSAH 101, constructing a new, signalized CSAH 101/TH 19 intersection, and turning existing CSAH 101 back to the City of Redwood Falls. The project has not yet been included in any transportation plan or capital improvement plan for the county or Mn/DOT.

In order to move the project forward, Redwood County, the City of Redwood Falls, and Mn/DOT will need to collaborate as each jurisdiction will be affected.

The second issue involves CSAH 2, CSAH 13, and CSAH 24, which provide access to and a route that passes through the Lower Sioux Mdewakantowan Reservation. With development of the tribe's casino, the segment of CSAH 24 that enters the reservation has become one of the busiest roads in the county with more than 6,000 vehicles per day in 2004. Maintenance issues along these roads and safety issues where CSAH 2 intersects TH 19 will need to be addressed as travel demand continues to grow.

Trails

There are two significant, future recreational trails in Redwood County: the Casey Jones Trail and the Minnesota River Valley Trail. The Casey Jones Trail is a state trail that will begin at the Plum Creek in Walnut Grove. The trail will follow the creek to the north to the Two Rivers Wildlife Management Area, where the Plum and Cottonwood Rivers merge. From there, the trail will generally follow CSAH 10 to the north to Clear Creek, which flows into the Redwood River and eventually to Lake Redwood on the southwestern side of Redwood Falls.

The Minnesota River Valley Trail is a component of the state's Wild and Scenic River legislation, which calls for better management of the Minnesota River. The segment of the Minnesota River in Redwood County, from the northwest corner of Redwood County (Section 7 Swedes Forest Township) to the CSAH 11 Bridge near Franklin, is designated a component of the Minnesota wild and scenic rivers system. The River's designation as a Scenic River was made by the commissioner of natural resources pursuant to the authority of the Minnesota Wild and Scenic Rivers Act, Minnesota Statutes 1974, sections 104.31 to 104.40.

TABLE 7
ESTIMATED FUNDING AND SOURCES FOR CAPITAL IMPROVEMENTS
(Millions of Dollars)

FUNDING SOURCE	2005	2006	2007	2008	2009	Total
County State Aid Regular	$1.886	$1.900	$1.900	$1.900	$1.900	$9.486
County State Aid Municipal Accounts	$0.300	$0.280	$0.280	$0.280	$0.280	$1.420
State Aid Town Bridge Account	$0. 190	$0. 150	$0. 150	$0. 150	$0. 150	$0. 790
Federal Aid and Other State Aid Sources	$1.832	0	0	0	0	$1.832
County Local Road and Bridge Fund	$0.360	$0.200	$0.200	$0.200	$0.140	$1.100
Total	**$4. 568**	**$2.530**	**$2. 530**	**$2.530**	**$2.470**	**$14. 628**

Not included in the funding estimates in Table 7 are carry-over funds from 2004. These total $3,018,000, which brings the total estimate for roadway improvements (2005 to 2009) to $17,646,000.
Source: Redwood County Highway Department

ECONOMIC CONDITIONS

The economy of Redwood County is and has been reliant on agriculture and agriculture-related businesses. The greatest number of employees, however, is in retail and wholesale trade, manufacturing and healthcare jobs. The largest single employer in the county is Jackpot Junction Casino.

Redwood County businesses and governments employed approximately 6,577 people in 2000. Redwood County is ranked 59 of 88 counties in the state in terms of total 2005 employment. Redwood County is also a net producer of jobs with 284 more local jobs than resident workers. Employment projections for Region Eight (the Southwest Development Region) indicate that personal care and service occupations will create the most new jobs. The increasing numbers of elderly in the county and the decreasing numbers of younger people will lead to a tightening of the labor force and a shortage of workers. On the plus side, more jobs will be created in the higher wage health care fields.

MAJOR INDUSTRIES

Agriculture:

The 2002 Census of agriculture identified 1,198 farms in the county, an increase of 35 farms from the 1997 agricultural Census. The average size of farms also increased from 433 acres to 455 acres. In 2002 farmland in production also increased from 85 percent of the acres in 1997 to 90 percent in 2002.

The consolidation of farms in Redwood County follows the national trend toward fewer and larger farms. The 2002 estimated market value of agricultural products sold totaled $220,490,000. Redwood County continues to perform well in the agricultural sector ranking fifth in the state for total cash receipts from marketing for 2002 at $227,000,000. The county also ranked well in a wide variety of commodity sales.

Animal production is the industry with the largest change in employment since 2001 in Redwood County, growing in new jobs by 64.7 percent. This is greater than the average for the state and the nation. This dramatic change is primarily a result of the small numbers of people employed in the industry but a signal that new production farming is impacting the economy. Tables 8, 9 and 10 detail recent trends in the county's employment by industry and commodity sales.

The importance of agriculture as a major contributor to the county's economy cannot be overstated. A report prepared by the University of Minnesota in 2002, "How Big is Minnesota's Food and Agriculture Industry?," stated that the food and agriculture industry represents 28 percent of employment in the western region of Minnesota, and 40 percent of dollar outputs.

According to data provided by the US Department of Commerce, in 2004, total employment in Redwood County stood at 10,015 jobs. Of these 1,792 (18 percent) of these jobs were located on farms. Additionally, in the same year, the combined effect of the Agricultural, Forestry, Fishing/Hunting industry sectors was $237.379 million in industry output and 1,866 jobs. (Therefore, in 2004, there were 74 jobs in the county in the Forestry and Fishing/Hunting industry sectors.)

As an economic engine in Redwood County, agriculture affects the economy in three distinct ways. The total impact is the sum of the three impacts.

1. Direct impacts, which represent production output of an industry
2. Indirect impact, which is a measure of how local industries are affected by the increase in output that stems from purchases between industries
3. Induced impact, a measure of how local industries benefit from expenditures of new income generated by direct and indirect impacts.

TABLE 8
LARGEST GROWTH BY INDUSTRY 2001-2005

Description	Employment 2001	Employment 2005	Employment Change	Average Wages 2004
Animal Production	17	28	64.7%	$29,944
Professional and Technical Services	117	125	6.98%	$35,469
Ambulatory Health	154	217	41.02%	$42,188

Source: Department of Labor Statistics

TABLE 9
LARGEST DECLINE BY INDUSTRY 2001-2005

Description	Employment 2001	Employment 2005	Employment Change	Average Wages 2004
Real Estate	27	21	-24.07%	$16,244
Manufacturing	960	766	-20.19%	$34,630
Utilities	30	25	-16.67%	$46,593

Source: Department of Labor Statistics

TABLE 10
COMMODITY SALES/RANKING

Type of commodity	Sales/units	State Rank
Crops	$122,000,000	3rd
Soybeans	216,300 acres	2nd
Corn	226,700 acres	3rd
Livestock	$98,000,000	9th
Government Payment	$6,970,000	8th

Source: Department of Employment and Economic Development report

Wholesale, Manufacturing and Retail Trade:
In Redwood County, retail trade, manufacturing, and the wholesale trade industries are the largest employment industries. The retail trade is one of the largest employment industries.

Manufacturing and wholesale trades total 12 and 6 percent of all employment. These sectors are very dominant in the region. The percent of total employment in the wholesale trade sector is 1.63 times greater than the national average. Employment in the wholesale trade sector was primarily in agriculture related industry with 191 jobs in farm product sales and 53 jobs in machinery sales. Manufacturing between 2001 and 2005 was faced with the largest loss in employment in Redwood County. The industry lost a total of 194 employees during the period, or 20.2 percent of jobs in the industry. The losses in this industry made up 43.2 percent of all employment losses in the county. (Source Bureau of Labor Statistics)

Health Care and Social Assistance:
Health care and social assistance is the largest non-agricultural employment sector in the county, with 870 jobs. This is 13.4 percent of total jobs in the county. Because of the growing number of elderly in the region, it is expected to be the largest growing industry in the southwest region of Minnesota. Of the total 870 jobs, 311 are in nursing and residential care facilities, and 150 are associated with the hospital.

The Minnesota Department of Economic Security estimated Redwood County's labor force at 9,153 people during the year 2002. At this same time, total employment within Redwood County was estimated at 8,795 people, which was an unemployment rate of only 3.9 percent. This level of employment is to be compared to 7,100 people who were employed in 2000. This difference, 1,695 people over a two-year period) represents a 24 percent increase in the number of employed people in the county. Table 11 shows the number of people employed in Redwood County between 1996 and 2000.

Various businesses throughout Redwood County with the greatest number of the county's citizens are shown in Table 12. Also included is where each business is located within the county.

TABLE 11
COUNTY EMPLOYMENT BY INDUSTRY
(1996 – 2000)

	1996	1997	1998	1999	2000	1996-1997 No.	1996-1997 Pct.	1998-1999 No.	1998-1999 Pct.	1996-2000 No.	1996-2000 Pct.
Ag Services	nd	nd	nd	nd	81	nd	nd	nd	nd	nd	nd
Construction	294	315	329	340	341	21	7%	11	3%	47	16%
Manufacturing	1,422	1,329	1,403	1,299	1,318	-93	-7%	-104	-7%	-104	-7%
TCPU	229	235	260	248	248	6	3%	-12	-5%	19	8%
Wholesale	468	486	477	461	432	18	4%	-16	-3%	-36	-8%
Retail Trade	1,111	1,162	1,255	1,234	1,252	51	5%	-21	-2%	141	13%
FIRE	248	239	245	246	240	-9	-4%	1	0%	-8	-3%
Services	1,671	1,714	1,737	1,771	1,879	43	3%	34	2%	208	12%
Government	1,326	1,329	1,344	1,351	1,390	3	0%	7	1%	64	5%
All Industries	**6,769**	**6,809**	**7,050**	**6,950**	**7,100**	**40**	**1%**	**-100**	**-1%**	**331**	**5%**

* nd is no data available
** Ag Services includes Forestry, Fishing, and Mining
*** TCPU includes Transportation, Communication, and Public Utilities ***FIRE includes Finance, Insurance, and Real Estate
Source: Minnesota Department of Economic Security

TABLE 12
Major Employers As of May 2001

Company	Products/ Services	Location	Full Time Employees
Jackpot Junction	Casino Gambling	Morton/Redwood	950
Schult Home	Wood Product Manufacturing	Redwood Falls	250
Redwood Falls School District	Education	Redwood Falls	225
Meadowland Farmers Co-op	Grain Elevator	Lamberton	200
Jonti Craft	Wood Product Manufacturing	Wabasso	185
Redwood County	County Public Services	Redwood County	183
Redwood Area Hospital	Health Services	Redwood Falls	181
Daktronics	Electronic Technologies	Redwood Falls	125
REM South Central Services	Vocational Rehabilitation	Redwood Falls	123
Wal-Mart	Commercial	Redwood Falls	120
Red Rock Central Schools	Education	Lamberton	120
Good Samaritan Communities	Nursing Care Facilities	Redwood Falls	115
Central Bi-Products	Wholesalers	Redwood Falls	106
Valley View Manor	Nursing Care Facilities	Lamberton	105

Source: Redwood County Economic Development

Railroad Contribution to Economic Development in the County

As mentioned, the DM&E and Minnesota Prairie Line Railroads operate in the county, and both railroads are vital ingredients in the county's economic development. As will be discussed further in the Land Use Section of the comprehensive plan, the railroads themselves (the track(s) and the railroad right-of-way) are linear industrial zones where commercial/industrial activities take place.

Within the last two years, the value of the railroads, as contributors to the county's economic vitality, has become even clearer and, as a result, consideration in the comprehensive plan should be given to the identification of railroad-economic development corridors where industrial businesses will want to locate.

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The availability of railroads in Redwood County could greatly contribute to the ability of community members to develop new products that can be used to solve today's energy problems.

Redwood County Economic Development Authority

In 2004 the county formed a task force to explore the formation of an Economic Development Authority (EDA). After work sessions with an outside facilitator, the task force recommended to the county board to form a county EDA as long as funding was provided by the county for the work plan created by the EDA Board.

In 2005 the Redwood County EDA was appointed by the county board to provide public assistance to business endeavors that will benefit the county. The EDA is a seven member board with two county commissioners and five citizen members.

The Redwood County EDA has a desire to further economic development efforts in Redwood County by exploring ways to diversify our local economy so that crop and livestock production are not the only large-scale economic engines. The EDA will further assist in the development of businesses that can add value to primary agriculture and to businesses that are not related to agriculture. The EDA will continue to focus their efforts on industry clusters such as renewable energy, bioscience, manufacturing, technology, and wood products. Efforts need to be focused on workforce development and attracting/retaining young people to the county.

DEMOGRAPHIC AND SOCIO-ECONOMIC TRENDS AND FORECASTS

POPULATION

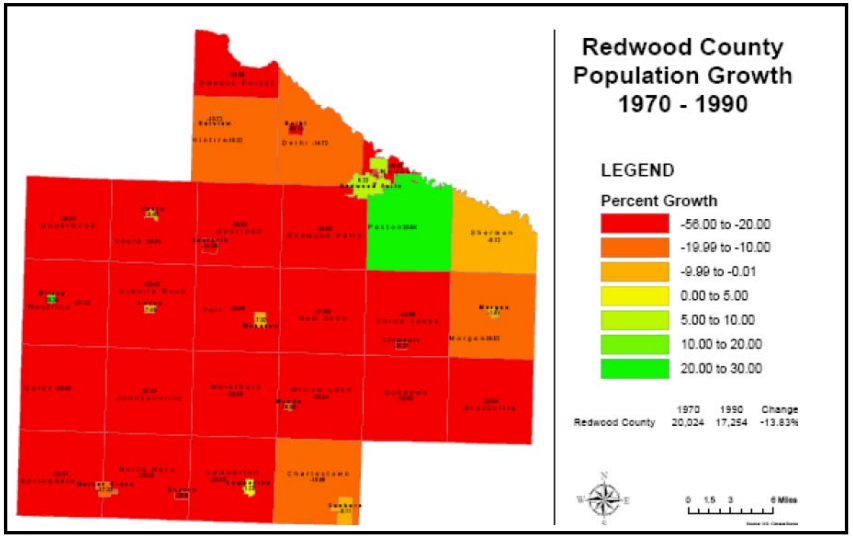
General Population Data

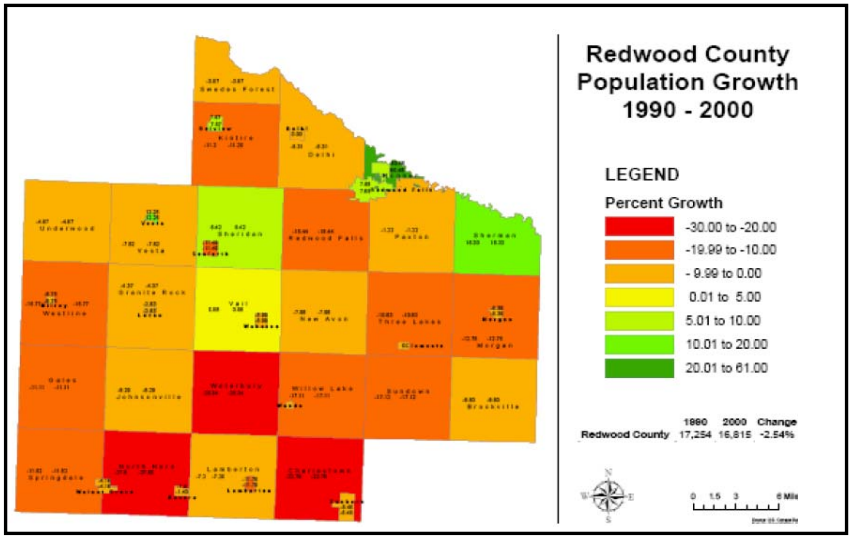
The population of Redwood County has decreased slightly from 1900 to 2000. At -2.54 percent, it is slightly lower than the regional average for southwestern Minnesota of -1.3 percent. The performance of the region is significantly less than that of the state of Minnesota as a whole, indicating an overall downward trend in population growth in the region.

At the same time, the projected growth for Redwood County (4 percent) is expected to increase at double the rate of the region (2 percent) from 2000-2030, but still significantly less than the State (27 percent) as a whole.

Table 13, on the next page, reports historical population characteristics for Redwood County, the southwestern region of Minnesota and the entire state, for the period between 1990 and 2000. Table 14 examines population growth projections for the periods between 2000 and 2010 and 2000 and 2030. As shown in Table 14, Redwood County is forecast to experience growth in the decades between 2010 and 2020 and, again, between 2020 and 2030. Growth in energy production industries is anticipated to stimulate the population growth.

The population in Redwood County is evenly spread with 26.50 percent under the age of 18, 6.60 percent between 18 and 24, 24.80 percent from 25 to 44, 22.70 percent from 45 to 64, and 19.30 percent who were 65 years of age or older. The median age of Redwood County is 40 years of age.





Age cohorts are described in Table 15 for the period between 1990 and 2000. As shown, a number of age cohorts showed population declines within this 10-year period. Among these cohorts are 0 to 4, 5to 9, 10 to 14, 20 to 24, 25 to 34, 60 to 64, and 65 to 74.

Redwood County and the surrounding region have high numbers of population 65+. Within Redwood County, individuals who are 65 years old and older make up 19 percent of the population. In cities such as Lamberton, Belview, Morgan and Walnut Grove the numbers are as high as 37 percent for individuals 65 years old and older.

Contributing to the comparatively high concentration of older people is a net migration out of Redwood County by younger people. This is shown in Table 15 where the percent change in population, between 1990 and 2000, is negative for persons who are less than 5, between 5 and 9, between 20 and 24, and between 25 and 34. The loss of young adults will certainly lead to a different kind of labor market, housing needs, educational needs, etc.

Certain townships and cities in the county will experience major declines in total population; in particular Charlestown Township is cited with a decline of 33 percent. Others like the City of Walnut Grove are projected to experience an increase of 44 percent.

Racial and Ethnic Composition

According to the 2000 Census the racial composition of Redwood County is 95 percent European American, 0.13 percent African American, 3.84 percent Native American, 0.38 Asian American, .043 from other races, and 0.85 percent from two or more races. Persons of Hispanic or Latino descent comprise 1.14 percent of the county's population. The data show that there was a slight decrease in the European American population from 1990 to 2000 and a corresponding increase in the populations of Native Americans and Asian Americans. (See Table 16.)

TABLE 13
POPULATION GROWTH FROM 1990 TO 2000

Location	1990	2000	Percent Change 1990 -2000
Redwood County	17,254	16,815	- 2.5 %
Southwest Region	123,359	121,717	- 1.3 %
State of Minnesota	4,375,009	4,919,474	12.4 %

Source: US Census, SWRDC

TABLE 14
PROJECTED POPULATION GROWTH

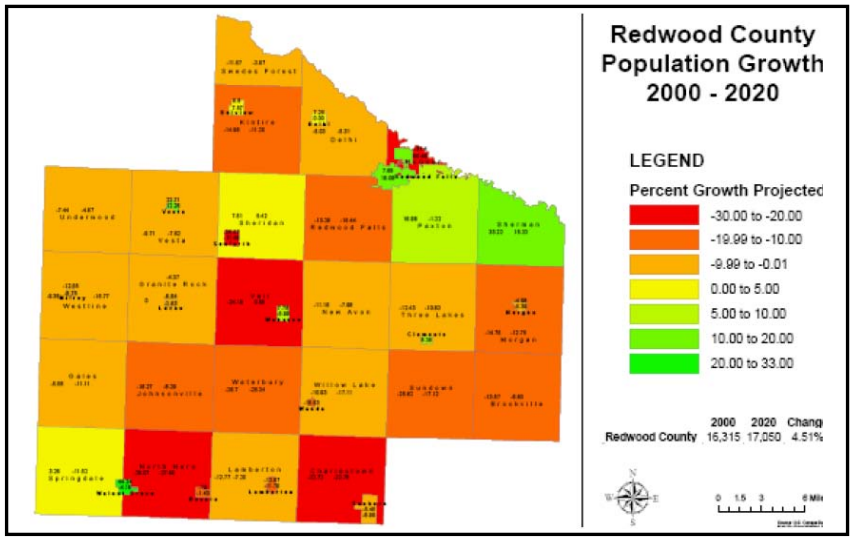
Location	2000	2010	2020	2030	Percent Change 2000 -2010	Percent Change 2000 -2030
Redwood County	16,815	16,620	17,050	17,450	- 1 %	4 %
Southwest Region	121,717	120,900	122,800	124,700	- 1 %	2 %
State of Minnesota	4,919,479	5,452,500	5,909,400	6,268,500	11 %	27 %

Source: US Census, Minnesota State Demographer

TABLE 15
AGE DISTRIBUTION FROM 1990-2000

Age Cohort	2000 Census	Percent of 2000	1990 Census	Percent of 1990	Percent Change 1990-2000
Under 5	1,031	6.13 %	1,279	7.41 %	-19.39 %
5-9	1,137	6.76 %	1,439	8.34 %	-20.99 %
10-14	1,350	8.03 %	1,354	7.85 %	-0.30 %
15-19	1,336	7.95 %	1,097	6.36 %	21.79 %
20-24	723	4.30 %	743	4.31 %	-02.69 %
25-34	1,771	10.53 %	2,328	13.49 %	-23.93 %
35-44	2,404	14.30 %	2,164	12.54 %	11.09 %
45-54	2,162	12.86 %	1,683	9.75 %	28.46 %
55-59	865	5.14 %	776	4.5 %	11.47 %
60-64	783	4.66 %	834	4.83 %	-06.12 %
65-74	1,412	8.40 %	1,819	10.5 %	-22.37 %
75-84	1,250	7.43 %	1,208	7.00 %	03.48 %
85 +	591	3.51 %	530	3.07 %	11.51 %

Source: U.S. Census



The Cities of Belview, Clements, Redwood Falls, Vesta, Wabasso, and Walnut Grove and the Townships of Paxton, Sheridan, Sherman, and Springdale will experience growth in population between 2000 and 2020. Other areas in the county will experience population declines.

TABLE 16
POPULATION BY RACE

Population by Race	1990	Percent of Total	2000	Percent of Total
White	16,875	97.8 %	15,969	94.90 %
Black	27	0.16 %	22	0.13 %
Native American	280	1.6 %	544	3.24 %
Asian/Pacific Island	31	0.18 %	64	0.38 %
Other	41	0.24 %	73	0.43 %
Two or More Race			143	0.85 %
Total Population	19,244		18,815	

Source U.S. Census

EMPLOYMENT AND INCOME

The unemployment rate, 3.1 percent, in Redwood County is consistent with the state average of 2.9 percent for 2000. Between 1990 and 2000, there was an increase in the total workforce employed and therefore an increase in unemployed as well. However the percent employed remained the same in that period, suggesting a stable employment situation. (See Table 17.)

TABLE 17
EMPLOYMENT IN REDWOOD COUNTY
1990 TO 2000

Employment	1990	2000	Percent Change 1990-2000
Employed	7,573	8,175	7.95 %
Unemployed		262	11.97 %
Total Workforce	7,807	8,437	8.07 %
Percent Unemployed	3 %	3.11 %	3.43 %

Source: League of Minnesota Cities

Great strides were made in Redwood County in the ten year period between 1990 and 2000. Average household income increased by 64 percent and per capita income increased by 80 percent. There was a substantial decrease in low income households with a 58 percent decrease in households earning $10,000 and less. Correspondingly, there was also a notable change in the $50,000 or above household levels, with increases of 180 percent to 570 percent. The median income for a household in Redwood County is $37,352 compared to $47,111 for the state of Minnesota. (See Table 18 on the following page.)

From 1990 to 2000, Redwood County saw a great reduction in the number of families living below the poverty level. The county witnessed a 41 percent reduction in the number of families with children in poverty and a 54 percent decrease for impoverished individuals 65 or over. Even with those great strides, Redwood County is slightly above the average for Minnesota with 7.70 percent of the population and 5.50 percent of families below the poverty line. Out of the total population, 8.30 percent of those under the age of 18 and 8.80 percent of those 65 and older are living below the poverty line. (See Table 19.)

TABLE 18
HOUSEHOLD INCOME IN REDWOOD COUNTY 1990 TO 2000

Income	1990	2000	Percent Change 1990 - 2000
0 - $10,000	1,305	546	- 58 %
$10,000 - $14,999	770	447	- 42 %
$15,000 - $24,999	1,516	1,023	- 33 %
$25,000 - $34,999	1,225	1,082	- 11 %
$35,000 - $49,999	1,078	1,292	20 %
$50,000 - $74,999	507	1,420	180 %
$75,000 - $99,999	101	561	455 %
$100,000 - $149,000	71	212	199 %
$150,000 and up	18	121	572 %
Median Household	$22,827	$37,353	64 %
Per Capita Income	$10,489	$18,903	80 %

Source: League of MN Cities

TABLE 19
POVERTY STATUS IN REDWOOD COUNTY 1990 TO 2000

Families below poverty level	1990	2000	Percent Change 1990 - 2000
With children under age 18	275	163	- 41 %
Female head of household	107	71	- 34 %
Age 65 and older	565	260	- 54 %
Individuals	2,167	1,260	- 42 %

Source: League of Minnesota Cities

HOUSING

With the forecast increase in population will come a need for an additional 650 to 750 dwelling units within the county, by 2030. Population growth will occur throughout the county but the majority of the growth will be seen in the Cities of Belview, Clements, Delhi, Redwood Falls, Vesta, Wabasso, and Walnut Grove. (Housing supply studies should be conducted in each of these cities.) As discussed in the Implementation Section of the plan, housing programs should be established to ensure that the supply of safe, affordable housing is adequate to meet the needs of county residents.

Analysis was conducted to gain understanding of existing housing characteristics in the county. As shown in the following tables, renter-occupied housing in the county is at 20 percent of the total, which is less than the percentage of renters in the rest of the state and the nation.

The median age of housing in the county is 55 years, with half the homes constructed before 1951 and half constructed after 1951. (Source: US Census Bureau, 2000 Census. See Table 20.) Depending on the quality of construction, which could be even more of a question for homes built after 1951, a significant number of homes are reaching and will reach the end of their useful life in the next 20 years. Conservatively assuming that one-twentieth (5 percent) of the homes built after 1951, will need to be replaced within 20 years, just keeping even with today's housing supply would require construction of 180 new homes.

The types and configurations of new housing in the county, both in the cities and the townships, will be focused toward developing sustainable housing. Programs should be developed to assist with:

- development of senior housing so that older residents can stay in the county when they are no longer interested in or able to take care of a single family home
- maintaining and upgrading housing that will be vacated by older residents so that it is ready for young families to move into
- development of housing subdivisions in the townships where a cluster of homes can be constructed in relatively close proximity, thus maintaining commonly held wooded or undeveloped areas

TABLE 20
COMPARISON OF HOUSING CHARACTERISTICS
COUNTY-STATE-NATION

	REDWOOD COUNTY		MN	US
HOUSING UNITS				
	Number		**Number**	**Number**
Total housing units	7,230			
RENTER-OCCUPIED HOUSING UNITS				
	Number	**Pct**	**Pct**	**Pct**
Renter-occupied housing units	1,338	18.5 %	23.4 %	30.8 %
Average number of household members	1.92		1.99	2.36
Average number of rooms	4.78		3.86	4.04
Average number of vehicles	1.33		1.18	1.19
Median year structure was built	1962		1970	1969
Median year householder moved in	1997		1998	1998
Median rent ($)	314		521	519
Median rent asked for vacant units ($)	314		464	469
Rent includes utilities	399	29.8 %	19.8 %	16.5 %
Rent as a pct of household revenue	21.1		24.7	25.5
OWNER-OCCUPIED HOUSING UNITS				
	Number	**Pct**	**Pct**	**Pct**
Owner-occupied housing units	5,336	73.8 %	68.4 %	60.2 %
Average number of household members	2.58		2.71	2.71
Average number of rooms	6.80		6.76	6.30
Average number of vehicles	1.35		1.44	1.64
Median year structure was built	1951		1969	1971
Median year householder moved in	1986		1991	1991
Median value ($)	62,700		118,100	111,800
With mortgage or contract to purchase	1,860	34.9 %	58.7 %	55.4 %
With second mortgage, equity loan	332	6.2 %	16.5 %	12.7 %
Median price asked for vacant housing ($)	20,500		92,800	89,600
Monthly cost, with mortgage ($)	659		1,044	1,088
Monthly cost, without mortgage ($)	226		271	295

Source: U.S. Census Bureau, 2000 Census

EDUCATIONAL ATTAINMENT

Concern was expressed during the planning process that large-scale employers coming to Redwood County could be agricultural research, technology-oriented, and alternative energy businesses. The county's overall level of educational attainment, a magnet for attracting these businesses, is currently not high enough to make it competitive with other areas of Minnesota or the nation. The tables that follow show educational attainment in Redwood County.

As shown in Table 22, 10.7 percent of county residents, 25 and older, have earned a bachelor's degree. Efforts to educate residents and tie education to employment opportunities in the county should be pursued as a strategy for keeping youth in the county.

TABLE 21
EDUCATIONAL ATTAINMENT IN REDWOOD COUNTY (1990 – 2000)

Educational Level	1990	2000	Percent Change 1990-2000
Less than 9th Grade	2,166	1,193	-45 %
9th to 12th Grade	1,101	1,042	- 5 %
Completed High school	4,395	4,168	- 5 %
Some College	1,587	2,689	70 %
Associates Degree	878	663	-25 %
Bachelors Degree	1,015	1,205	19 %
Graduate Degree	254	309	22 %
Percent High School Graduate or Higher	71 %	80 %	13 %
Bachelors Degree or Higher	11 %	13 %	18 %

Source: League of MN Cities

TABLE 22
COMPARISON OF EDUCATIONAL ATTAINMENT
COUNTY-STATE-NATION

	REDWOOD COUNTY Number		MN Number	US Number
Population 25 and older	11,269			
High school graduates (includes equivalency)	4,168	37.0	28.8	28.6
Some college, or associate's degree	3,352	29.7	31.7	27.4
Bachelor's degree	1,205	10.7	19.1	15.5
Master's, professional or doctorate degree	309	2.7	8.3	8.9
SCHOOL ENROLLMENT				
Population 3 years and over enrolled in school	4,054			
Preschool and kindergarten	459	11.3	11.9	11.9
Grades 1-12	3,292	81.2	66.3	65.3
College	303	7.5	21.7	22.8

Sources: U.S. Census Bureau, 2000 Census

Summary

In summary, Redwood County can expect to enjoy moderate growth as projected by the current population trends. Population will centralize in the urban areas with most townships continuing to lose population. Large numbers of elderly in Redwood County will shape the economics of the county for years to come having an effect on every sector of the county. The county has seen great changes in the per capita income and enjoys a low cost standard of living. The strides made in per capita income between 1990 and 2000 will lead to a more prosperous Redwood County as it continues into the future.

COMMUNITY-IDENTIFIED ISSUES AND VISION

KEY AREAS OF INPUT

Members of the community provided input throughout the planning process. Key areas of input were: 1) findings from the one-on-one interviews conducted in December 2005 and 2) identification of issues and visioning directions obtained from the kick-off meeting held in March 2006.

FINDINGS FROM THE INTERVIEWS

Twenty-eight (28) interviews were conducted over a three-day period (December 12, 13 and 14, 2005). The interviews were held with government officials and agency staff, business people, farmers, and economic development professionals. Information discussed during the interviews was recorded and analyzed. Common themes were identified during the interviews to gauge how important various subjects are in the county.

The first-level themes represent issues and concerns that were discussed more frequently (by more people) than any of the others. The second-level themes were next in frequency, and finally, the third-level themes were identified as the issues and concerns that were discussed by the fewest numbers of people.

First-Level Themes:

- General consensus that traditional agriculture is and, for the foreseeable future, will be the main economic (and social) driver in the county.
- Recognition that, because of high capital cost requirements, there is high likelihood that "newcomers" to the county will not be able to afford to become traditional farmers.
- Therefore, if agriculture (and the lifestyle agriculture affords) is to remain the main economic (and social) driver, opportunities for the development of non-traditional agriculture should be included in the plan.

Second-Level Themes:

- Development of a tourism-based economy is needed to diversify the economy
- Consistent with the development of tourism was protecting the natural environment.
- Two areas in the northern part of the County present the most promise for tourism and related business development.
  - Along the Minnesota River valley.
  - CSAH 24 corridor between Redwood Falls and the Lower Sioux Mdewakantowan Community.
  - Opportunities for cooperation were discussed.

Third-Level Themes:

- Basic services are generally provided at a high level
- Transportation systems are well-maintained and operating effectively
- Emergency management
- Drainage ditches
- Balanced growth
- Townships

- Land use issues such as junk yards, feedlots, and ATV use need to be addressed
- Tribal relations with the county are at a low point, and very little action is being taken (on either side) to improve them. Efforts should be made (on both sides) to ensure positive relations between the tribe and the county.

FINDINGS FROM THE KICK-OFF MEETING

The kick-off meeting held on March 9, in Wabasso, was the first opportunity for the public at-large to become involved in the comprehensive planning process. Nine questions concerning the future of Redwood County were presented to attendees at the kick-off meeting. Responses to the questions are outlined below.

1. List the county's top assets
    - Strong workforce
    - Agriculture
    - Small towns
    - Good government
    - Good roads

2. List the county's agricultural assets
    - Good soil, weather, and livestock
    - Work ethic
    - Varied agricultural base and agricultural workforce
    - Energy (presumably energy production)
    - Railroads
    - Elevators

3. What are potential barriers to a prosperous future in Redwood County?
    - Lack of industry
    - Lack of sustainable industry

    - Government regulations
    - Distance to major markets

4. What are the issues faced by those who are involved in agriculture?
    - Government regulations
    - Lack of leadership
    - Racial tensions

5. Where should future growth in population and housing occur?
    - Most people identified towns and cities with school facilities as the best locations for population and housing growth

- Growth should occur adjacent to the municipalities
- Rural towns

6. What are the housing options that should be provided in the future?
    - Assisted living was the top ranked response
    - Single family homes on both small and large lots
    - Low rent housing

7. What are the agricultural trends that will shape the future?
    - Production of alternative fuels
    - Organic farming
    - More technology in agriculture
    - Livestock
    - Feedlots and value-added crops

8. What are tourism activities that could be developed/ expanded in the county?
    - Recreational lakes and historic sites in the county were the top two responses
    - Minnesota River District was the second most highly ranked answer
    - Ramsey Park, scenic overlooks, wildlife viewing, and Lake Redwood tied as the number three responses
    - Hunting

9. List activities/attractions that will keep youth in the county:
    - Employment opportunities was the most popular response
    - Dating/social scene
    - Schools, excitement, social life

VISION FOR REDWOOD COUNTY'S FUTURE

Input provided at the kick-off meeting was used to develop a vision for the county and to provide guidance in the development of the county's land use plan. Redwood County's vision for the future is presented below.

Redwood County is envisioned to be a community in southwestern Minnesota where both lifestyles and economies will largely be based on assets derived from rural environments. It is envisioned that Redwood County will be a single community where both the "time-proven and traditional" and the "new, innovative, and advanced" are encouraged, facilitated, and allowed to flourish. This is relevant to lifestyles, recreation and relaxation, housing choices, and economic development (including industrial development and agriculture).

Redwood County is envisioned to be a community where natural resources are cherished and valued and utilized in a sustainable manner to support a growing economy. Over the long-term, it is envisioned that some traditional approaches to economic development and the utilization of resources will give way to new, innovative approaches that are more conscious of waste streams, more harmonious with the environment, and more sustainable.

Recognizing the challenges it will face as traditional approaches are replaced with new, innovative approaches, it is envisioned that Redwood County will facilitate these shifts through the provision of:

- Improved relations with the Lower Sioux Mdewakantowan Oyate.

- Educational programs that focus on technology and research and development of innovative, energy efficient and sustainable approaches to agriculture. These technologies should focus on minimizing negative impacts of agriculture on air, soil, water, and fuel consumption.
- Economic development programs that encourage innovative approaches to manufacturing, agriculture, value-added agriculture, and energy production.
- Long-term energy independence where, through wind, bio-mass, and other technologies, energy is produced and utilized within the county, and excess energy is sold to utility companies for export outside the county.
- Housing development programs that are sustainable, encouraging energy efficiency, resource conservation, life-cycle housing, and a variety of housing types at a variety of price points.
- Environmental protection programs to ensure proper disposal of waste, recycling, and the availability of wastes as inputs in industrial processes.
- Resource preservation programs that ensure the protection of natural resources and as clean an environment as possible.
- Social service and human resource programs to address the needs of residents and to proactively address social and racial issues.
- Empowerment of residents to engage in the oversight and governing process to help ensure a successful outcome of this plan.
- Foster cooperation at all levels of government and open forums of communication to ensure current and future decision-making processes achieve the highest level of understanding and acceptance.

LAND USE

EXISTING LAND USE

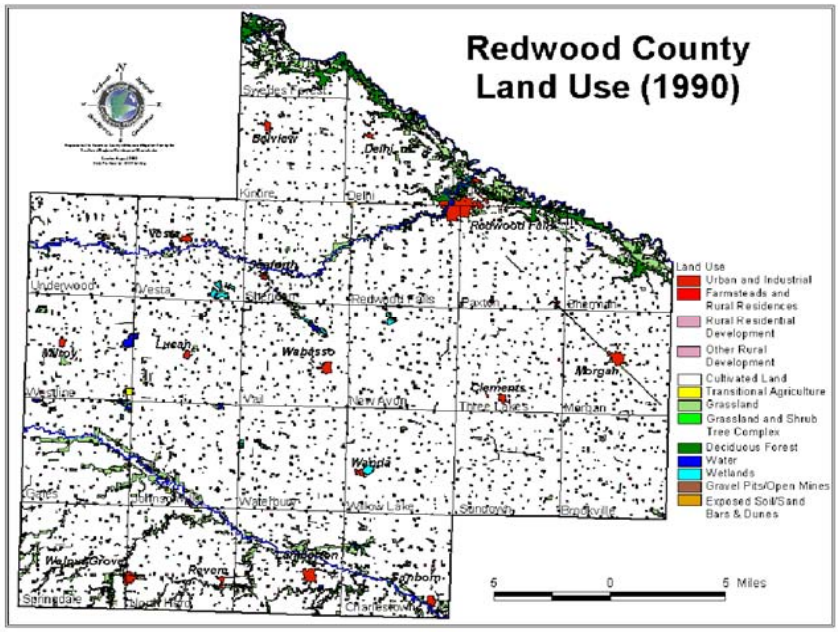
Land use in Redwood County is illustrated on the adjacent map and is shown to consist of 13 different uses. The county's land uses can be grouped into two large categories: the natural environment and the built environment. The natural environment consists of the following land uses:

- Grassland
- Grassland and Shrub/Tree Complex
- Deciduous Forrest
- Water
- Wetlands

The built environment includes uses that have been altered by or developed with human intervention. These uses include:

- Urban and Industrial uses
- Farmsteads and Rural Residences
- Rural Residential Developments
- Other Rural Developments
- Cultivated Land
- Transitional Agriculture
- Gravel Pits and Open Mines
- Exposed Soil and Sand Bars and Dunes

As shown on the map, the predominant land use under the built environment category is "Cultivated Land." Remaining uses in the built environment category, with the exception of the municipalities, are scattered across the county in shotgun fashion. This lack of a pattern or structural framework for locating built land uses is to be expected in a rural county where each land owner is relatively unencumbered in the development of his or her land.



On the other hand, the municipalities (the urbanized areas) do show a distinct locational rationale. The cities are located at the confluence of rivers and at the intersections of transportation facilities.

Analysis showed that land use and zoning are compatible within the county.

ZONING DISTRICT OVERVIEW

The county's zoning districts are discussed below. This section of the comprehensive plan presents the purpose of each zoning district, as outlined in the county's Zoning Ordinance. It is the codified purpose of each zoning district, along with the comprehensive plan, that provides the county with legal standing to enforce its land use control and regulations.

A (Agricultural) District

The purpose of the "A" Agricultural District is to provide extensive areas of the county where agricultural uses and activities will be permitted. Additionally, the "A" District is intended to control scattered non-farm development; preserve woodlands and other areas of aesthetic and scenic value, which, because of their physical features, are desirable as water retention areas, habitat for plant and animal life, green space or other environmental uses beneficial to the county.

B-1 (Highway Service) District

The purpose of the county's "B-1" Highway Service Business District is to provide areas where highway-oriented business development, operations, and activities will be allowed. The "B-1" Districts are intended to be closely related to existing urban areas, as the trade area population served by highway-oriented businesses requires easy access; therefore, it is desirable to group the uses at locations along major traffic routes providing for appropriate and adequate accessways. These uses should be designed to standards that will not impair the traffic carrying capabilities of abutting roads and highways.

FP (Flood Plain) District

The purpose of the "FP" District is to designate land where it is in the public's interest to promote the public health, safety, and general welfare by minimizing impacts and losses that are

due to floods. Lands within the county that are within the "FP" District must be identified on the Official Zoning Map.

I-1 (Industry) District

The purpose of the "I-1" Industrial District is to provide areas where industrial development, operations, and activities will be allowed. The "I-1" Districts should be located in areas that are (or will be) served by utilities with adequate capacity to accommodate the demands of industrial operations. Additionally, transportation infrastructure should be available to ensure delivery of inputs and shipping of products. In order to minimize impacts on adjacent or nearby incompatible uses, standards should be applied in "I-1" Districts to control noise, odor, dust, smoke, glare or other hazards.

R-1 (Rural Residential) District

The "R-1" Rural Residential District is intended to provide areas within unincorporated areas and rural residential subdivisions where low density residential development (and on-lot utilities) will be allowed. "R-1" Districts can be developed where municipal or community utility systems are not available.

S (Scenic River) District

The "S" Scenic River District is intended to preserve and protect those rivers and adjacent lands that possess outstanding scenic, recreational, natural, historical, scientific, and similar values. The purpose of the "S" District is also to reduce the effects of overcrowding and poorly planned development of such adjacent lands, to prevent pollution, to provide ample space on lots for sanitary facilities, to preserve

natural beauty and quietude, to maintain property values, and to promote the general welfare.

The boundaries of the "S" Scenic River District shall include all lands described in State of Minnesota, Department of Natural Resources Regulations, Chapter 2600 and 3200 within the County of Redwood, Minnesota. The "S" Scenic River District designated in Chapter 3200 of the Minnesota Department of Resources Regulations shall be regulated according to the provision of Project River Bend: Six County Minnesota River Management Plan. Said Plan regulations are adopted by reference and made a part of this comprehensive plan.

Shoreland District

The purpose of the Shoreland District is to identify and delineate lands that abut public (and some private) water bodies. Once identified and delineated, the county has the authority to protect the public health, safety and general welfare by enhancing the quality of surface waters, conserving the economic and natural environmental values of shoreland, and providing for the wise use of waters and related land resources.

UE (Urban Expansion) District

The "UE" Urban Expansion District is intended to provide an area adjacent to incorporated municipalities for the purposes of:

- Containing and managing urban development within planned urban areas where basic services such as sewers, water facilities, and police and fire protection can be provided efficiently and economically.
- Conserving resources by encouraging orderly development of land.
- Preserving farmland and open space.
- Making more economical use of local tax dollars in locating facilities and providing services for the benefit of all citizens within the urban growth area.
- Providing property owners greater security in long-range planning and investments.
- Making it possible for utility extensions, transportation facilities and schools to be designed and located so as to match population growth more closely.
- Preserving and enhancing the livability of the area.

It is intended that the status of all areas in this district be reviewed jointly by the appropriate planning bodies or their representatives once per calendar year. Upon completion of this review each of the planning bodies should recommend to the appropriate governing bodies any land use changes for the "UE" Urban Expansion District. Recommendations for changes may include the following:

- The addition or removal of land from the "UE" Urban Expansion District.
- The rezoning of land to a more appropriate land use classification.
- The orderly annexation of land.
- The revising of land use plans and ordinances affecting land within the "UE" Urban Expansion District.

LAND USE ISSUES TO ADDRESS IN THE PLAN

Key Land Use Issues

Key land use issues addressed in this plan relate directly to the county's future growth and development. The response to these issues is a matter of **land use type and density and siting**. In other words, the plan will provide guidance (and, at some level, direction) to decision-makers who will determine which land use types are appropriate for

development, how much of any particular land use should be developed, and where should particular land uses be allowed to develop.

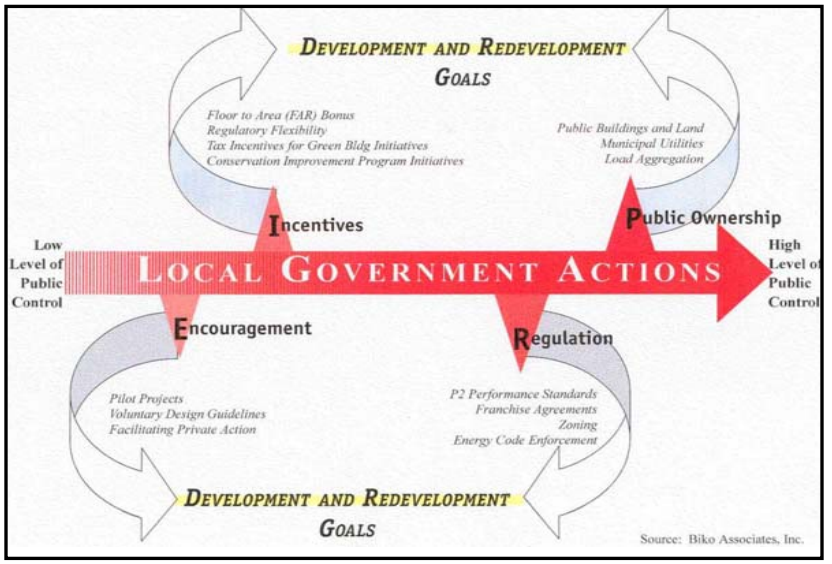
As mentioned earlier in the Introduction Section of the plan, answers to the what, where, and how much questions of land use should be influenced by:

- The Earth
- The Built Environment and the Economy
- Demographic and Socio-Economic Trends and Fore-casts
- Community-Identified Vision

The response to the key land use issues also addresses **implementation and enforcement**. The **implementation and enforcement** response is provided to ensure that policy objectives, as stated in the comprehensive plan, and regulations that are codified in the Zoning Ordinances, will become reality. While there can be overlaps, there are four basic approaches available to the county for **implementing and enforcing** its land use plan:

- Encouraging
- Incentives
- Regulating
- Condemning to gain public ownership

As illustrated in the next column, approaches that encourage the private sector to cooperate and participate to achieve public goals are comparatively low level government actions. Regulating is a mid-level government action.



Gaining public ownership (through condemnation) is the highest levels of government action. Each of these approaches is available to government jurisdictions and each is an essential element in a jurisdiction's tool box.

Key issues identified through the planning process include:

- Feedlots (siting future developments, regulations, and regulatory processes)
- Waste disposal sites (siting and protecting the public interest)
- Mining and extraction (siting and protecting the public interest)
- Airport zoning (impacts on development)
- Needs of new residents (residential and employment)
- Residential subdivisions
- "Clustered," residential subdivisions

- Purchase of development rights and transfer of development rights (implementation programs)
- Energy production (opportunities for economic development and siting)
- Telecommunications (opportunities for economic development and education)
- ATVs (recreational use and protecting the environment)
- Land use compatibility with railroads
- Radon exposure and future mitigation plans

Feedlots

Animal operations have proven to be an economic benefit in Redwood County. Confinement feedlots allow a producer to maintain larger animal units on relatively small areas of land. Confinement feedlot operations do come with costs, however. For one, confining large herds of animals in a limited space generates odors, which, given the strength and direction of the wind, may impact neighboring residents (both farmsteads and homesteads) and entire communities. Secondly, confinement operations need to be monitored to ensure that pathogens are not given an opportunity to infect a herd and spread throughout a region or sub-region.

An important viable option for livestock development within Redwood County is pasture operations, which allow for the grazing of livestock. Well managed pasture operations, especially rotational grazing, cut down on concentrated livestock odors, the accumulation of manure, and the runoff of contaminated surface water. Per annual grasses utilized by pastures provide year around cover on the land, conserve soil, and have a positive energy impact of reduced fossil fuel use while providing for carbon sequestration.

Redwood County regulates feedlots by implementing and enforcing the adopted Redwood County Feedlot Ordinance. The county's ordinance addresses:

- Standards for all feedlot operations
- Conditional use permits
- Minimum required setbacks for feedlots
- Minimum setbacks: Manure stockpiles and application
- Enforcement

Redwood County, however, has not been delegated by the PCA to act on the state's behalf on issues related to feedlots. Therefore, as an "Undelegated County," Redwood County does not have authority to implement state feedlot regulations and programs, which include:

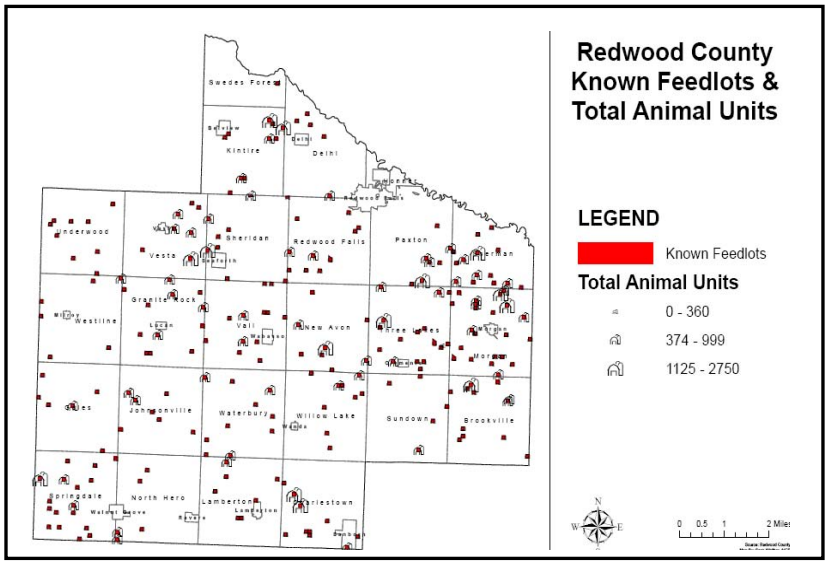
- State of Minnesota registration, permitting, and inspections;
- provision of State of Minnesota-sponsored education and assistance; and
- follow-up on complaints that were made to the state.

As listed on the previous page, one of the regulations the county can address requires feedlots to be set-back from residences.

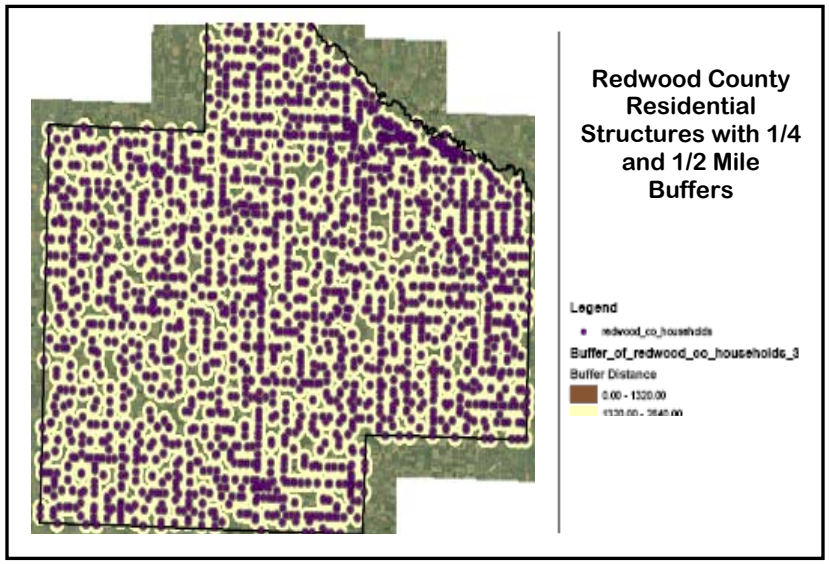
A critical concern in Redwood County is whether the currently enforced one-quarter mile setback allows for the expansion of the feedlot industry. With projected population increases and with the increase in residential subdivisions in non-urbanized areas, conflicts between feedlots and residences are bound to be a critical issue.

Analysis was conducted by the county to compare the impacts of a quarter-mile radius and a one-half mile radius. The county's analysis showed that a one-half mile radius would leave very little land for future feedlot development.

The first map, below, shows the locations of known feedlots. (It is suspected that there are additional feedlots in the county that are not shown on the map.) Based on the distribution of feedlots, it is clear that the majority of feedlots are located in the northeastern portion of the county where they cluster in Morgan, Paxton, Sherman, and Three Lakes Townships. Remaining feedlots are scattered throughout the county.



The second map, on the next page, is a plot of all residential structures in the county with one-quarter and one-half mile buffers drawn around them. The green areas shown between the encircled structures are areas that are remain available for future feedlot development.



Recent advancements in odor reducing technologies present potential to prevent (or minimize) the conflicts that could occur when non-feedlot developments are located near feedlots. These technologies include systems that capture particulates and dust, reduce hydrogen sulfide and ammonia concentrations, control temperature, and run emissions through filters that are enriched with aerobic bacteria (micro-organisms).

To the extent that these technologies prove to be effective, a quarter-mile setback between feedlots and residences may be sufficient to facilitate both feedlot expansion and adjacent, non-feedlot development.

Waste Disposal Sites

Planning for waste disposal sites in Redwood County concerns three distinct, but related facility types: a) junk yards, b) ash landfill disposal, and c) emergency disposal sites.

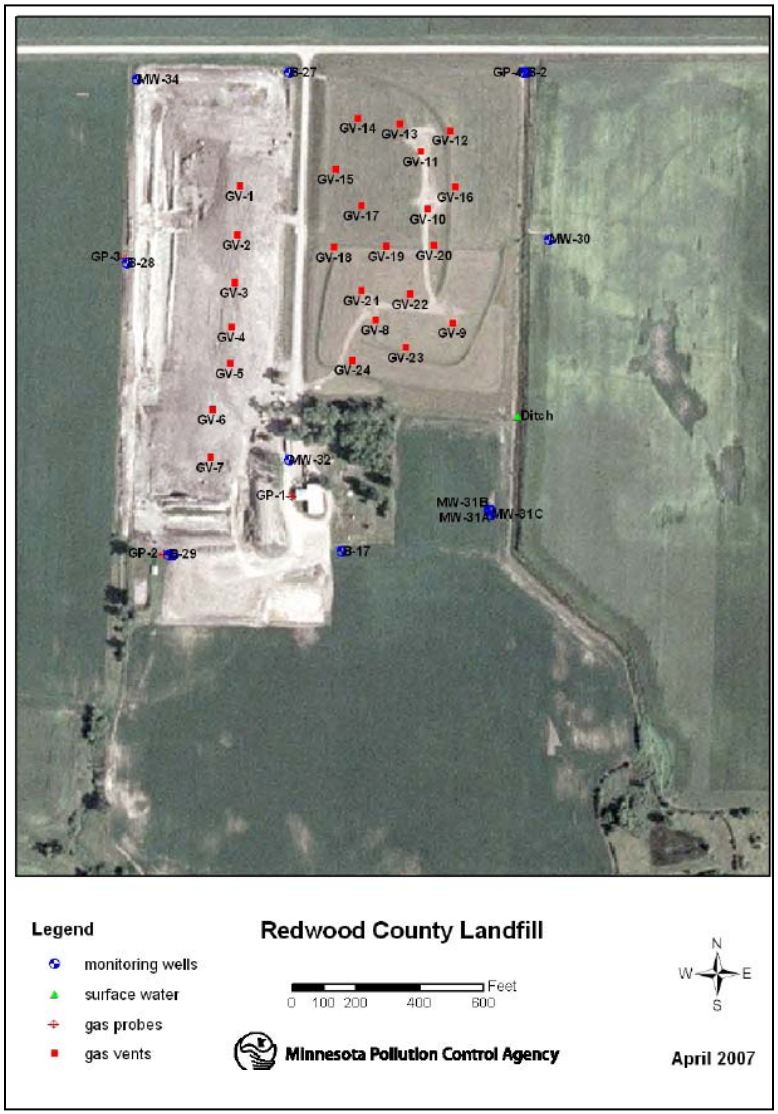
Junk Yard Sites:

Junk yards have been observed to be proliferating within the county. These facilities can be implemented within the Agricultural District as conditional uses. Recent experiences have brought home the need to site these facilities carefully with attention given to proximity to surface water and percolation characteristics of the soil. To protect the public's interest, the Zoning Ordinance should be revised to ensure that the party to whom the junk yard is registered is held responsible in the event of hazardous spills, air and/or soil contamination, and the need for clean-up. This language might include provisions for a remediation surety bond that could be required before a conditional use permit to operate a junk yard is issued.

In addition, the Zoning Ordinance needs to be strengthened to protect neighbors and passers-by from the visual impact of these facilities. Primarily the concern is the visual impact of unscreened junk yards where disposed of automobiles, farm machinery, appliances, etc. can be seen from the road and by neighbors.

Ash Landfill Disposal Site:

As discussed on the following pages, biomass energy production is anticipated to become a major industry in Redwood County. With fuel prices as high as they currently are and with the nation having to rely on increasingly hostile regions of the world for fuel, home-grown energy production is more feasible now than it ever was before.



Byproducts of gasification processes are particulate ash and char, which can be inputs in the production of marketable goods. One such product is concentrated fertilizer.

Gasified ash can be mixed with concrete and crushed glass from recycling facilities to produce *"glashphault."* This is a material that can be used for road construction. In order to facilitate the use of gasified ash, a location needs to be identified for its storage.

The Redwood County Landfill site has been identified as a potential location. This site already has monitoring wells and gas vents. Further contributing to its suitability as an ash disposal site are its suitable soils, location where traffic volumes are exceedingly low, and current zoning as a landfill site.

Emergency Disposal Sites:

The Department of Homeland Security (DHS) and the National emergency Management Association (NEMA) are both calling on county governments across the country to play a lead role in the development of emergency disposal sites, which can be accessed in the event of local and national emergencies. The emergency disposal sites would be developed as part of the counties' overall emergency preparedness plans.

The emergency disposal sites would be used, for example, for the disposal of debris after a cataclysmic event like a tornado. The sites could also be used as a holding site for victims of a major infectious disease (anthrax or avian flu virus, for example) until Centers for Disease Control (CDC) personnel can arrive and effectively treat the remains.

It is recommended that each of the cities in the county would have its own emergency waste disposal site, located in an

area of the county that is zoned agricultural, beyond the municipal boundaries. The sites themselves would need to be secured with fencing. Trees and shrubs could be planted along the fence line to create a more aesthetically pleasing facility.

On the sites themselves, buffers would need to be established between stockpile and disposal areas. Thus, three on-site areas would need to be delineated: a) one area for building materials from natural disasters, b) another area for trees and shrubs knocked down by a tornado, and c) another area where infected human remains can be held until arrangements can be made for their proper disposal.

Mining and Extraction

Mining operations are viewed as a benefit to local road authorities and the economic viability of the railroad. Mining and extraction (both gravel and hard rock) may be conditionally approved uses within the county's Agricultural, I-1, Shore Land, Floodplain, and Urban Expansion Districts.

Mining and extraction operations can be unsightly, noisy, and dusty and can hasten wear and tear on unpaved and paved roads. (Excessive wear and tear can occur on paved roads, even if they are rated at 10 tons.)

While gravel pits are located throughout the county, most of the hard rock mining takes place along the Minnesota River Valley where granite outcroppings are either exposed or within minimal depths from the surface.

The existing conditions under which mining and extraction are allowed should be reviewed to ensure that mining operations and processes do not irreparably impact the environment and ecology. Reclamation plans should address the following:

a) damage (excessive wear and tear) to the county's roads;
b) reduced habitat for wildlife;
c) negative recreational experiences for residents, tourists, and hunters; and
d) reduced attractiveness for housing development.

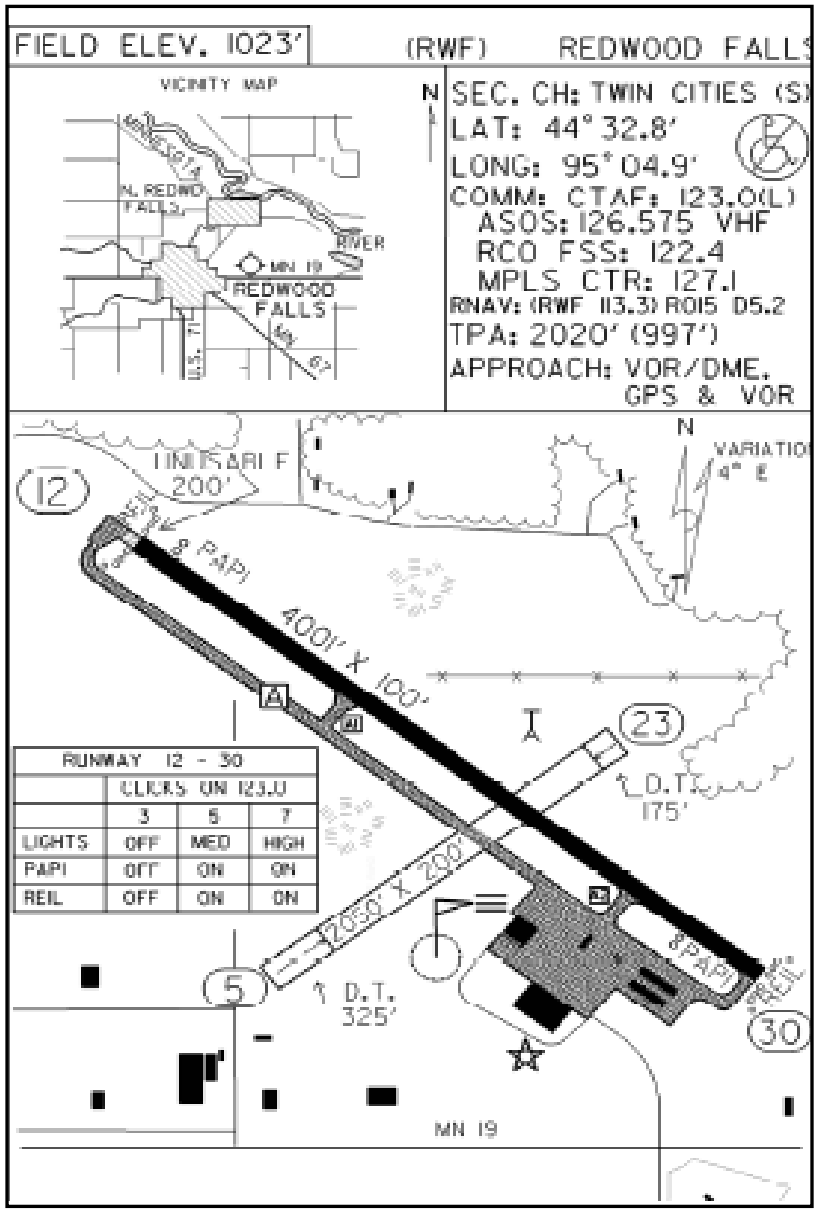
To protect the public interest, the Zoning Ordinance should address detailed reclamation plans and require reclamation sureties. The sureties should be required as part of the permitting process. Bonds should be presented before conditional use permits are valid.

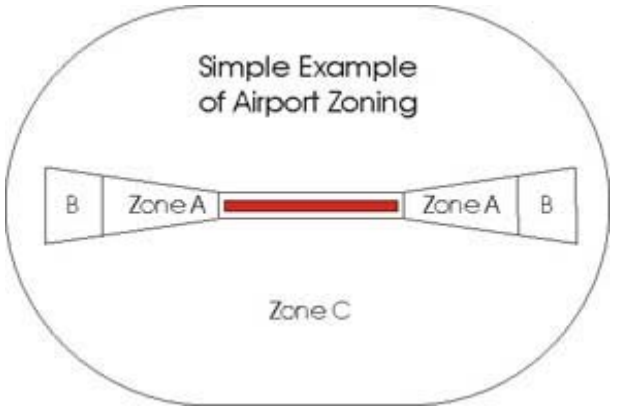
Airport Zoning

The county has one airport, the Redwood Falls Municipal Airport. Another airport, the Tracy Municipal Airport (in Lyon County) also serves Redwood County. The Redwood Falls Municipal Airport has two runways, and the longer of the two is 4,001 feet long. The airport in Tracy has three runways; the longest of which is just over 3,000 feet long.

Located north of TH 19 and east of CSAH 101, the Redwood Falls Municipal Airport itself and its legal influence areas, as defined by Safety Zones, are located both within the City of Redwood Falls, and Honner and Paxton Townships. As a result, both the city and the county have adopted land use regulations to address:

- Creating and delineating Federal Aviation Administration (FAA) Air Space Zones. These are the primary, horizontal, conical, approach, and transitional zones where no structures are to be allowed.
- Land use regulations (type of use, location of use, how much of the use, number of people who will occupy or inhabit the use) within Mn/DOT-defined Safety Zones.
- Mapping for the airport to illustrate the Zones.





Land use safety zones and other Airport Zoning Standards are established in the Minnesota Rules: Chapter 8800.2400. Minimum Standard Zones are; Safety Zone A, Safety Zone B, and Safety Zone C. The shape of Safety Zone C is a projection of the horizontal surface of the Airspace that surrounds each public airport.

These zones are intended to restrict land uses that may be hazardous to the operational safety of aircraft using the airport, and to protect the safety and property of people on the ground in the area near the airport.

The FAA promulgates rules and regulations concerning air space, and Mn/DOT promulgates rules and regulations regarding land use and zoning at and in the vicinity of airports. Federal and state enabling legislation authorize local governments to adopt zoning ordinances that regulate land use in order to ensure clear zones both above and around airports.

Needs of New Residents (a case for affordable housing and non-traditional, rural-based economic development)

Future residents of the county are forecast to arrive between 2010 and 2030. As discussed, two key concerns about the newcomers are: a) Where will they live and what kind of housing will they need? and b) Where will they be employed? Information provided by the state demographer and Redwood County indicated that they will likely settle throughout the county but will be concentrated in the Cities of Belview, Clements, Delhi, Redwood Falls, Vesta, Wabasso, and Walnut Grove and Paxton, Sheridan, Sherman, and Springdale Townships. As immigrants to a new land, they will likely not be in the market for housing at high price points, and they will likely be in the market for older homes.

As mentioned in the Demographic and Socio-Economic Trends and Forecasts Section of the plan, the median age of housing in the county is 55 years, with half the homes constructed before 1951 and half constructed after 1951. By the time the new residents arrive, a significant number of homes will have reached the end of their useful life, and just keeping even with today's housing supply would require construction of 180 new homes.

Immigrant groups have recently come to America (and particularly Minnesota) from east African nations, southeast Asian countries, and Mexico. European immigrants have recently come to America from Russia and other countries in the former Soviet Union. Wherever their point of origin, it is likely that they will not have financial resources to purchase the vast acreages of land required to prosper in traditional agriculture. They may, however, come from environments that are agriculturally oriented, and non-traditional agricultural activities that are comparatively less costly on the front end could be an area of employment.

Some of these non-traditional agricultural ventures have already been started in the county and include:

- vineyards,
- tree farms,
- microbreweries, and
- energy production.

They may also have factory skills and will be able to step into positions that will be available in the county's energy-production industry where energy is produced with wind and from corn and other agricultural products.

Residential Subdivisions
The county's subdivision ordinance applies when a petitioner proposes a division of land.

Redwood County should consider the following when subdividing land:

- Safeguard the best interests of Redwood County
- Assist the subdivider in harmonizing his/her interests with those of the county at large, as well as with those of the local municipalities located within the county
- Prevent piecemeal planning of subdivisions, undesirable, disconnected patchwork of pattern, and poor circulation of traffic
- Correlate land subdivisions with the County Comprehensive Plan
- Secure the rights of the public with respect to public lands and waters
- Improve land records by updating standards for surveys and plats
- Discourage inferior development that might adversely affect property values
- Establish subdivision development at standards compatible with affected municipalities within the county
- Preserve the natural environment and preventing erosion
- Recognize the natural features which add value to all improvements and to the community, such as trees or groves, watercourses and falls, beaches, historic spots, vistas and similar irreplaceable assets.
- Institute measures to insure the prevention of wind and water erosion.
- Protect and preserve historic and archaeological sites including structures, burial sites, and places where historically significant events occurred.

"Clustered," Residential Subdivisions
(adapted from *Cluster Development*, authored by Thomas W. Blaine, Northeast District Specialist Community Development and Peggy Schear, Southwest District Specialist Community Development)

Additions and revisions to these provisions in the subdivision ordinance could be made to allow the development of "clustered," residential subdivisions. A "clustered," residential subdivision generally sites houses on smaller parcels of land, while the additional land that would have been allocated to individual lots is converted to common shared open space for the subdivision residents. Typically, road frontage, lot size, setbacks, and other traditional subdivision regulations are redefined to permit the developer to preserve ecologically sensitive areas, historical sites, or other unique characteristics of the land being subdivided.

Consider the following distinction between a conventional and a "clustered" subdivision. Imagine that a 100-acre parcel of land might be subdivided into 40, 2.5-acre parcels, each with

a residential dwelling. Under a “clustered” design, a developer would plan differently. Imagine that the plan would still call for 40 dwellings, but this time each would be located on one half-acre parcels, "clustered" together in groups. This would only use 20 acres of land for residences and would leave 80 acres of "open space." Typically, the open space areas are in the midst of the development and are designed around the natural or human-made features of the landscape.

In the hypothetical 100-acre parcel, for example, there may be four separate areas of open space averaging 20 acres each. One might be centered on a section of woods, one around a pond or a creek, one around a meadow, and another around an outcropping of granite.

In a typical “clustered” subdivision, each homeowner has access to all of the open space areas, which may be permanently preserved by a conservation easement -- a restrictive covenant forbidding any type of development in perpetuity (see OSU Extension Fact Sheet CDFS 1261-99, *Conservation Easements*). To provide maximum protection for both the resource and the residents, the conservation easement should be assigned to at least two organizations, a homeowners' association, whose membership consists of all the homeowners in the subdivision, and a local government agency or land trust (see OSU Extension Fact Sheet CDFS 1262-99, *Land Trusts*). The conservation easement should specify the types of activity permitted on the open land, i.e., recreation, type of agriculture, woodland protection, or stream buffers.

It is ideal, but not essential, for the easement to be placed on the property prior to the development of the subdivision. If that does not occur, the property owners could place an easement on the land at a later time.

What Are the Advantages of a Cluster Subdivision?:
Clustering housing in rural areas can maintain the rural character of the area. It can also provide open space for community members and preserve critical land qualities. It may provide a sense of community among residents, particularly if some of the open areas are designed for communal activities. Another advantage is that developers often experience cheaper site development costs involving the construction of roads and water/sewer infrastructure. These reduced costs often offset the costs of restoration or development of amenities such as trails in the open space areas. Other advantages include meeting a market need for low-maintenance housing and greatly reducing the impacts of development on watersheds.

What Are the Disadvantages of a Cluster Subdivision?:
In many communities, current zoning and subdivision regulations require conventional building patterns. This forces the developer to educate and convince local zoning boards to approve variances for a cluster subdivision, adding a potential time delay to the project.

The maintenance of open space normally requires the formation of a homeowners' association and the assessment of maintenance fees to each subdivision lot owner to pay for taxes, insurance, and the general upkeep of the land in the open-space areas. This is a cost not typically incurred in a conventional subdivision, since all of the land is privately owned.

The smaller-sized lots often result in close proximity to neighbors' homes and are considered a disincentive to some homeowners. If the lots and housing layouts are designed carefully, each house in the subdivision has a private unobstructed view that overcomes the disadvantage of the small lot size. Unfortunately, some earlier cluster subdivision

models did not provide very much open space, resulting in a negative attitude toward this option in some communities.

What Is the Role of Sewage Disposal in Determining What Types of Residential Development Are Created?:
In the past, many zoning regulations that called for large minimum lot sizes (two to five acres, for example) were put into place primarily to allow adequate room for on-site septic systems. This was especially true in rural areas, where central sewers were not available. Advances in technology, however, have given developers the capability of creating small community systems where wastewater is transported and treated in an environmentally safe, economically feasible, and aesthetically pleasing manner.

How Does Cluster Development Protect Farmland?:
Some proponents of rural cluster development contend that this is a tool that saves farmland. The open space areas that are protected by conservation easements do protect land, but it is not likely that these areas can provide space for a vigorous agricultural industry. They are designed more for the enjoyment of the residents than for use in agriculture. However, these areas can be used as effective buffers to separate residential areas from agricultural enterprises and thus may reduce agricultural nuisances, such as odors and noise. Nevertheless, if communities are serious about preserving farmland itself they need to consider very specific farmland preservation tools such as exclusive agricultural zoning, water and sewer boundaries, and purchase of development rights (PDR) and transfer of development rights (TDR) programs.

Purchase of Development Rights and Transfer of Development Rights
(adapted from *Purchase of Development Rights*, Joe Daubenmire and Thomas W. Blaine and *Fact Sheet Transfer Of Development Rights,* American Farmland Trust)

Ownership of land includes a bundle of rights. Among these is the right to possess, use, modify, develop, lease, or sell the land. Mineral rights constitute one of the items in the bundle with which most people are aware. If the mineral rights have been separated from the remaining items in the bundle, the owner is prohibited from drilling for oil or from mining the land. The right to develop a piece of land for residential, commercial, or industrial purposes is also a right within the bundle. The Purchase of Development Rights (PDR) involves the sale of that right while leaving all the remaining rights as before.

PDR is a voluntary program, where a land trust or some other agency usually linked to local government, makes an offer to a landowner to buy the development rights on the parcel. The landowner is free to turn down the offer, or to try to negotiate a higher price. Once an agreement is made, a permanent deed restriction is placed on the property which restricts the type of activities that may take place on the land in perpetuity.

In this way, a legally binding guarantee is achieved to ensure that the parcel will remain agricultural, or as open (green) space forever. This is because the agency involved retires the development rights upon purchase. The deed restriction may also be referred to as a conservation easement, or, since most PDR programs are designed to preserve agricultural use, an agricultural conservation easement. As a result, PDR programs are occasionally called PACE programs (purchase of agricultural conservation easements).

Transfers of Development Rights (TDR) programs allow landowners to transfer the right to develop one parcel of land to a different parcel of land. Generally, TDR programs are established by local zoning ordinances. In the context of farmland protection, TDR is used to shift development from agricultural areas to designated growth zones closer to municipal services. The parcel of land where the rights originate is called the "sending" parcel. When the rights are transferred from a sending parcel, the land is restricted with a permanent conservation easement. The parcel of land to which the rights are transferred is called the "receiving" parcel. Buying these rights generally allows the owner to build at a higher density than ordinarily permitted by the base zoning.

TDR programs are based on the concept that property owners have a bundle of different rights, including the right to use land, lease, sell and bequeath it, borrow money using it as security, construct buildings on it and mine it, subject to reasonable local land use regulations. Some or all of these rights can be transferred or sold to another person. When a landowner sells property, generally all the rights are transferred to the buyer. TDR programs enable landowners to separate and sell the right to develop land from their other property rights.

TDR is most suitable in places where large blocks of land remain in farm use. In communities with a fragmented agricultural land base, it is difficult to find a viable sending area. Jurisdictions also must be able to identify receiving areas that can accommodate the development to be transferred out of the farming area. The receiving areas must have the physical capacity to absorb new units, and residents of those areas must be willing to accept higher density development. Often, residents of potential receiving areas must be persuaded that the benefits of protecting farmland outweigh the costs of living in a more compact neighborhood.

TDR programs are distinct from purchase of agricultural conservation easement (PACE) programs because they involve the private market. Most TDR transactions are between private landowners and developers. Local governments generally do not have to raise taxes or borrow funds to implement TDR. A few jurisdictions have experimented with public purchase and "banking" of development rights. A TDR bank buys development rights with public funds and sells the rights to private landowners.

Energy Production

Redwood County, and other rural counties across the nation, are in a unique position to offer relief through the production of energy that is derived from renewable resources. Given the current rate of petroleum consumption, which increases by 2 percent each year, petroleum deposits are projected to be depleted by 2125. (Diversity Amid Globalization Rowntree, Lewis, Price, Wyckoff.) Renewable sources of energy, however, will be available for as long as they can be produced.

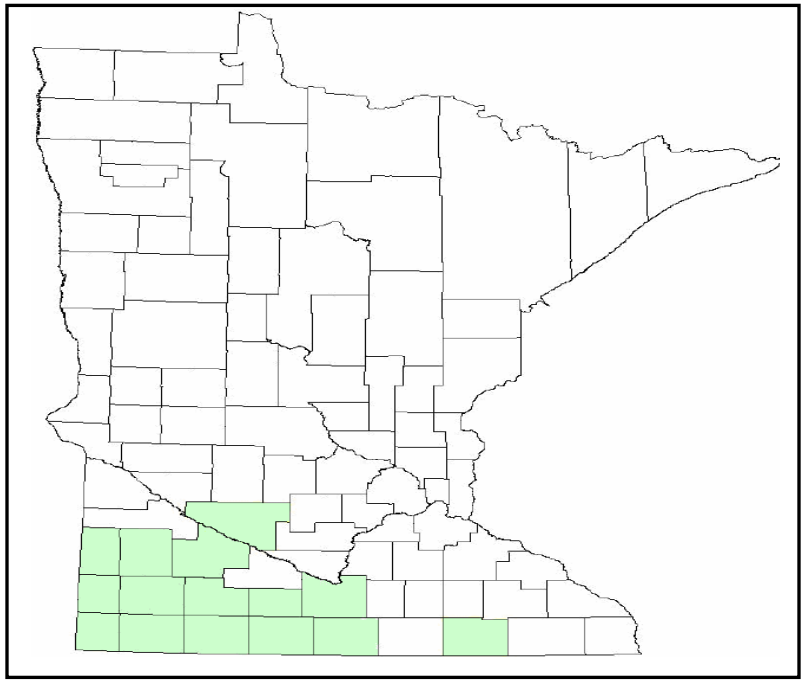
Alternative energy development can benefit local communities economically in many ways. Where implemented across the country, alternative energy production can diversify agriculture-based economies, create local jobs, keep energy dollars local, broaden the tax base, and provide new business and investment opportunities for farmers. The sources of energy that are available for harvesting in Redwood County are corn and other cellulose-based materials and wind.

In an effort to facilitate the production of energy, Redwood County has joined the Rural Minnesota Energy Board, a Joint Powers Board comprised of fifteen counties in southern

Minnesota. The board was formed to provide policy guidance on issues surrounding energy development in rural Minnesota.

Originally formed in 1996 as the Ridge Counties Task Force, it developed into the Wind Task Force, SW Minnesota Energy Task Force, and Rural Minnesota Energy Task Force, as both the membership and policy issues expanded. The initial focus on wind energy has broadened to include renewable energy and transmission issues.

In January 2004, the process to become a more formal entity through the formation of the Joint Powers Board was initiated, the first joint powers' meeting with fourteen county members was held in January 2005. The counties have been active in working together to resolve many energy related issues, including the barriers to local wind energy generation and development.



The Rural Minnesota Energy Board addressed many energy issues that have local long-term benefits to rural Minnesota. These issues and initiatives include:

- Wind Energy Production Tax - supported a tax structure for wind energy projects that would balance the needs of host communities with a policy of encouraging renewable energy development.
- Support for Renewable Energy Development: ethanol, bio-diesel support, bio-mass, methane, hydrogen, solar, and waste to energy.
- As an intervener in the Xcel Energy Application to the Public Utilities Commission, the board was successful in its support of increased transmission outlet capacity that would also allow local access to the transmission grid.
- The board identified a lack of communication between energy companies and the local community and has opened dialogues on issues of concern to the region.
- Support for community-based renewable energy development.
- Work with the Twin Cities Metro Counties Energy Task Force on issues of common interest.

The Rural Minnesota Energy Board is committed to cooperating in a joint venture to provide the greatest public service benefit possible for the fifteen county area encompassed by the counties in policy, planning, management, and implementation of methods to deal with energy and transmission in rural Minnesota.

The county is also involved with Southwest Clean Energy Resource Teams (SW CERTs), which is made up of citizens, business people, local officials, utilities, state and local agencies and organizations with an interest in renewable energy and energy conservation. The purpose of SW CERTs is to serve as a local resource that can facilitate communication and link information and resources that will foster energy conservation and renewable energy projects. By taking advantage of farm commodities for energy production, SW CERTs believes the economic and environmental atmosphere of the region can be enhanced.

Relative to land use, the southern portion of the county has been identified as the Energy Corridor. Key determinants in siting energy production facilities in this part of the county are availability of constant velocity winds and access to east/west transmission lines that can be used to export electricity. It should be noted, however, that wind energy production is a viable industry throughout the entire county.

The county, through energy efficiency ordinances, could additionally facilitate energy efficiency on the builder and consumer sides of the equation. The energy efficiency ordinances would provide staff, who would be reviewing development proposals, with the tools needed to guide decisions and inform developers of options. Performance standards would also be needed in the ordinances to address complaints before they arise and limit unreasonable objections to renewable energy installations.

Where the county has land use authority, it can encourage or require landowners to site homes and buildings in a way that will maximize the potential use of solar energy. The county may also use ordinances to protect access to direct sunlight for solar energy for building sites or existing homes and non-residential buildings.

Telecommunications

As a rural county, Redwood County is at a disadvantage, because of its distance from urbanized areas where access to information is comparatively higher. Advances in telecommunications technologies, however, present growth and development opportunities to Redwood County. Telecommunications technologies exist today that essentially take distance out of the equation and enable college professors to lecture students anywhere in the world, a surgical specialist to guide local physicians through a complicated medical procedure, and employees to work from home.

The development of telecommunications infrastructure is directly linked to the production capacity of the county. It is

now common to use telephone transactions as an indicator of the economy. The capacity to transfer information, telephone calls and data, represents the key to technological growth in the process of globalization. It follows that the availability of telecommunications infrastructure is fundamental for economic growth.

In recent years the development of mobile communications has given way to a new perspective for the creation and expansion of telecommunications networks. The costly operation of cabling the county to bring each user a standard fixed wireline telephone can be avoided, or at least deferred, by introducing systems operating on radio waves.

Redwood County should consider the following when regulating telecommunications towers:

- Regulate the location of telecommunication towers and telecommunication facilities in the county.
- Protect residential areas and land uses from potential adverse impacts of telecommunication towers and telecommunication facilities.
- Minimize adverse visual impacts of telecommunication towers and telecommunications facilities through careful design, siting, landscaping, and innovative camouflaging techniques.
- Promote and encourage shared use/co-location of telecommunication towers and antenna support structures as a primary option rather than construction of additional single use telecommunication towers.
- Avoid potential damage to adjacent properties caused by telecommunication towers and telecommunications facilities by ensuring such structures are soundly and carefully designed, constructed, modified, maintained and removed when no longer used or determined to be structurally unsound.
- Ensure that telecommunication towers and telecommunications facilities are compatible with surrounding land uses.
- Facilitate the provision of wireless telecommunications services to the residents and businesses of the county while protecting the public health, safety, and general welfare of the Redwood County residents.

ATV Use

All Terrain Vehicles (ATVs) are widely used in Redwood County, both as working vehicles on farms and as recreational vehicles. The number of all terrain vehicles in the county is likely increasing, although there is no hard data to support this assertion. It is an accepted fact, however, that recreational ATV use can be damaging to the environment, especially when ATVs are driven in roadside ditches and over trails.

In 2003, the Minnesota State Legislature passed Minnesota's first comprehensive plan regulating where people can ride off-road vehicles. In the year 2006, the law stated that ATVs may not be operated:

- on the median of a four-lane highway
- within the right-of-way of any interstate highway
- on the right-of-way between opposing lanes of traffic
- at airports
- below the ordinary high water level of unfrozen public waters that are lakes, streams, or rivers and certain wetlands, or in calcareous fens
- on any frozen public waters where legal access is prohibited
- in most state parks, state recreation areas, state historic sites, wildlife management areas, or state scientific and natural areas with the exception of posted trails and areas
- in any areas, including streets, restricted by local ordinances or municipalities
- in a tree nursery or planting area
- on state forest lands that are posted or designated closed to motorized uses
- on agricultural land without permission
- off-highway motorcycles (OHMs), off-road vehicles (ORVs) and Class 2 ATVs cannot be operated in ditches unless on a trail designated for that specific vehicle type

The law in 2006 stated that ATVs may be operated:

- on private land with the landowner's permission
- on frozen public waters where you have legal access (if not restricted by law or local ordinances)
- on public lands and trails that are open to ATVs.

Like other rural counties, Redwood County is in a position where, if it is going to protect the environment and accommodate an ever-growing number of ATV enthusiasts, provisions must be made for the safe use of ATVs in an area(s) that will not be damaged by off-roading.

Land Use Compatibility with Railroads

As mentioned, there are two railroads operating in Redwood County; the DM&E and the Minnesota Prairie Line. Each of these railroads is critical to the economic vitality of the county, its municipalities, businesses, and residents. Redwood County's rural-based, agricultural economy is an engine that ignites and moves sub-economies. Depending on the product, where within the county the product is made, and its destination, shipping by rail, compared to truck, can sometimes be more economical.

Railroads are industrial uses and should be zoned I-1 Industrial Districts. This zoning should apply to the railroad track or tracks, rights-of-way, and spurs that access adjacent industrial nodes (e.g., where elevators, warehouses, and other loading facilities are agglomerated). Not as obvious, however, is that railroad rights-of-way are linear industrial sites, and it would be appropriate in Redwood County to zone entire railroad corridors as I-1 Industrial Districts, along the line-haul segments of track(s) that run between industrial nodes.

There is high potential that future industrial facilities (e.g., elevators, ethanol plants, and gasification plants) and agricultural holding facilities (stockyards and feedlots, e.g.) will be developed in the county. For many of these facilities, it will be economically feasible to locate along railroad rights-of-way. This proximity to the railroad will create a situation where, as transportation modes compete, business operators will be able to negotiate for the most efficient shipping costs.
Regarding railroad corridors, this comprehensive plan aims to:

- Ensure that railroad corridors are earmarked for industrial development;
- That they will not be occupied by incompatible uses; and
- That incompatible uses (and/or structures associated with incompatible uses) are set back a reasonable distance from the railroad right-of-way and that buffering (row of trees, berms, noise barriers, e.g.) are installed to help minimize impacts from the railroad.

Federal Railroad Administration (FRA) rules are vague on the subject of setback requirements from railroad rights-of-way. They do focus, however, on enabling state departments of transportation to establish minimum clearances for structures that are adjacent to a railroad track(s). Minnesota Statute 219.46 establishes the vertical clearance at 22 feet from the railroad bed and the horizontal clearance at 8'-6" from the centerline of the outside track.

The standard railroad track consists of two rails spaced 4'-8.5" apart, and the centerline spacing between rails is 2'-4.25". This indicates that the minimum horizontal clearance for structures (e.g., a loading dock) is 6'-.075" from the outside rail.

Presumably any land use (and attendant structures) within 6' of a railroad track will be industrial and, therefore, compatible with railroad operations and impacts on the environment. Non-compatible uses, however, should not be allowed to be constructed or to operate within close proximity to railroad tracks and operations. Railroad right-of-way is typically, but not always, defined as being 50' on either side of the centerline of the outside track.

There is no language in the county's zoning ordinances that addresses clearance requirements or setbacks from railroad rights-of-way. The county's ordinances, however, do address development in various land use districts, specifically in the areas of minimum lot size, minimum lot dimensions, setbacks from public rights-of-way, and maximum lot coverage.

One of the two railroads operating in Redwood County, Minnesota Prairie Line, is a public entity; the other, DM&E is privately owned. Either way, design standards defined in ordinances provide good examples of how development might be regulated adjacent to railroad properties.

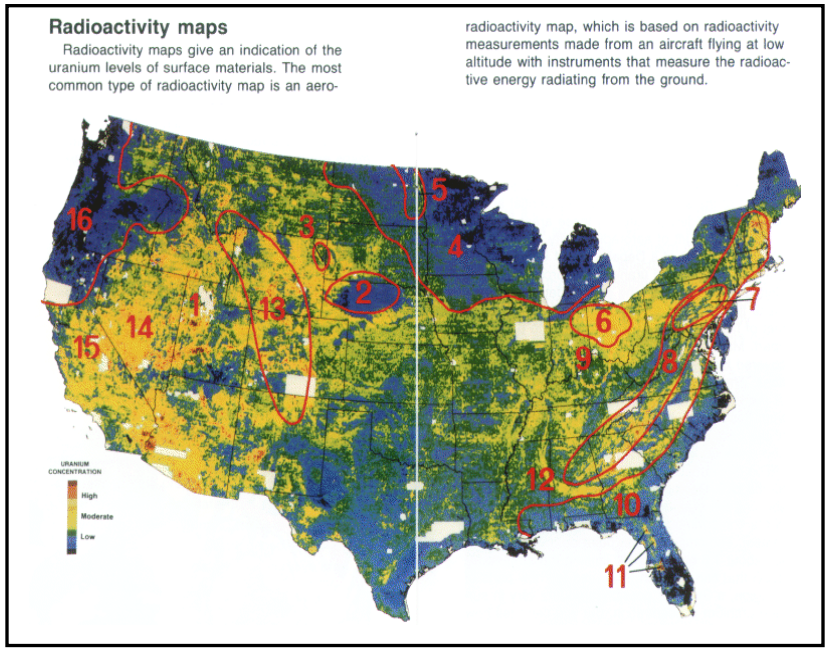
The intent of the design standards would be to: a) maintain a separation between railroad (industrial) uses and potentially incompatible non-industrial uses and b) establish design standards for uses adjacent to railroads that ensure health, safety and welfare and an acceptable appearance. It is suggested in this comprehensive plan that a minimum distance should be established between structures associated with an incompatible use and the railroad right-of-way.

Radon Exposure and Future Mitigation Plans

Radon gas is radioactive, which means it continuously decays and releases radiation. Because it is radioactive, it can be detected from the air by measuring the radioactivity of an area's rocks and soils. A large amount of aeroradioactivity data was collected as part of a U.S. Department of Energy program to evaluate the uranium resources of the United States. The data from this survey gave a good indication of the background uranium concentration of soils and rocks underlying most of the United States.

The digital data from the survey were processed by the U.S. Geological Survey to produce a map showing the uranium content of surface materials in the United States (the lower 48 States). The smallest data point on the map covers about 1.6 by 1.6 miles, limiting the amount of detail that can be seen. (At this scale, one can see how parts of a region, a state, or possibly a county vary in surface uranium concentrations.)

All of Minnesota, with the exception of the Arrowhead Region, has high concentrations of radon gas. It is produced from minerals in soil, such as uranium and radium, which are both in abundance in Minnesota several feet beneath the Earth's surface and above the bedrock. Redwood County, in particular, is an area of the state where uranium concentrations beneath the Earth's surface are such that the potential for radon gas is high. As shown on the map that follows, Redwood County is within Uranium Concentration Zone 4 where Pleistocene glacial deposits have left low concentrations of uranium on the surface but considerable concentrations below the surface. Zone 4 is recognized as an area in the United States where the potential for radon gas is "High."



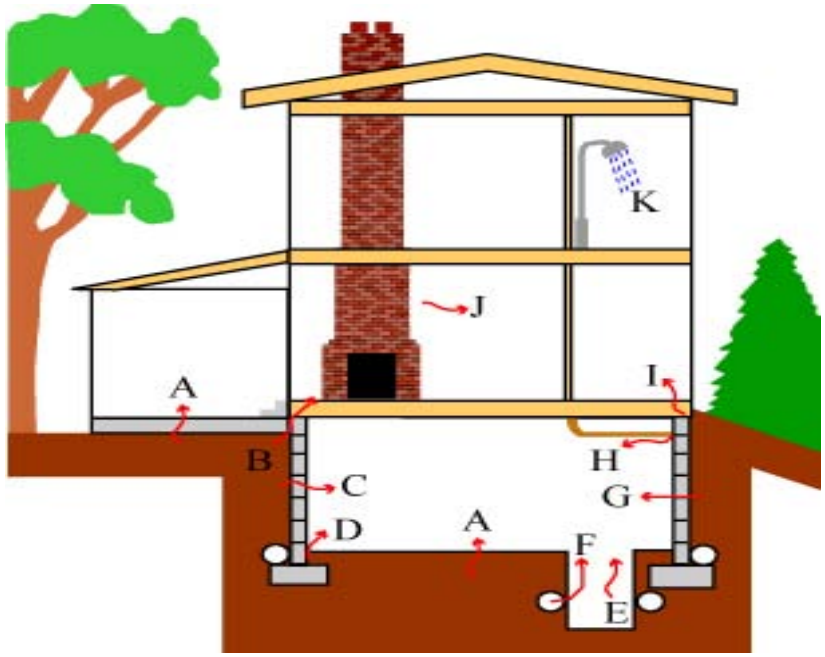
Although radon is present throughout the environment, when high levels are present indoors people are exposed to more of its radiation, and risks of cancer increase. Next to cigarette smoking, exposure to radon is the second leading cause of lung cancer in the United States.

A large percentage of Minnesota homes have high levels of radon in the indoor air because of how they are built and how they operate in our climate. One important factor is that many Minnesota homes have basements that are used as living spaces. The Minnesota Department of Health (MDH) estimates that about one in three (1/3) Minnesota homes has enough radon to pose a large risk to the occupants' health over many years of exposure. In some areas of the state, the percentage of homes that have high levels of radon is even larger.

Radon is colorless, odorless and tasteless. Therefore, a radon test is the only way to find out how much radon is in present in a given home. Performing a radon test is easy, inexpensive, and can be done privately. Every home is unique due to its local soil, construction details, maintenance and degree of depressurization. Therefore, test results from nearby homes cannot be relied upon to predict the radon level in another home. Likewise, previous test results may not reflect current and future radon levels for a home that has been remodeled, weatherized or had changes made to its heating, air conditioning or other ventilation systems such as exhaust fans.

The MDH recommends that all Minnesota homeowners test their homes for radon. The results of a properly performed radon test will help homeowners determine for themselves if they need to take further action to protect their family from the health risks of radon in the home.

Major Radon Entry Routes (Minnesota Department of Health)



A. Cracks in concrete slabs.
B. Spaces behind brick veneer walls that rest on uncapped hollow-block foundations.
C. Pores and cracks in concrete blocks.
D. Floor-wall joints.
E. Exposed soil, as in a sump or crawl space.
F. Weeping (drain) tile, if drained to an open sump.
G. Mortar joints.
H. Loose fitting pipe penetrations.
I. Open tops of block walls.
J. Building materials, such as brick, concrete, rock.
K. Well water (not commonly a major source in Minnesota homes).

Recognizing the documented health hazards related to radon exposure, Redwood County, through this comprehensive plan, has determined that a pro-active response is necessary and legally defendable. Under the "Police Powers," which enable the county to protect the health, safety, and welfare of the community, regulatory language should be developed to require radon mitigation in new construction of residential and institutional uses) throughout the county. Mitigation in construction is a simple procedure that involves venting of understructure soils through the roof. The venting, depending on location, can be either active (requiring a fan) or passive (without a fan).

Currently (year 2007), the costs associated with mitigating radon exposure during construction are estimated to total $300 to $500 for a residential structure. By comparison, the costs of eliminating/reducing radon gas in an already built home, can be $2,500 to $3,000.

LANDSCAPE AND LAND USE ZONES

A land-based approach was sought as a way to respond to these and other issues. Six policy districts, referred to as Landscape and Land Use Zones, were identified to form a conceptual foundation for developing the county's land use plan.

Definition of the Landscape and Land Use Zones:
Analysis led to the definition of six distinct areas within the county:

- Scenic River District
- Shoreland District
- Remaining Agricultural, Residential, Industrial Zone
- Small Cities Protection Zone

- City of Redwood Falls Protection Zone
- County Future Development Zone

Principles of Sustainable Development were followed to define permitted and non-permitted uses within each of the zones. These principles are outlined below:

- **Scenic River District**
  The purpose of this district is to recognize and protect the **unique** character of the Minnesota River Valley and associated bluffs. An example of the unique character of the Scenic River District is the granite outcroppings along the Minnesota River, which were exposed when the glacier receded. These are recognized to be some of the oldest rock formations in North America and the world. While not unique, another characteristic of the river valley is the balance of natural systems required to sustain riparian-related flora and fauna.

  It is the intent of this comprehensive plan that the county's land use restrictions within the Scenic River District may be more restrictive, but never less restrictive, than those defined in State of Minnesota Rules Chapter 6105 and Project River Bend: Six County Minnesota River Management Plan. As a result, it is the intent of Redwood County that permitted and conditional uses within this zone should be non-invasive and non-polluting. Where provisions in Project River Bend would allow "any agricultural use," the county's vision for the Scenic River District is that permitted agricultural uses should be non-polluting, non-traditional (Ag2 Low Impact). Permitted Ag2 uses would not include feedlots. Examples of permitted Ag2 uses would include organic farms, tree farms, hobby farms, truck farms (a farm producing vegetables for the market), and vineyards.

  Low-impact park and recreational (P/R) uses that are non-polluting (air, water, noise) should be permitted. Low density residential (R-LD) uses could also be permitted. The densest residential development within the Scenic River District could be one dwelling unit per five acres.

- **Shore Land District**
  The Shore Land District recognizes and provides the means for protecting the Cottonwood and Redwood Rivers and other significant waterway systems in the county. Permitted and conditional uses within these zones should be non-invasive and non-polluting, and, as in the Scenic River District, non-traditional Ag2 and R-LD land uses would be permitted. As in the Scenic River District, one dwelling unit per five acres would be the highest density allowed under the R-LD zoning.

  A difference between the two, however, is that motorized trail uses (snowmobiles, dirt bikes, and ATVs) could not be allowed in the Scenic District, but would be allowed in the Shore Land District.

- **Agricultural Zone**
  It is recognized that traditional (Ag1 High Impact) agriculture, as it currently operates in Redwood County, is the backbone of the county's economy. It is necessary to continue current agricultural practices for the foreseeable future and beyond. Existing land use controls described in and future regulations from the state and county would be the applicable land use controls.

The Agricultural Zone also includes a number of conditional uses. Among these are junk yards, industrial facilities, gravel pits, and mining operations.

- **Small Cities Protection Zone**
  Understanding that the county has no land use regulatory control within the small cities, the Small Cities Protection Zones will define land that is under county jurisdiction and just outside the boundaries of the small cities. The exact shape and size of the protection zones around the county's 14 small cities will be defined with input provided by municipal governments and the townships.

  Land use controls within the county's Small Cities Protection Zones will be the same (or less restrictive) as those that are defined for the Urban Expansion Districts. It is the intent of the plan that, once it is determined that urbanized residential development will occur; a Small City Protection Zone (SCPZ) can be established for the following purposes:

  1. Provide future populations land for development where the county's residential zoning regulations would apply.
  2. Provide a buffered zone of land where small cities and future urbanized residential developments will be protected from the impacts of Ag1 and Ag2 activities, which could include odors, noise, dust, contaminated wells, etc.
  3. Provide a mechanism for the review of future development proposals to ensure that orderly development will occur outside municipal boundaries. Through such development review, for example, the characteristics of adjacent developments or development proposals will be considered together to ensure that when the time comes for a city to expand its borders into the Protection Zone, linkages to infrastructure (roads and utilities, for example) will be efficiently accommodated.

- **City of Redwood Falls Protection Zone**
  The City of Redwood Falls Protection Zone (RFPZ) would operate the same as the protection zones for the small cities. It is proposed that through discussions with Redwood Falls and affected townships, the county would define the size and shape of the Redwood Falls Protection Zone.

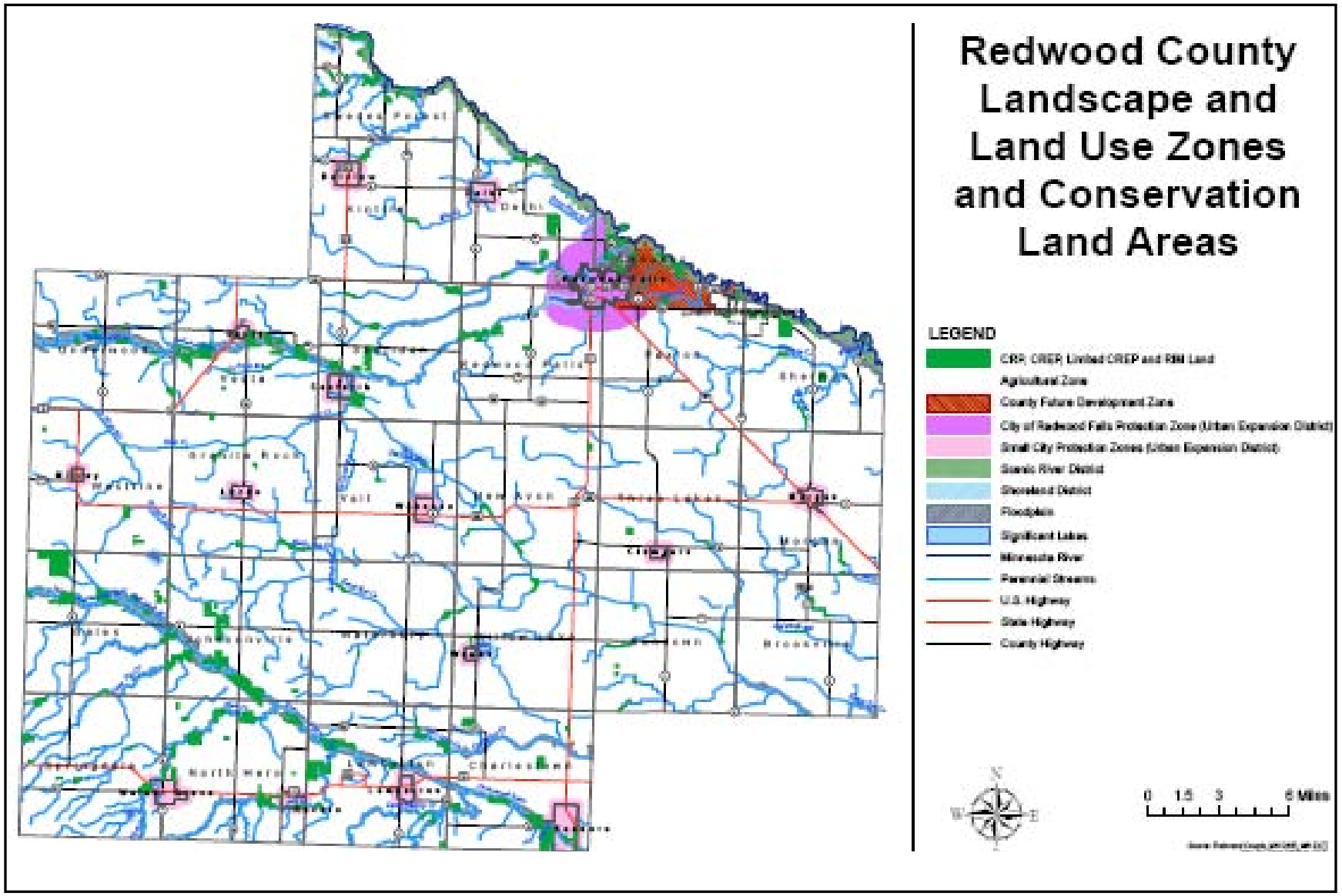
- **County Future Development Zone**
  The Future Development Zone has been defined as a zone where the tribal community and the county would be encouraged to collaborate on economic development projects and other ventures that promote goodwill and understanding.

  The County Future Development Zone recognizes that the tribal community is part of the county community and the tribe's casino operation is the area's largest employer and is the source of considerable capital resources. The County Future Development Zone is that area where the county and tribe might focus cooperative business activities, which could include entertainment and hospitality businesses, non-traditional agriculture, and energy production.

Mapping on page 77 illustrates the six Landscape and Land Use Zones. The boundaries drawn for the Zones, at this

point, are conceptual. Actual boundaries will be determined after the county and affected municipalities and townships have had an opportunity to review and critique existing and future conditions.

Matrices, beginning on page 79, further define the Landscape and Land Use Zones and list concept-level, representative permitted and non-permitted uses. As presented in the Redwood County Comprehensive Plan, the permitted and non-permitted uses are possibilities. Actual permitted and non-permitted uses, as well as the exact boundaries of the zones, will be determined in thorough discussions that will be held between Redwood County and affected municipalities and townships.


Redwood County Landscape and Land Use Zones and Conservation Land Areas
LEGEND
CRP, CREP, Limited CREP and RIM Land
Agricultural Zone
County Future Development Zone
City of Redwood Falls Protection Zone (Urban Expansion District)
Small City Protection Zones (Urban Expansion District)
Scenic River District
Shoreland District
Floodplain
Significant Lakes
Minnesota River
Perennial Streams
U.S. Highway
State Highway
County Highway
N
W
E
0 1.5 3 6 Miles

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
Scenic River District	Generally a low-impact zone including the Minnesota River and adjacent wildlife and scenic protection areas (per Mn/DNR). The purpose of the Zone is to protect the environment and ecology of the Minnesota River Valley while providing opportunities for tourism, recreation and non-traditional (Ag2 Low-Impact) agricultural economic development.	The Wild and Scenic area of the Minnesota River Valley, as defined in Minnesota Rules 6105.1200, from Redwood County Road 11, west to the Redwood County/Yellow Medicine County border, including: - Minnesota River, - Shore Land - Bottom land, - Minimum Wild and Scenic River protection setback. - Visual (view shed) impact zone on bluffs above the River.	5,475 (0.97 %)	**R-LD Low Density Residential** This zone will be defined by the Zoning Ordinance. **Ag2 Low-Impact Agricultural** Traditional agricultural uses such as: - crop farming - hobby farms - vineyards - tree farms and nurseries - organic and truck farms - non-confined livestock **P/R Low-Impact Park and Recreational** - camp grounds - non-motorized recreational trails for hiking, biking, cross-country skiing, snowshoeing, and equestrian. - boating - hunting and fishing shall be allowed only with prior approval of private property owners or within State of Minnesota Wildlife Management Areas. - institutional uses directly associated with the overall P/R1 Zone... such as restroom facilities, interpretive centers, and shelters.	**Residential uses more intense than R1** **New Feedlots** **Institutional uses:** - schools - health care facilities - libraries **Industrial facilities and operations:** - ethanol plants - rendering plants - junk yards nor landfills - boat rental and boat (small) engine repair **Commercial uses:** - convenience stores - outdoor supply stores - bait and tackle shops - gun and ammunition shops - taverns, restaurants, coffee shops (None of the above, non-permitted uses are allowed under Mn Rules Chapter 1605.)

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
Shore Land District	Generally a low-impact zone including the Redwood and Cottonwood Rivers, Plum Creek, other significant springs and creeks, and the eight lakes within the County, as defined by the Protected Waters Inventory Map for Redwood County. These are not waterways that are protected by the State Wild and Scenic River Act. The purpose of the Shore Land District is to prevent the uncontrolled use of the County's Shore Lands and protect public waterways from detrimental subdivision, use, and development of Shore Land and to enhance tourism, recreation and non-traditional, low impact agricultural economic development.	An area on either side of all rivers, creeks, streams, and tributaries listed in the DNR's Protected Waters Inventory and 1,000 feet from the lakes identified in the DNR's Protected Waters Inventory. that serves to protect the shoreland ecosystem.	58,837 (10.43 %)	**R-LD Low Density Residential** This zone will be defined by the Zoning Ordinance. **Ag2 Low-Impact Agricultural** Traditional agricultural uses such as: - crop farming - hobby farms - vineyards - tree farms and nurseries - organic and truck farms - non-confined livestock **P/R1 Medium-Impact Park and Recreational** - camp grounds - recreational trails for snowmobiling, hiking, biking, cross-country skiing, snowshoeing, and equestrian. - boating - hunting and fishing shall be allowed only with prior approval of private property owners or within State of Minnesota Wildlife Management Areas. - institutional uses directly associated with the overall P/R1 Zone... such as restroom facilities, interpretive centers, and shelters.	**Residential uses more intense than R1** **New Feedlots** **Institutional uses:** - schools - health care facilities - libraries **Industrial facilities and operations:** - ethanol plants - rendering plants - junk yards or landfills (None of the above, non-permitted uses are allowed under Mn Rules Chapter 1605.)

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROXSIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
Shore Land District (continued)				**Commercial uses:** - convenience stores - outdoor supply stores - bait and tackle shops - gun and ammunition shops - taverns, restaurants, coffee shops	

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
Agricultural Zone	Generally where current agricultural, residential, and industrial activities can continue. Current land use regulations and State and County requirements will be applicable. The purpose of this zone is to ensure that current, time-tested and proven approaches, activities, and values are preserved and continue to flourish in the County.	Land within the County remaining after excluding, the: - Scenic River District, - Shore Land District, - Small Cities Protection Zones, - City of Redwood Falls Protection Zone, - County Future Development Zone	467,559 (82.92 %)	**Ag1 Traditional (High Impact)** Agricultural Zone, including: - high intensity agriculture - animal confinement operations (feedlots) - small grains - Ag2 Low-impact agricultural uses **R1 Rural Residential** **R2 Rural Residential** Where the highest level of density is higher than R1 and may be allowed with implementation of TDR or PDR programs. **Business and industrial** uses can be developed in the Agricultural Zone, but only through rezoning.	**Residential uses more intense than R2**

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
Small City Protection Zone	The Small Cities Protection Zones are formed by a boundary around each of the County's 14 small cities. The boundary is provided to ensure that the small cities are: 1. given room to grow in an orderly and cost effective manner and 2. protected from Ag1 and Ag2 activities that produce excessive odors (feedlots) and those that are incompatible with urban development.	To be determined during discussions among the county, the cities, and affected townships.	16,029 (2.84 %)	**Per Redwood County Zoning with input provided by the small cities and affected townships.** **SCPZ** Where development can extend beyond existing municipal boundaries. This development would be no closer to a feedlot than allowed by the ordinance. Permitted uses include: - residential subdivisions **County Agricultural Zone** Where development would extend beyond the Small Cities Protection Zone. Permitted residential uses would be at a maximum intensity of three dwelling units per 40 acres.	**Per Redwood County Zoning with input provided by the small cities and affected townships.**

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
City of Redwood Falls Protection Zone	The City of Redwood Falls Protection Zones is formed by a boundary around the City. The boundary is provided to ensure that Redwood Falls is: 1. given room to grow in an orderly and cost effective manner and 2. protected from Ag1 and Ag2 activities that produce excessive odors (feedlots) and those that are incompatible with urban development.	To be determined during discussions among the county, the cities, and affected townships.	10,988 (1.95 %)	**Per Redwood County Zoning with input provided by the City of Redwood Falls and affected townships.** **RFPZ** Where development can extend beyond existing municipal boundaries. This development would be no closer to a feedlot than allowed by the ordinance. Permitted uses include: - residential subdivisions **County Agricultural Zone** Where development would extend beyond the Redwood Falls Protection Zone. Permitted residential uses would be at a maximum intensity of three dwelling units per 40 acres.	**Per Redwood County Zoning with input provided by the City of Redwood Falls. and affected townships.**

LANDSCAPE AND LAND USE ZONES	DEFINITION AND PURPOSE	CONCEPTUAL, APPROX BOUNDARIES	APPROX SIZE (Acres)	POTENTIAL PERMITTED USES	POTENTIAL NON-PERMITTED USES
County Future Development Zone	Generally developed so that proactive steps can be taken where two cultural groups can positively and cooperatively engage in economic development activities, environmental protection initiatives, and other ventures that will improve the quality of life in Redwood county and on the Reservation. The County Future Development Zone is defined as the area between the City of Redwood Falls and the Lower Sioux Indian Reservation.	From the Minnesota River to one-half mile south of CSAH 24 and from Redwood Falls to the Lower Sioux Indian Reservation.	4,993 (0.89 %)	Ag2 Non-Traditional (Low Impact) Agriculture Highway Commercial: - hospitality, hotels, motels, restaurants - tourism - park and recreations - amusement park Residential subdivisions Alternative wind energy production facilities	Ag1 High Intensity, Traditional agriculture including: - animal confinement operations - uses that exceed height limitations defined by the Federal Aviation Administration

SUMMARY OF LANDSCAPE AND LAND USE ZONES

Note: Totals do not include Lower Sioux Indian Reservation and do not account for overlapping areas. This explains the sum 563,881 acres, compared to the total number of acres in the county, 564,184.

LANDSCAPE AND LAND USE ZONES	Concept-Level, Approx. Acres	Percent of Total Acres	Acres within Floodplain	Percent of Zone or District within Floodplain	Acres in Conservation	Percent of Zone or District in Conservation
Scenic River District:	5,475	0.97	4,034	73.67	267	4.87
- Wild/Scenic River	5,093	0.90	3,665	71.96	267	5.23
- Project River Bend	382	0.07	369	96.41	0	0.00
Shore Land District:	58,837	10.43	10,335	17.56	2,248	3.82
- 300' – 500' rivers and streams	55,952	9.92	9,710	17.35	2,115	3.78
- 1,000' lakes	2,886	0.51	445	15.43	96	3.33
Agricultural Zone	467,559	82.92	5,553	1.19	5,264	1.13
Small City Protection Zone (Urban Expansion District)	16,029	2.84	653	4.07	445	2.78
City of Redwood Falls Protection Zone (Urban Expansion District)	10,988	1.95	1,707	15.54	281	2.56
County Future Development Zone	4,993	0.89	1,897	38.00	136	2.73
All of Redwood County	**563,881**	**100.00**	**24,179**	**4.29**	**8,641**	**1.53**

IMPLEMENTATION

GENERAL LAND USE AND GROWTH POLICIES

The planning process conducted in 2005, 2006, and 2007 established a successful framework for land use planning in Redwood County. The cities are responsible for planning within their boundaries, and the county is responsible for planning and plan implementation in the unincorporated areas.

Historically the townships have coordinated with the county and played an active role in the planning and implementation process. This plan is based on a continuation of this effort. The General Land Use and Growth Policies, which are outlined below, establish a framework for cooperative planning efforts among the townships, the cities, and the county.

Policy 1: Policy Areas (Landscape and Land Use Zones)
Six landscape and land use zones have been defined as policy areas. They are:

- The Scenic District
- The Shore Land District
- The Agricultural District
- The Small Cities Protection Zones
- The City of Redwood Falls Protection Zone
- The County Future Development Zone

These zones are illustrated and defined in the previous section, Land Use, of this plan.

Policy 2: Fundamental Development Position
The county's fundamental position on land use in the county is that urban development should occur within the municipalities of the county and that the area outside the municipalities should remain rural with agriculture as the principal land use.

In order to accommodate future growth, while minimizing the conversion of agricultural production land to urban uses, and to promote efficient provision of public services, most future non-agricultural growth, and associated public investment will be directed to the municipalities of the county.

Policy3: Organization for Planning
In Redwood County, land use planning is done by the cities within their corporate limits and by the county in the unincorporated area with active participation by the township governments. This plan and the County Zoning Ordinance provide for certain choices to be made by cities and townships, including but not limited to the delineation of protection districts that will surround the municipalities.

Policy 4: Service Level
The county will support growth that can be accommodated within existing or planned service capacities of the city. Growth beyond the service capacity of the city has potential for adverse impact on not only the city, but also on surrounding areas and the county as well. The county will cooperate with the cities whenever possible to ensure adequate levels of public services. The service levels should be maintained at a level that adequately services the residents.

Policy 5: Annexation

The county will support the annexation of land to a municipality if:

- The annexation is consistent with the municipal and township land use plans.
- The area to be annexed is a logical expansion of the municipality.
- Urbanization is about to occur.
- Municipal services (central sewer and water at a minimum), provided by the annexing municipality, will be available at the time of development.
- Planning for storm water run off and protection of natural resources will be completed prior to development.
- The annexation of additional land is necessary to accommodate development, and the supply of development land within the city is extremely limited.

OBJECTIVES TO GUIDE LAND USE, GROWTH AND DEVELOPMENT

Objective No. 1: Protect the rural, agricultural character of Redwood County.

- Develop and implement growth management strategies that ensure the long-term viability of the agricultural economy and lifestyle.
- Maintain and enhance the value of agricultural, residential and commercial property.
- Implement and otherwise support economic, environmental and social programs that support agricultural development:
  - Develop and implement ordinance standards that support Transfer of Development Rights and Purchase of Development Rights (TDR/PDR).
  - Develop and implement standards for cluster and/or conservation development
  - Develop and implement standards for a mixed use district that can be used in unincorporated areas with neighborhoods (population concentrations)
  - Develop policies and provide funding to assure ditch maintenance.
  - Review ordinances for recent changes in the state statutes and make appropriate changes (i.e. adult uses, nonconforming uses, licensed residential facilities, timing of approvals).
  - Research and consider developing programs and policies that inform persons who purchase non-agricultural homesteads within agricultural districts about agricultural practices and potential issues that could result from living in an agricultural district. The programs and policies should serve to inform potential buyers and home builders that their property is within an agriculturally zoned district and that agricultural

uses could be given preference over other uses within the agricultural district.

Feedlots:

- Encourage and support development of the feedlot industry within the county by minimizing the potential conflicts between feedlots and their non-farm, future neighbors.
- Identifying areas clearly designated for feedlot development and areas clearly designated for non-feedlot devel-
- Development, according to setbacks codified in county ordinances.
- Change the county's status from "Undelegated" to "Delegated" to give the county greater authority for registering, monitoring, and regulating feedlots under State of Minnesota rules and regulations.

Waste Disposal Sites:

- Locate waste disposal sites (junk yards, ash landfill disposal sites, and emergency disposal sites) in areas of the county that are zoned for agricultural use.
- Specifically site emergency disposal sites so that each city in the county has its own site.
- Siting criteria for waste disposal sites should include the suitability of soils, direction of major wind currents, and distance from municipal borders and areas of human habitation.

Mining and Excavation:

- Continue to allow mining and excavation operations to occur as a conditional use in all districts except R-1 and B-1.
- Establish standards to ensure that as a condition of approval, mining and excavation operations will not negatively impact wildlife habitat and areas identified for tourism and future residential development.
- Establish standards to ensure that as a condition for approval, these operations will: a) remediate impacts to county-owned land and facilities (e.g., roads) that can be attributed to mining and excavation operations and b) reclaim excavated land to meet standards that shall be set by the county.
- Amend the Zoning Ordinance to include language that requires surety bonds as part of the permitting process.

Objective No. 2: Encourage ag-related commercial and non-traditional agricultural development.

- Encourage non-traditional ag-business, such as vineyards, micro-breweries, food processing, and alternative energy production:
  - Develop and adopt ordinance standards that more broadly define agricultural uses to include vineyards, sale of produce, tree farms, etc.
  - Develop and adopt ordinance standards that define ag-related businesses to include non-traditional agricultural related uses, such as micro-breweries, food production, and alternative energy production. These ordinances should state that non-traditional agricultural businesses would be allowed in an agricultural district with a conditional use permit. Such standards should also include performance standards for such businesses related to noise, odor, traffic, setbacks, etc.
  - Promote organic farming (e.g., with field to market delivery systems).
  - Work with the Inventor's Congress to create competitions for new agricultural products and the field to market incentives for economic viability.

- Monitor trends and entrepreneurial ventures that hold promise for the County and offer incentives for testing trends and ventures in the County.
- Encourage the research and development of alternative energy sources.

Objective No. 3: Retain the county's youth, its biggest asset.

- Encourage educational institutions to provide advance learning in ag-related fields.
- Participate with existing companies to provide advance training in needed fields.
- Work with social service agencies to promote activities for the County's youth.

Objective No. 4: Provide for quality, managed growth.

- Adopt planning directions that reinforce the Comprehensive Plan.
- Establish a process to ensure that land use and development decisions are made with the maximum advice of the County, cities and townships and with full opportunity for public participation.
- Encourage industrial development along major highway corridors.
- Encourage development of city comprehensive plans.
- Identify areas appropriate for residential development near existing municipalities.
- Determine areas appropriate for higher density residential development.
- Identify areas for non-traditional ag-business (including but not limited to):
  - Vineyards
  - Micro-breweries
  - Food processing
  - Energy production
    - Wind power
    - Bio-mass energy production
    - Ethanol production
- In agriculture, update the zoning ordinance to assist in meeting this objective by:
  - Reviewing and revising: a) regulations related to the number of animal units permitted when a conditional use permit is required and b) conditional use permit standards for siting feedlots.
  - Broadening the definition of agriculture to include tree farms, grapes/vineyards, sale of on-site raised produce, and agriculture – related business.
  - Reviewing and developing specific performance standards for mining operations.
  - Discouraging placement that has an adverse effect on environmental and tourism assets.
- In residential development, update the zoning ordinance to assist in meeting this objective by:
  - Developing standards to require appropriate height and setback regulations in areas around the airport.
  - Encouraging development of a process where adjacent communities (cities and towns) can work together to develop annexation policies, procedures and agreements.
  - Developing standards for conservation and/or cluster development in rural areas.
- In commercial and Industrial development, update the zoning ordinance to assist in meeting this objective by:
  - Identifying and zoning areas that are along major transportation corridors to be designated for commercial/industrial development.
  - Developing standards that encourage compatibility between commercial and non-commercial land uses.
  - Requiring site planning and building design that results in adequate site buffering, screening,

landscaping, traffic circulation, access, parking and traffic safety.
- Regulating commercial signage so that is does not detract from the rural character of townships.
- Encouraging commercial development that is locally based or compatible with local commercial needs.
- Establishing planning directions that concentrate growth to reduce required services.
- Ensuring that planned commercial areas can support future growth scenarios.
- Encouraging development of eco-industrial sites.
- Developing and adopting specific performance standards for junk yards, salvage yards, contractor's yards, recycling facilities, etc.
- Limiting commercial/industrial development to areas that do not require premature expansion of urban services.
- Investigating methods to reinforce the town centers of existing cities in the County.
- Adopting standards that limit the size of home occupations.

Objective No. 5: Establish land use patterns that preserve and protect the natural qualities and existing rural character of the landscape.

- Encourage and explore land use options related to the preservation of unique landscapes.
- Develop and adopt standards for river corridor overlay districts.
- Encourage the clustering of residential uses to ensure the efficient use of natural resources and economic efficiency in the extension of public services.
- Enforce river corridor development standards as well as shoreland and flood plain regulations.
- Enforce development standards that govern the permitting, design, installation, expansion, and maintenance of individual septic treatment systems.
- Reinforce recommended actions from the County's 2005 Water Plan.
- Ensure steps are being taken to address Total Maximum Daily Loads (TMDLs) in order to ensure the application of water quality standards developed to define how much of a pollutant can be in surface and/or groundwater while allowing it to meet its designated uses:
  - Turbidity = cloudiness, caused by suspended solid matter from disturbed or eroded soil.
  - IBI = index of biotic integrity used to assess water and habitat quality by looking at types of insects, plants and fish found there. A rate of 30 or below is considered impaired.
  - Fecal Coliform = bacteria found in the intestinal tract of humans and animals, and in soil.
  - Mercury and PCBs occur naturally in the environment.
- Develop a plan to identify failing septic systems and to assist property owners in upgrading such systems.
- Work with Seaforth to plan and identify funding for a sanitary system.
- Ensure and enforce development standards that require development to be suited to site-specific soil conditions and existing drainage patterns, in order to minimize runoff and maximize absorption of water.
- Promote natural erosion control over structural methods.
- Continue working to educate residents about best management practices for agricultural production, and the residential use of fertilizers, and water quality and quantity concerns.
- Require erosion and sediment control prior, during and after site construction.
- Protect the natural environment along the Minnesota River Valley.

- Protect the natural environment in the CSAH 24 corridor between Redwood Falls and the Lower Sioux Mdewakantowan Community and, at the same time, develop business enterprises that will not negatively impact the environment.
- Encourage tourism in the Minnesota River corridor by supporting current trails and trail plans, adding bike trails and preserving existing bridges over Minnesota River for either automotive or pedestrian use.
- Encourage and promote the policies and goals of the Redwood County Local Water Management Plan.
- Encourage and promote the policies and goals of the Redwood County All Hazard Mitigation Plan. Working with the townships:
  - Develop a plan that identifies rural areas that can be used for natural disaster waste disposal outside of municipal limits.
  - Identify a hazardous waste disposal area for human-made contaminated materials (meth houses, e. g.).
  - Identify area for disposal of construction debris.
- Continue local commitment to promoting resource conservation through sound waste prevention, reuse, recycling, composting, and purchasing practices.
- Encourage local businesses and residents to explore and implement alternative energy techniques such as small wind turbines, solar collectors, and other energy saving devices.
- Promote energy conservation and consumption reduction through design techniques on new home and commercial construction sites (geothermal, bio-fuels, etc.)

Objective No. 6. Preserve open space and wildlife habitat and protect natural resources.

- Restrict or prohibit development on shoreland and flood plain areas, wetlands, and other natural features that serve important environmental functions.
- Develop and enforce development standards that are consistent with soil suitability, steep slopes and ground water sensitivity.
- Enforce development standards that are consistent with the Wetlands Conservation Act (WCA).
- Encourage the preservation and restoration of native vegetation in areas not used for agricultural purposes.

Objective No. 7. Work to provide recreational opportunities for county residents.

- Work cooperatively with other entities to identify potential trails.
- Encourage use of county, city and township parks.
- Maintain County parks.
- Require dedication of park or open space land, or cash in lieu of land, in conjunction with the subdivision of all properties.
- Identify and accept park or open space land with natural features and habitat qualities.
- Encourage developers to provide trails or sidewalks and access to such.

Objective No. 8. Encourage housing of various types for people of all economic levels in a manner that is consistent with county land use goals.

- Develop, within county government, an agency or office to address housing needs.
- Coordinate with the municipalities to conduct a thorough assessment of the county's future housing needs.

- Explore the establishment of housing programs (private, public, and private/public partnerships) that provide assistance for housing improvements.
- Establish programs that encourage life-cycle, affordable housing.
- Explore incentives for cluster or conservation development, which may include a density bonus or easing of other development restrictions.
- Identify and designate areas appropriate for higher density residential development.

Objective No. 9. Communicate information and issues to residents in a timely, regular manner and communicate with adjacent communities and counties.

- Continue publication of newsletters.
- Continually update the County web site.
- Create informational brochures that assist citizens in understanding County procedures.

Objective No. 10. Maintain a safe, cost-effective, efficient and environmentally sensitive transportation system.

Roads:

- Invest in and maintain the road system consistent with local and state design, safety, traffic flow, and maintenance characteristics.
- Coordinate with Mn/DOT to define a county roadway classification system that is tied to performance and will include design, safety, traffic flow and maintenance characteristics for each class of roadway.
- Periodically review the existing improvement schedule based on projected available funds, pavement life, and performance classification system to include the transportation needs of the agricultural industry, rural economic development goals, and tourists and scenic considerations.
- Continue to ensure county roads (non-state aid) are developed and maintained in accordance with performance classification system.
- Conduct public hearings to: Educate both decision-makers and the public on transportation needs, road design, investment, and maintenance standards. Receive comments for consideration in the county's investment priorities.
- Cooperate with municipalities, townships and Lower Sioux Mdewakantowan Indian community (Tribal Roads Department) on maintenance and investment decisions.
- Work with State agencies to meet regional and inter-regional access management goals in a manner that meets the needs of county residents and businesses.
- Create local access management goals for county roads that reflect county land use priorities.
- Emphasize maintenance of existing roadways over expansion needs.

Transit:

- Cooperate and coordinate with other governmental entities, including surrounding counties and the Lower Sioux Indian Reservation, to enable cross-jurisdictional transit travel.
- Encourage coordinated planning by non-profit and governmental para-transit agencies for vehicle acquisition and use, driver training, maintenance, and dispatching.
- Promote existing transit and para-transit in order to encourage use and gain recognition for existing transit options.

Air Transportation:

- Encourage development and use of rural airstrips for agricultural and business development purposes.
- Examine options to limit traffic nuisances that may occur from increased air traffic.

Railroad:

- Promote fully utilized, safe, and quiet freight and passenger rail services.
- Work with railroad properties to promote a safe, efficient and effective freight rail system that meets the needs of local producers.
- Develop ordinances to ensure proper setbacks and buffering between the railroad rights-of-way and non-compatible uses.
- Investigate future commuter rail transportation to/from the metropolitan area.

Trails:

- Develop and maintain recreational trail systems throughout the county.
- Support the creation of permanent non-motorized trails in the county and work with other local, Tribal, and State, agencies to create regional, non-motorized trail systems.
- Encourage new developments to create links to existing local and regional trail systems.
- Develop an ordinance to address ATV use.
- Explore development of dedicated ATV facilities.

Objective No. 11. Encourage development designs that minimize the need for new roadways.

- Where possible, coordinate transportation planning and system improvements with neighboring jurisdictions.
- Where desirable and safe, maintain existing gravel roads, thereby maintaining the rural character and reducing potential run-off.
- Develop priorities to improve the existing transportation system.

Objective No. 12. Work to provide tourism opportunities for residents and visitors to the county.

- Coordinate with adjacent counties for continuation of trail systems and joint benefits of shared tourism ventures.
- Encourage tourism in the Minnesota River corridor by supporting current trails and trail plans, adding bike trails and preserving existing bridges over Minnesota River for either automotive or pedestrian use.
- Coordinate with the Tribal Council to promote joint tourism efforts.
- Develop polices to encourage preservation of historic structures and sites.
- Make a concerted effort to market existing natural resources – hunting, camping, boating and hiking.
- Make a concerted effort to market Inventor's Congress, Walnut Grove's Laura Ingalls Wilder site, etc.

Objective No. 13. Work to promote economic development opportunities in the county.

- Develop a plan that identifies and distributes tax free development zones.
- After zoning ordinance amendments are completed, identify and market appropriate locations for commercial and residential development in the county.
  - Fund feasibility studies to assist in identifying appropriate areas. Feasibility studies should consider

existing infrastructure and need for additional infrastructure.
- Encourage development of eco-industrial areas.
- Encourage small business development.
- Partner with neighboring counties to encourage regional economic development.

Objective No. 14. Support the efforts of the private and public sectors to develop renewable energy production as a viable business within the county.

- Continue to participate and play a leading role in organizations, associations, and agencies that are coordinating to develop the county's potential as a producer and exporter of renewable energy.
- Support local entrepreneurs with plans and proposals to develop the renewable energy-producing capacity of the county. (e.g. if after reviewing plans and proposals, worthy entrepreneurs are identified, offer support in the ways of: a) access to financing, b) land acquisition, c) assistance in the development approval process, d) assistance in the identification of customers, etc .)

Objective No. 15. Support the efforts of the private and public sectors to ensure Redwood County's energy efficiency and independence.

- Make revisions to the county's ordinance to encourage builders and property owners to site homes and buildings in a way that will maximize the potential use of solar and wind energy. The county should also use ordinances to protect access to direct sunlight for solar energy for building sites.
- Amend the county's ordinance to include installation standards for solar electric, solar water heating.
- Amend the county's ordinance to provide a means for building owners to protect access to sunlight for solar energy purposes.
- Amend the county's ordinance to ensure that in the issuance of building permits, it will not discriminate against well-designed buildings that make active or passive use of solar energy.
- Evaluate the use of solar energy and natural light sources in the design of new county facilities and during the renovation of existing facilities.
- Encourage municipalities and townships in the county to follow the county's lead in managing land and approving developments in ways that bring about the optimum long-term economic and environmental benefits that stem from the efficient use of energy.
- Assist municipalities in the county in a review of their local policies, ordinances, approval processes, etc. to identify any regulatory barriers to the installation of solar roof technology.
- Create local regulatory or programmatic initiatives to encourage installation of solar roofs in both the public and private realms.
- Promote and support efforts to reward private property owners who install energy efficient facilities in their homes and buildings, such as solar, wind, geothermal, bio-fuel heat, etc.

Objective No. 16. Provide adequate community facilities.

- Assess and quantify how future population increases will impact the delivery of county services.

- Fund a facilities study to analyze county facilities (program needs, space needs, physical condition, maintenance costs, etc.) and how to best improve them.

Objective No. 17. Develop regulations to require radon mitigation in new construction.

- Implement a development review process for new construction (residences and institutional uses).
- Include radon testing as an element in the development review process.
- Include radon mitigation mechanicals and apparatus as required elements in the site development approval process.
- Contract with a certified radon mitigation specialist to inspect plans and ensure that radon mitigation measures are correctly installed.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