

Clearwater County Resource Management Plan



July 2008

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Acknowledgements

Clearwater County Land Department would like to thank all of those who have supported the development of this Natural Resource Management Plan. This product is the first step towards providing a vision of the future of the County's land resources and direction for departmental activities to achieve that vision,

In addition we wish to thank the County leadership, Headwaters Regional Development Commission, and the Northwest Minnesota Foundation for their support in making this possible.

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Introduction

The management of Clearwater County forest resources has undergone a major transformation in just a few short years. While the traditional emphasis has been on timber production, the task is now much broader, with a greater number of stakeholders and interests to be addressed, a greater number of challenges to face, and an even greater number of opportunities to capture. Clearwater County has acknowledged that this is the right time to take a much broader, more comprehensive view of managing its 90,000 acres of county lands. This report documents the results of the planning process completed in June, 2008 to address this objective.

The purpose of the Forest Management Plan for the Clearwater County Land Department is to establish a framework for the department's resource management activities. The planning process was designed to meet the following objectives:

- Describe the existing situation of the County's land resources
- Provide a vision of a future condition of the County's land resources and direction for departmental activities to achieve that vision
- Identify and address the most important strategic resource management issues faced by the County
- Create a plan that is consistent with the County's Sustainable Management Procedures, and meets the requirements for a Long Term Forest Management Plan outlined in those procedures

This natural resources plan provides guidance for county management activities over the next 20 years. The planning process included the following steps:

- *Description of Existing System.* The HRDC worked closely with the County Land Department to collect the information necessary for the development of the plan.
- *Identification of Priority Strategic Issues.* Working with County staff, and listening carefully to the many constituent groups, priority strategic issues were identified.
- *Assessment of Resources.* A general assessment of the condition of the County's land resources identified

This natural resources plan provides guidance for county management activities over the next 20 years.

Participation by concerned stakeholders was an important component of this planning process.

overall trends, and a more detailed assessment for each planning area identified key strategic issues.

- *Development of Policy and Strategy Framework.* A vision for County lands was identified, as were long-term goals and policies that will guide implementation. The framework also dealt with the strategic issues identified in the assessments.

Participation by concerned stakeholders was an important component of this planning process. Four different methods were used for involving stakeholders in the process.

- *Staff consultations* – Conversations with County staff were held throughout the process.
- *Individual interviews/focus groups* – Staff met with groups one-on-one or as small groups, whichever was most appropriate.
- *Open Public Meetings* – Two public meetings were held as part of this process.
- *Multi-Agency Involvement* – At appropriate times during the process, the advice of other local, state and federal natural resource management agencies was sought.

The result of this effort is a plan that set a strong vision for a more diverse forest that can accommodate multiple uses, while addressing the issues of a broad range of stakeholders.

Existing Situation/Planning Environment

This section covers the existing situation and planning environment for tax-forfeited land in Clearwater County, and provides context for the remainder of the plan. The first part is a description of the socio-economic context and assessment for the County, followed by a brief introduction of the forest resources.

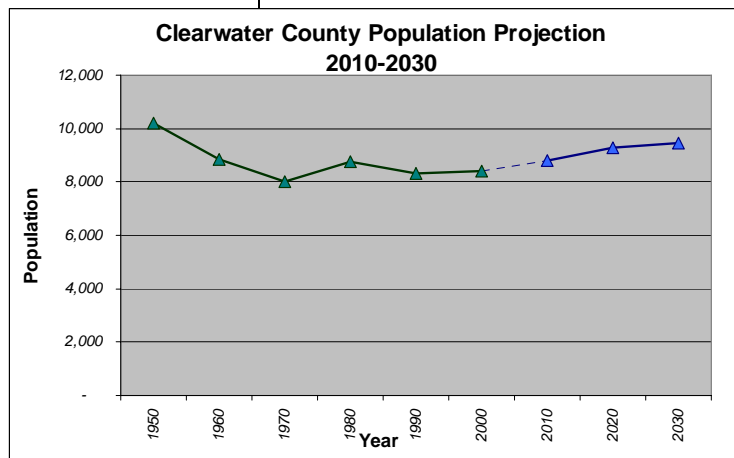
Socio-Economic Context and Assessment

General Demographics

According to the 2000 Census, the population of Clearwater County increased from 8,309 residents in 1990 to 8,423 residents in 2000, or 1.4 percent. The Minnesota State Demographic Center has the following population projections for Clearwater County.

- 2010 – 8,790
- 2020 – 9,270
- 2030 – 9,470

The population of Clearwater County increased from 8,309 residents in 1990 to 8,423 residents in 2000, or 1.4 percent.

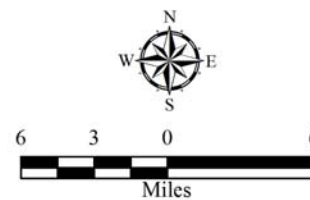
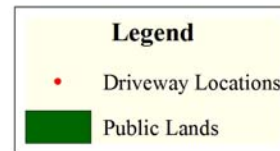
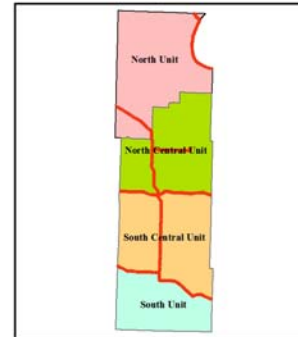
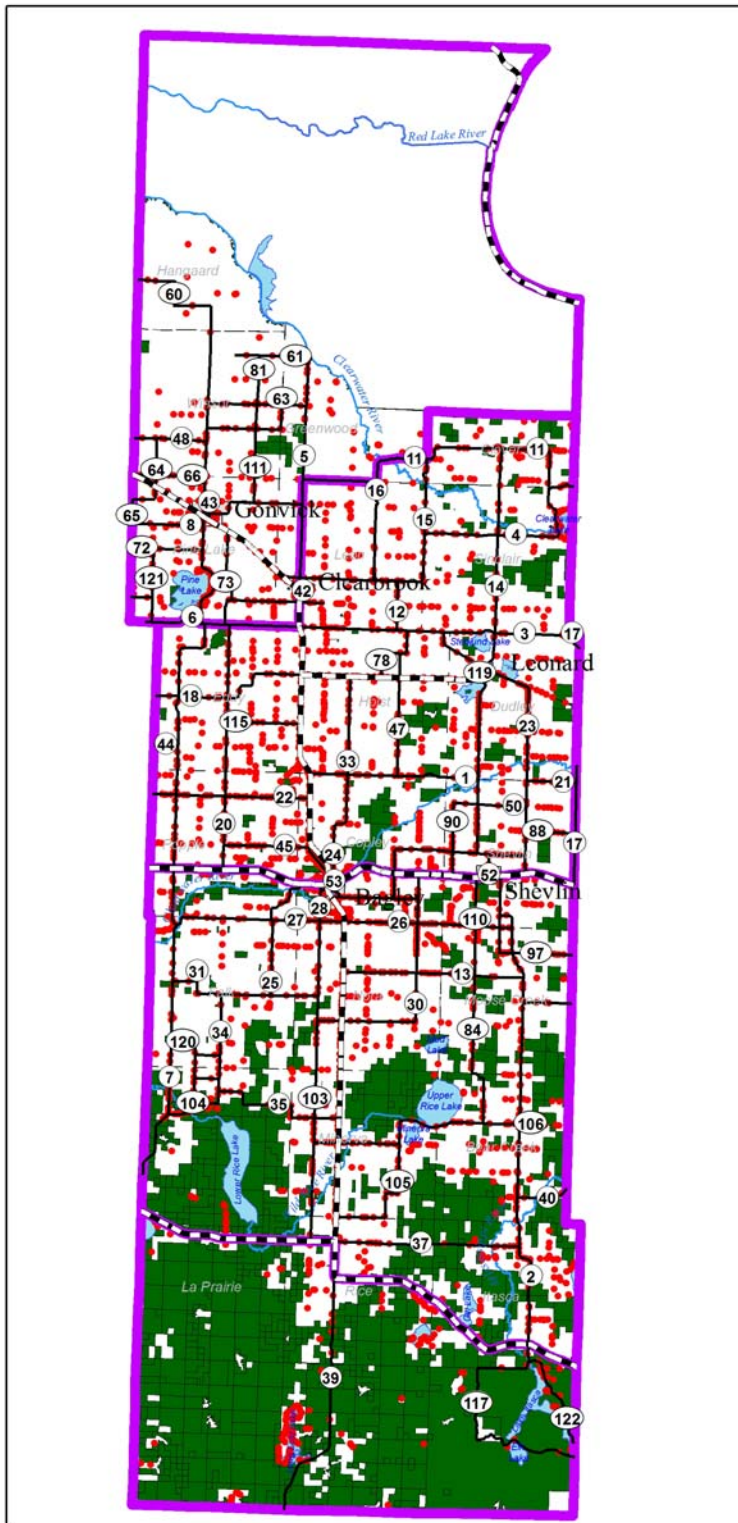


The chart at left illustrates a population projection for Clearwater County.

The map on the following page shows the population distribution for Clearwater County. The population is fairly evenly distributed throughout the County, with the exception of the southern portion, which is predominantly county

land. Areas with relatively higher density include homes around Long Lost Lake, Bagley, and Gonvick.

Clearwater County Population Distribution



Land Cover/Use

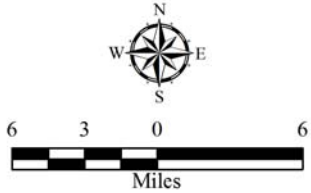
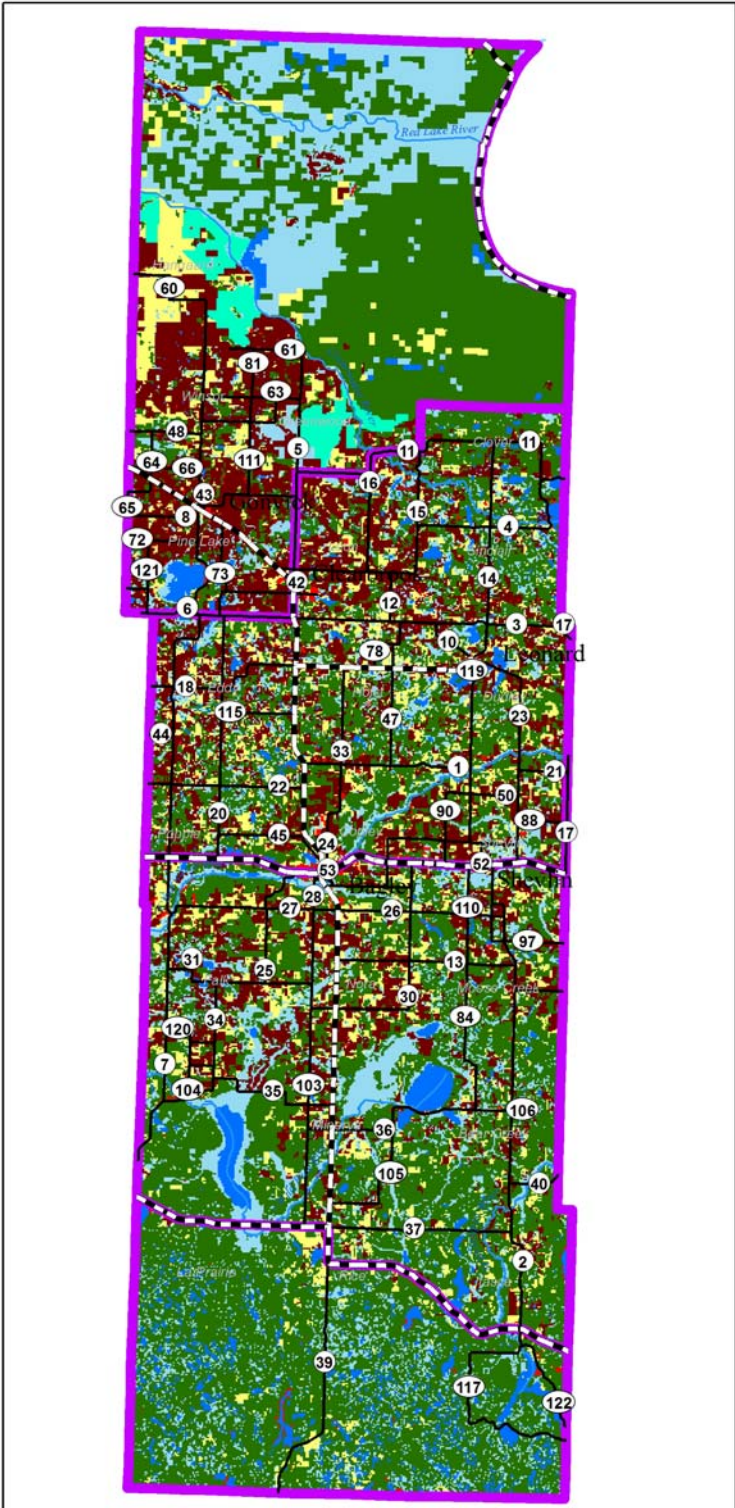
Clearwater County is rural in nature. The maps on the following three pages show land cover, land use, and County administered forest lands, respectively, in Clearwater County.

The map on the following page shows that the southern part of the County is primarily covered by forest land, and a good portion of northern Clearwater County is covered by agricultural land. The land cover in the middle has a mix of agriculture and forest land.

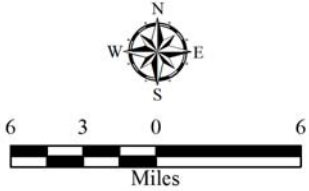
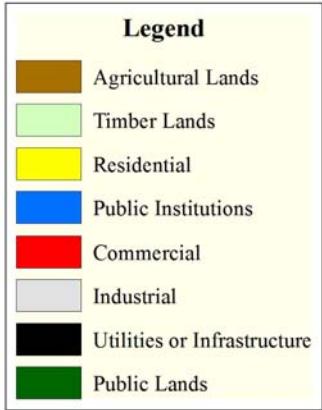
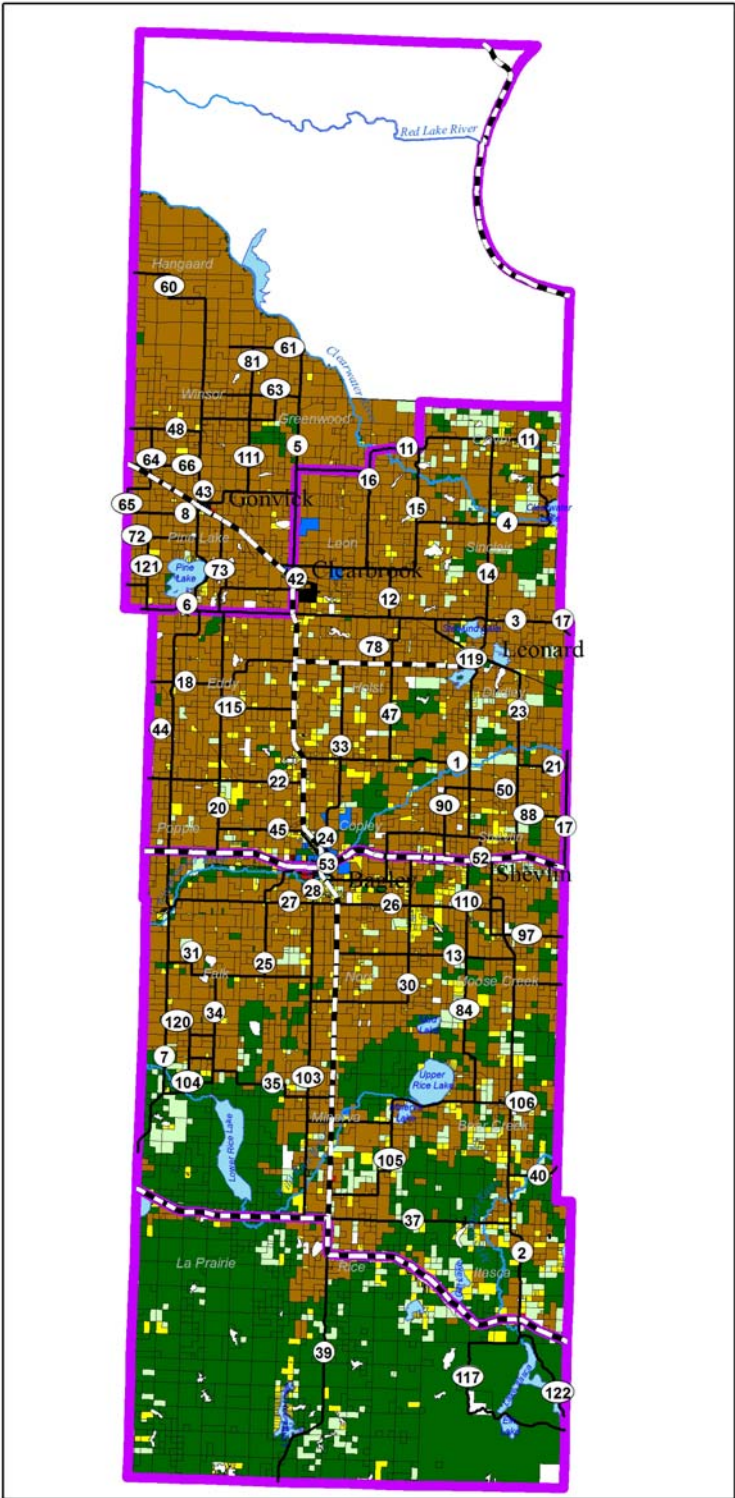
Page 8 shows that the predominant land use in Clearwater County is Agriculture. The second biggest land use category is Public Lands, and is mostly concentrated in the southern portion of the County. There are also residential parcels spread throughout the County.

The map on page 9 shows commercial versus non-commercial stands on County managed tax-forfeit land. The commercial stands are forested areas that are available for logging, while the non-commercial stands are composed of wetlands, grasslands, shrubs, or trees that are not suitable for logging.

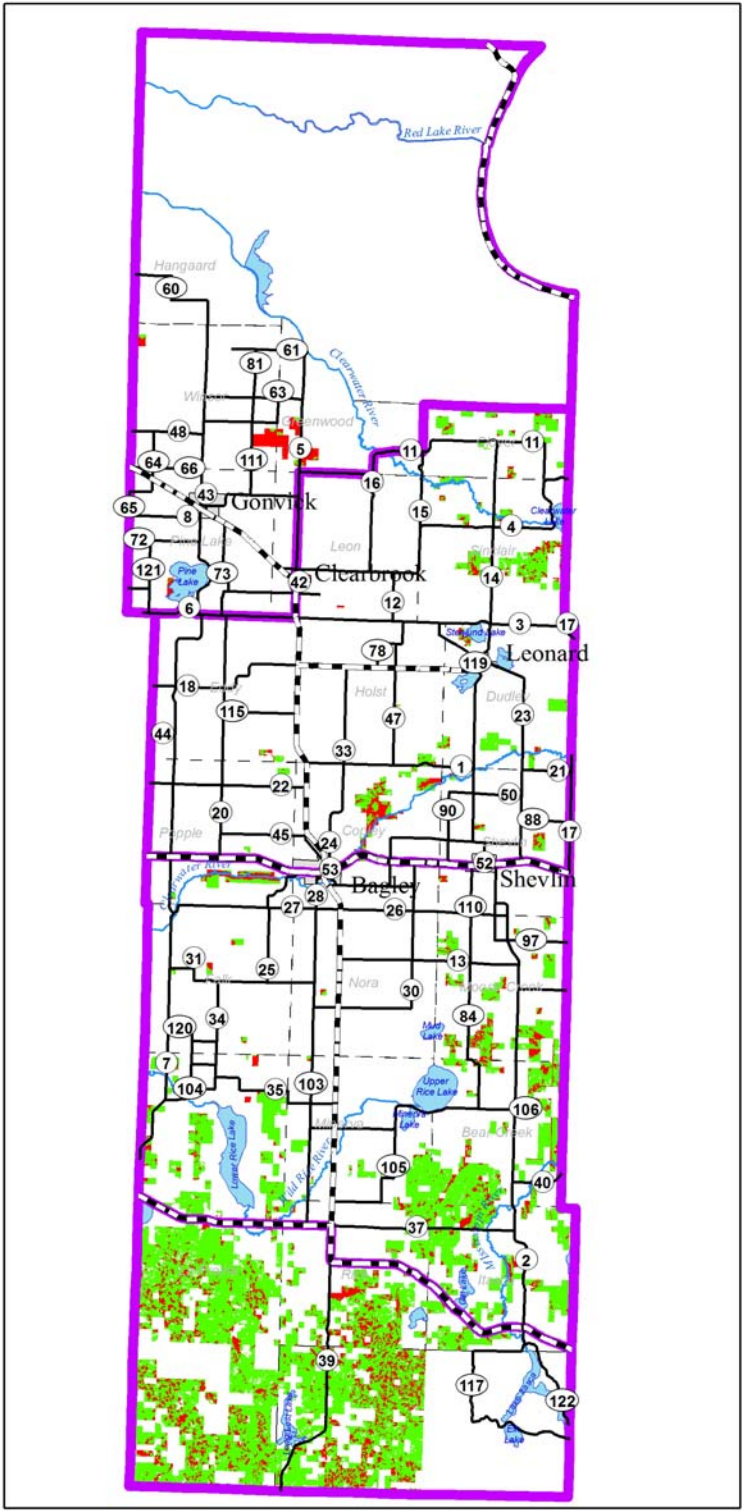
Clearwater County Land Cover



Clearwater County Land Use



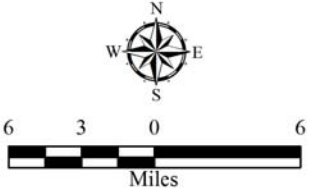
Clearwater County County Administered Lands



Legend

Forest Stands on County Lands

- Commercial Stands
- Non-commercial Stands



Land Ownership

The distribution of land ownership in Clearwater County is split between private land owners, the County, the State of Minnesota, and the Federal Government. Private land owners account for over half (56.4 percent) of the land ownership in the County. The following table shows the breakdown of ownership:

| Land Ownership in Clearwater County | | |
|-------------------------------------|----------------|-------------|
| Manager | Total Acres | Percent |
| Private | 360,636 | 56.4 |
| County | 95,507 | 14.9 |
| State | 54,432 | 8.5 |
| United States | 129,308 | 20.2 |
| Total | 639,883 | 100% |

Timber sales in 2006 reached \$1,159,743.

Benefits of the Forest

Direct

Clearwater County generates revenue from County tax forfeited land in a variety of ways. An overwhelming majority of the revenue is based on Timber sales to area loggers. Timber sales in 2006 reached \$1,159,743, which amounted to 97 percent of the total revenue generated for that year. The following table shows revenues generated from 2003 to 2007.

| Revenue generated from Clearwater County tax forfeited land | | | | | |
|---|------------------|--------------------|------------------|------------------|------------------|
| | 2007 | 2006 | 2005 | 2004 | 2003 |
| Licenses/Permits | 510 | 675 | 399 | 512 | 349 |
| Leases | 10,707 | 12,514 | 10,774 | 13,867 | 10,707 |
| Timber Sales | 774,878 | 1,159,743 | 868,834 | 614,583 | 607,314 |
| Extensions | 1,003 | 7,323 | 11,362 | 2,272 | 7,483 |
| Land Sales | 3,000 | 15,251 | | 25,750 | 8,900 |
| Easements | 62,585 | | | 320 | 81 |
| Gravel | 260 | 609 | 52,753 | 1,549 | 9,927 |
| Patronage Credit | 313 | | 278 | 253 | 239 |
| Sale of County Property | | 644 | 9,277 | 37,000 | 10,112 |
| Miscellaneous | 15 | 45 | 35 | 240 | |
| Refunds/Reimbursements | 12 | 1,203 | 127 | | |
| Charges for Services | | | 3,513 | | |
| Non Governmental Grants | 6,250 | | | | |
| Total | \$859,533 | \$1,198,007 | \$957,352 | \$696,346 | \$655,112 |

Minnesota State Statute 282.08 allows counties some flexibility in apportioning revenue generated from the net proceeds from the sale or rental of tax forfeited land. The following table shows the apportionment of revenue, minus expenses to the Land Department, that Clearwater County has adopted:

| Clearwater County Apportionment of revenue generated from tax forfeited land | | | | | |
|--|----------------|------------------|------------------|------------------|------------------|
| | 2007 | 2006 | 2005 | 2004 | 2003 |
| Timber Development | 191,473 | 276,483 | 220,000 | 128,055 | 136,090 |
| General Revenue | 178,708 | 184,322 | 146,667 | 85,370 | 90,726 |
| County Parks* | 0 | 184,322 | 146,667 | 85,370 | 90,726 |
| Schools | 178,708 | 184,322 | 146,667 | 85,370 | 90,726 |
| Townships/Cities | 89,354 | 92,161 | 73,334 | 42,685 | 45,363 |
| Total | 638,243 | \$921,610 | \$733,335 | \$426,850 | \$453,631 |

* The County opted not to apportion any revenues to the parks fund in 2007.

The following table identifies the actual apportionment of revenue from 2003 to 2006:

| Clearwater County Apportionment Breakdown | |
|---|---------|
| Recipient | Percent |
| Timber Development | 30% |
| General Revenue | 20% |
| County Parks | 20% |
| Schools | 20% |
| Townships/Cities | 10% |

Indirect

It is largely recognized that social benefits of the forest are important. Current recreational activities in the forest include hunting, ATV and snowmobile use, hiking and walking, etc. Open space for wildlife viewing is another social benefit. These are all activities that will remain important to citizens of Clearwater County in the future. There are also some traditional forest uses that include maple sugaring, berry picking and making pine boughs.

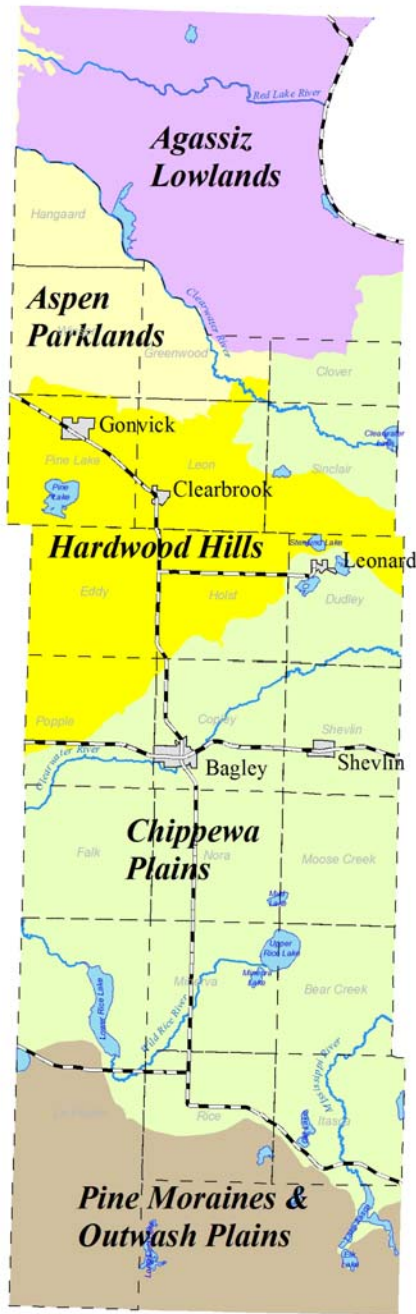
In addition to the social benefits, there are several other environmental benefits that forest land provides. Clearwater County is home to a variety of wildlife, including deer, black bear, grey wolf, eagles, great grey owls, northern goshawk, and many other species of animals. Other amenities include water quality protection by filtering run off and slowing downstream movement of water and air quality

enhancement through carbon sequestration and oxygen emission.

Future economic, political and social trends

The economy of Clearwater County has historically been dependent upon natural resources, and to a large extent, it remains natural resource-dependent today. The new economy, however, is changing that, with a new focus on knowledge, skills, and technology. Place is still very important, but for different reasons. Employers and employees can locate wherever they choose because of the continuing advances in technology. Quality of place includes things like education, recreational opportunities, access to healthcare, etc. In response to the quality of life framework of the new economy, Clearwater County forests are increasingly being used in ways that take advantage of their recreational opportunities.

In the forest industry, the new economy has manifested itself in the use of more efficient, safer harvesting equipment, more technologically advanced processing equipment, and fewer but more highly educated workers. The wood products industry will continue to play an important role in the County, but the total numbers of logging operations in the County will likely decrease over time as smaller operations are forced out of the market in favor of larger more efficient operations.



Forest Description

Landscape/Ecosystems

The Minnesota Department of Natural Resources and the U.S. Forest Service have developed an Ecological Classification System (ECS) for ecological mapping and landscape classification in Minnesota following the National Hierarchical Framework of Ecological Units. Ecological land classifications are used to identify, describe, and map progressively smaller areas of land with increasingly uniform ecological features. The system uses associations of biotic and environmental factors, including climate, geology, topography, soils, hydrology, and vegetation. This classification system forms the basis on which the Land Department makes decisions regarding the lands suitability for long term maintenance of various tree species.

Clearwater County includes four Subsections: Chippewa Plains, Hardwood Hills, Aspen Parklands, and Pine Moraines and Outwash Plains.

Chippewa Plains

The Mississippi River flows through a large part of this subsection and has its headwaters at Lake Itasca. Wetlands exist throughout the area. Before being settled by people of European descent, this area was heavily timbered with a diverse mixture of deciduous and coniferous trees. The exceptional mix of forests and lakes in this subsection provides prime habitats for numerous featured species such as great gray owl and the northern goshawk, which primarily inhabits northern hardwood forests and mixed hardwood-coniferous forests of northern and northeastern Minnesota.

Hardwood Hills

This subsection of a fascinating, wetland-rich transition zone between prairies and forest intermingled with hundreds of lakes. About 15 percent of the subsection is forested. Many of the wetlands have been drained, but a large amount of potholes remain and provide habitat for waterfowl and shorebirds.

Aspen Parklands

The subsection is the southern end of a much larger province that stretches north and west into Canada and serves as the transition zone between the prairie and forest areas. It also contains large complexes of wetlands, aspen and brush prairie

with dry prairie on beach ridges. Wild rice cultivation is common in the eastern edge of this area.

Pine Moraines and Outwash Plains

The Pine Moraines and Outwash Plains Subsection, named for its mix of end moraines and outwash and till plains, is a resource-rich, heavily forested area. The subsection contains sections of the Mississippi River, along with hundreds of lakes, including Leech, Itasca, Ten Mile, Upper and Lower Whitefish, and Gull. Kettle lakes and wetlands are common on the outwash plains. Before this area was settled by people of European descent, forests of jack pine mixed with northern pin oak were most common on outwash plains, and aspen-birch and pine forests were the most common on end moraines.

Rare and endangered Species

Clearwater County is in the process of having a complete biological survey completed for the County and when that is complete it will integrate that into its Resource Management Plan. Currently the County relies on the MN Department of Natural Resources Natural Heritage Database which lists the locations of known occurrences, and its own procedures (LD-PS4 Conservation Areas).

| Stand Type | Acres | Percent |
|-----------------------|--------------|----------------|
| Ash | 996 | 1.10% |
| Aspen | 42066 | 46.44% |
| Balm of Gilliad | 473 | 0.52% |
| Balsam Fir | 891 | 0.98% |
| Birch | 4093 | 4.52% |
| Black Spruce, Lowland | 931 | 1.03% |
| Black Spruce, Upland | 12 | 0.01% |
| Cotton Wood | 87 | 0.10% |
| Jack Pine | 1533 | 1.69% |
| Lowland Hardwoods | 694 | 0.77% |
| Northern Hardwoods | 7774 | 8.58% |
| Norway/Red Pine | 5230 | 5.77% |
| Oak | 2325 | 2.57% |
| Scotch Pine | 3 | 0.00% |
| Stagnant Spruce | 28 | 0.03% |
| Stagnant Tamarack | 27 | 0.03% |
| Tamarack | 1530 | 1.69% |
| White Cedar | 225 | 0.25% |
| White Pine | 855 | 0.94% |
| White Spruce | 1078 | 1.19% |
| Non Commercial | 16205 | 17.89% |
| Unknown | 3523 | 3.89% |
| Grand Total | 90577 | 100.00% |

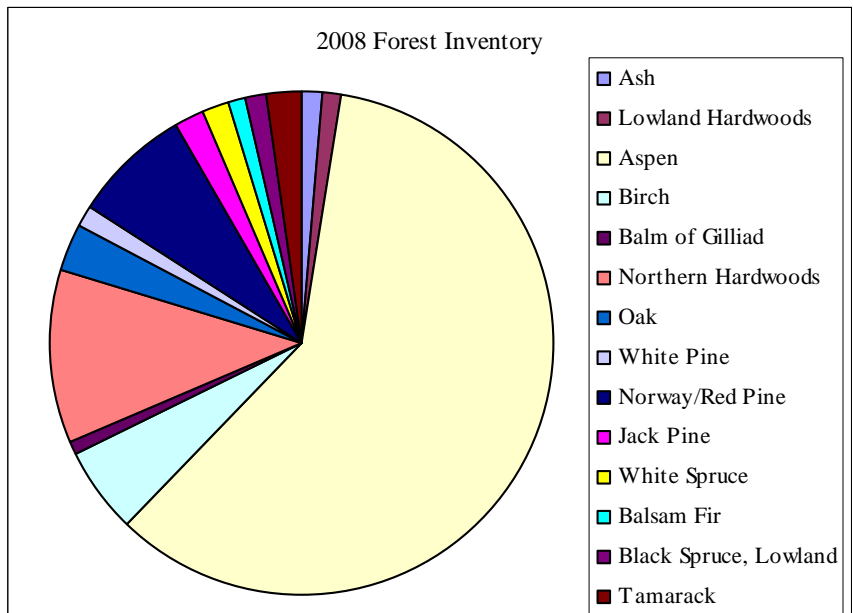
Forest Inventory

Clearwater County manages 90,577 acres of forest land. About 90 percent of the forest is located in the southern half of the County. The adjacent table provides the forest inventory on County managed lands. The map on page 17 shows the distribution of species type on County land.

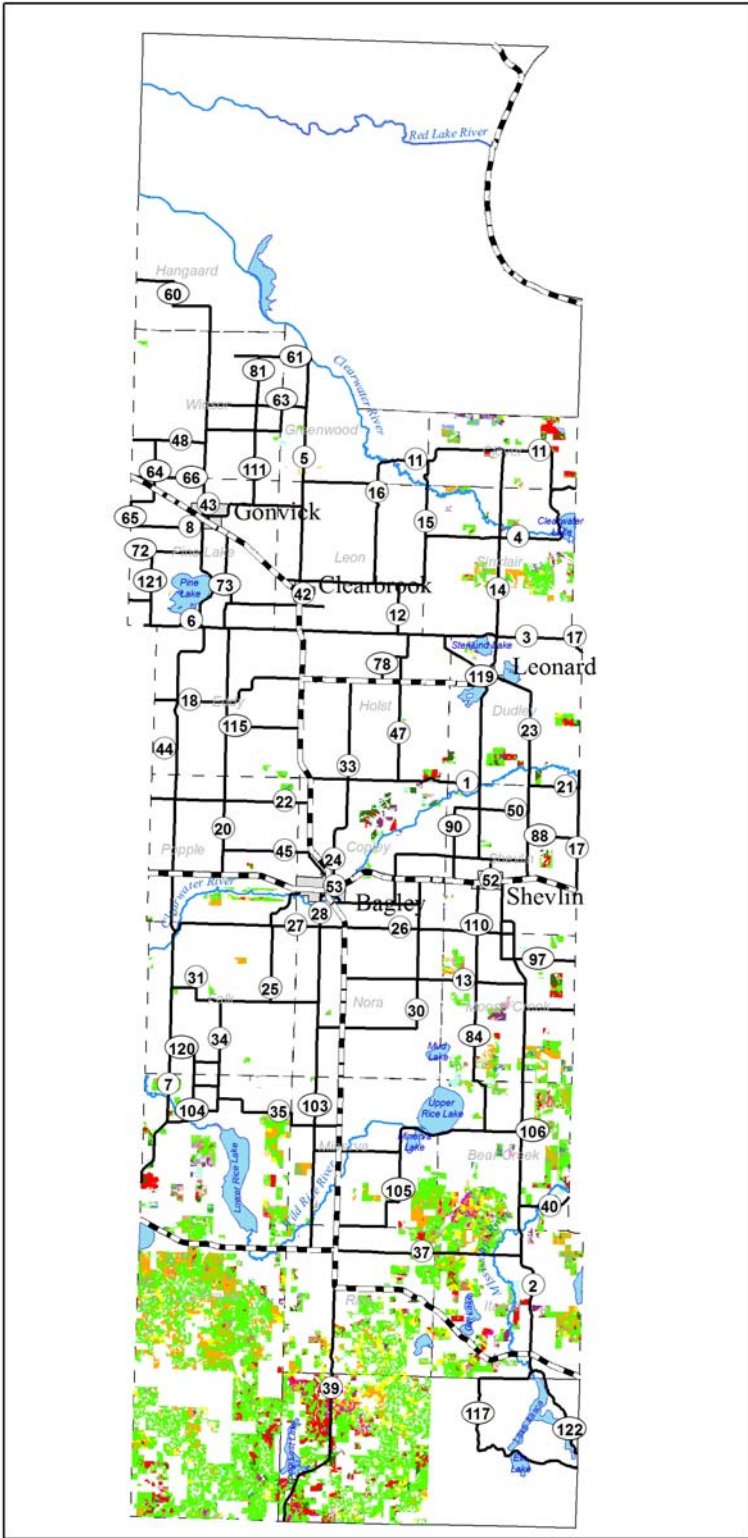
Clearwater County manages 90,577 acres of forest land. About 90 percent of the forest is located in the southern half of the County.

The existing composition of the forest is largely aspen, with a mix of northern hardwoods, pine and birch species. Major Components of the forest on county lands are:

- Aspen - 46%
- Hardwoods - 13%
- Pines - 8%
- Birch - 5%
- Non-commercial- indicating wetlands, shrubs, or open prairie - 18%



Clearwater County County Forest Stands



Inventory and Assessment by Planning Area

Clearwater County has been broken down into four separate units for planning purposes, based on a combination of the location of the biophysical ecology regions and man-made boundaries such as the County line and trunk highways. The next section will provide a complete inventory and assessment for each of these areas:

- South Planning Unit
- South Central Planning Unit
- North Central Planning Unit
- North Planning Unit



87% of the land in this unit is public.

| Stand Type | Acres | Percent |
|-----------------------|--------------|----------------|
| Ash | 188 | 0.36% |
| Aspen | 27855 | 52.67% |
| Balm of Gilliad | 57 | 0.11% |
| Balsam Fir | 203 | 0.38% |
| Birch | 2983 | 5.64% |
| Black Spruce, Lowland | 147 | 0.28% |
| Black Spruce, Upland | 3 | 0.00% |
| Cotton Wood | 87 | 0.16% |
| Jack Pine | 541 | 1.02% |
| Lowland Hardwoods | 104 | 0.20% |
| Northern Hardwoods | 4324 | 8.18% |
| Norway/Red Pine | 2947 | 5.57% |
| Oak | 1111 | 2.10% |
| Scotch Pine | 3 | 0.01% |
| Stagnant Spruce | 6 | 0.01% |
| Stagnant Tamarack | 12 | 0.02% |
| Tamarack | 259 | 0.49% |
| White Cedar | 0 | 0.00% |
| White Pine | 525 | 0.99% |
| White Spruce | 412 | 0.78% |
| Non Commercial | 8671 | 16.40% |
| Unknown | 2443 | 4.62% |
| Grand Total | 52884 | 100.00% |

South Planning Unit

The south planning unit is bordered on the north by TH 200 and the County boundary to the south. This unit is the least populated area in the County with development scattered; one exception would be the concentration of residential development around Long Lost Lake; 87% of the land in this unit is public.

Inventory.

The area contains 52,884 acres of county tax forest land; 58% of the County's tax-forfeited land. Of that, approximately:

- 53% is aspen;
- 13% are softwoods of various types;
- and 11% are hardwoods.

Fully two-thirds of the tax-forfeited aspen acreage is found in this area.

While there are a handful of scattered parcels in the north-central part of this planning area, much of the tax-forfeited

The substantial quantity and large consolidated tracts of public land in this planning unit present numerous opportunities, and a handful of challenges.

acreage consists of large blocks of land. There are three somewhat distinct tracts – that area west of Long Lost Lake, another in the northwest quadrant of the area (south of Lower Rice Lake), and a third from Long Lost Lake to Itasca State Park.

This planning unit contains well over half of the 40+ aspen on County tax-forfeited lands.

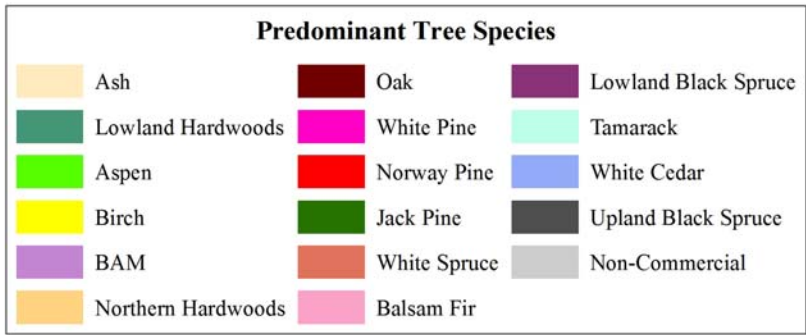
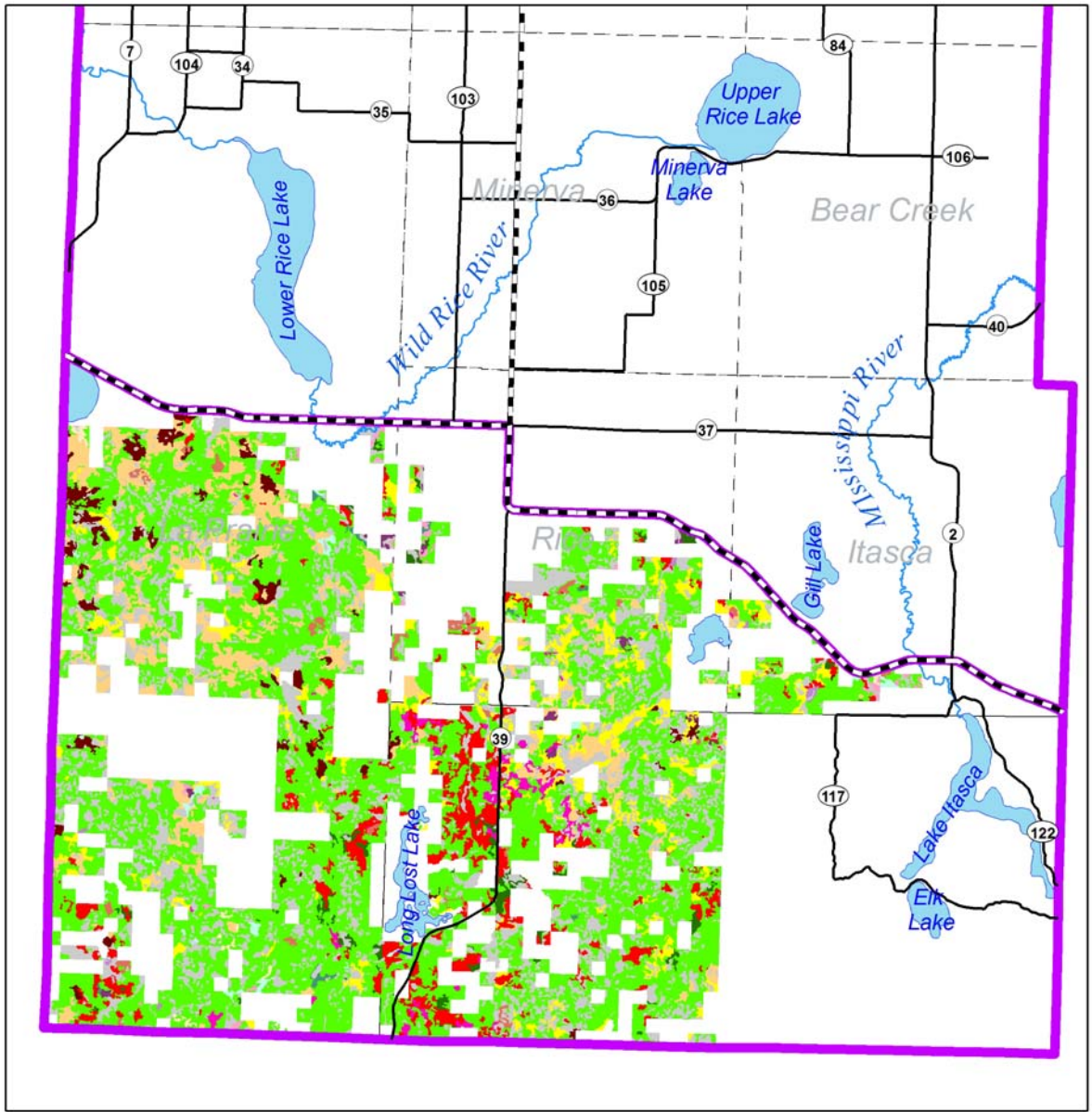
Opportunities, Challenges and Issues.

The substantial quantity and large consolidated tracts of public land in this planning unit present numerous opportunities, and a handful of challenges, to the County. Following is a brief discussion of the principal ones:

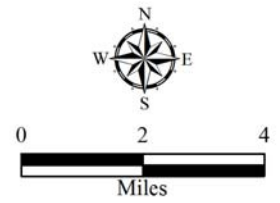
- *8,000 acres Of 40+ aspen.* While the County has effectively reduced the amount of over-mature aspen over the last decade, there is still a significant amount. This creates an opportunity to support the local timber industry, and to also undertake activities to address the County’s goal of increasing species and age-class diversity.
- *Three (3) large public land tracts provide management opportunity.* The consolidated tracts improve the efficiency of land management activities, and also minimizes potential conflicts between different uses.
- *Opportunity to expand pine presence in Long Lost Lake area.* The existing forest cover near Long Lost Lake suggests that this area could support an expansion of the pine resource.
- *Principal area for expanding recreation activities, trails.* Trail development requires large contiguous blocks of public land and a diverse landscape. This planning unit provides both.
- *Need to prevent trail/wildlife/timber conflicts.* While this planning unit provides numerous opportunities for multiple use management, care will need to be taken to minimize potential conflicts.
- *In the northwest quadrant there is a possible opportunity for hardwood expansion.* The existing forest cover in the northwest quadrant of this planning area suggests that it could support an expansion of hardwoods.
- *Need to be sensitive to traditional use areas.* Bough-cutting, berry picking and sugaring are all activities important to residents in the general area. Management

activities could enhance these activities, but also could detract from their practice if not conducted in appropriate ways.

- *Opportunity to enhance wildlife habitat.* The large tract of land provides county land managers with opportunities to enhance wildlife habitat for selected species.



South Planning Unit



South Central Planning Unit

The south central planning unit is bordered on the south by TH 200 and US Hwy. 2 on the north. Much of the land in the south part of this area is forested, while increasing agricultural use is seen in the northern part of the planning unit. The unit contains three large contiguous blocks of public land. Only one of those substantial tracts consists mostly of county land, and that tract is located south of Upper Rice Lake; the remainder of county lands are scattered on the east and west boundaries of the county.



This area contains 27,663 acres of county tax forest land.

Inventory

This area contains 27,663 acres of county tax forest land. Of that, approximately:

- 42% is aspen;
- 23% are softwoods of various types;
- and 17% are hardwoods.

This planning unit contains the second-largest quantity of over-mature aspen, with approximately 3,000 acres over 40 years old.

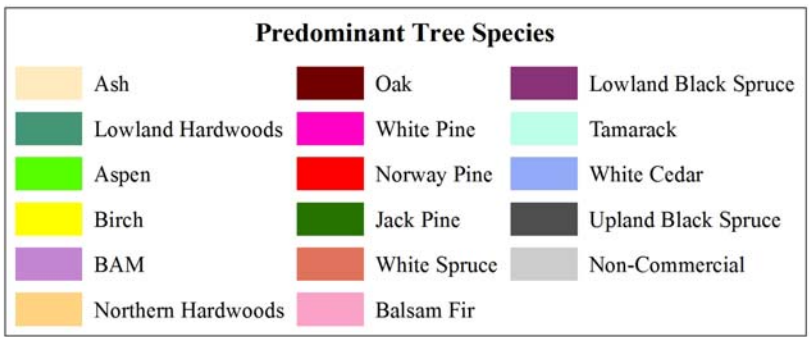
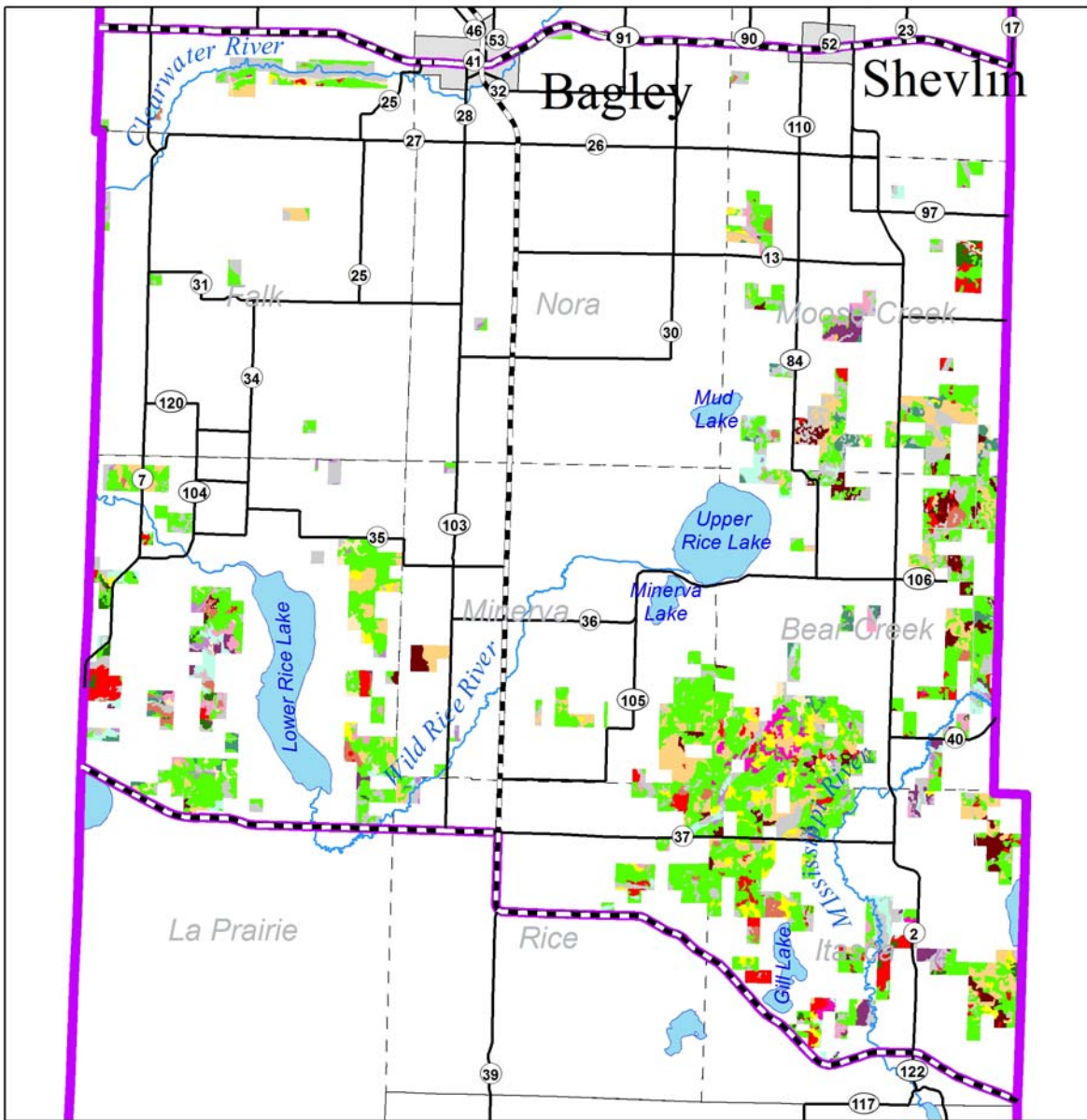
| Stand Type | Acres | Percent |
|-----------------------|--------------|----------------|
| Ash | 484 | 1.75% |
| Aspen | 11697 | 42.28% |
| Balm of Gilliad | 313 | 1.13% |
| Balsam Fir | 610 | 2.21% |
| Birch | 960 | 3.47% |
| Black Spruce, Lowland | 472 | 1.71% |
| Black Spruce, Upland | 0 | 0.00% |
| Cotton Wood | 0 | 0.00% |
| Jack Pine | 351 | 1.27% |
| Lowland Hardwoods | 525 | 1.90% |
| Northern Hardwoods | 3035 | 10.97% |
| Norway/Red Pine | 1377 | 4.98% |
| Oak | 1017 | 3.68% |
| Scotch Pine | 0 | 0.00% |
| Stagnant Spruce | 2 | 0.01% |
| Stagnant Tamarack | 5 | 0.02% |
| Tamarack | 921 | 3.33% |
| White Cedar | 0 | 0.00% |
| White Pine | 307 | 1.11% |
| White Spruce | 574 | 2.08% |
| Non Commercial | 4196 | 15.17% |
| Unknown | 815 | 2.95% |
| Grand Total | 27663 | 100.00% |

Opportunities, Challenges and Issues. The scattered ownership pattern provides a different set of opportunities and challenges for Clearwater County than what exists in the South Planning Area. Following is a brief listing and discussion of each.

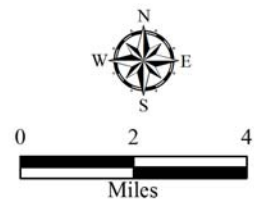
- *Access to isolated county lands.* While the County has access to these parcels for management activities, the

public has little opportunity to access isolated lands for recreational pursuits.

- *<3,000 acres of 40+ aspen.* As in the South Planning Unit, this quantity of older aspen creates an opportunity to support the local timber industry, and to also undertake activities to address the County's goal of increasing species and age-class diversity.
- *Opportunity for hardwood expansion.* The existing forest cover east and north of Upper Rice Lake suggests that it could support an expansion of hardwoods.
- *Opportunity for trail connector.* There has been some discussion among user groups about the desire for a north-south trail connection. County lands on the eastern part of this planning area could serve to help establish that connector route.
- *DNR/County Land Exchange.* Scattered parcels are more difficult to manage. There may be opportunities to enter into land exchange agreements with DNR that would allow a consolidation of ownership.
- *Opportunity for softwood expansion.* Forest cover on the one major block of public land south of Upper Rice Lake suggests that an expansion of the pine resource might be accomplished.



**South Central
Planning Unit**



The scattered ownership pattern, the different species mix and the different ecosystem suggest opportunities and challenges that are very different from those presented in the two planning areas to the south.

North Central Planning Unit

The north central planning unit is bordered on the south by TH 2, and extends north to the northern twp. boundaries of Eddy, Leon, and Clover. This unit is split between two ecological subsections and this is reflected by development patterns in this area of the County. The Hardwood Hills portion of this unit is dominated by development that is agricultural in nature and the Chippewa Plains portion trends toward a larger mix of forest cover within smaller areas cleared for agriculture. The County's lands are scattered throughout the area, but a significant majority are located in the Chippewa Plains portion of the unit.



Inventory

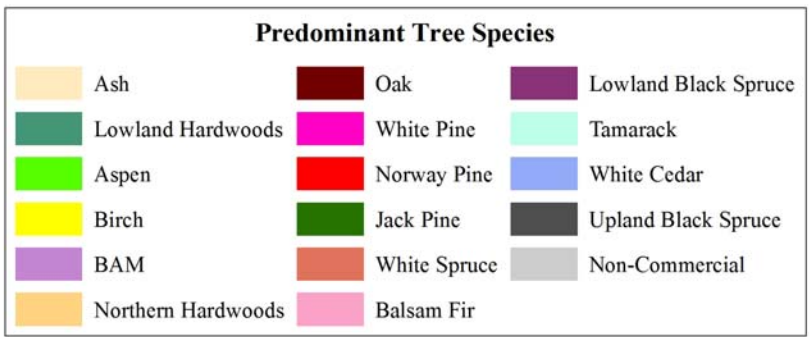
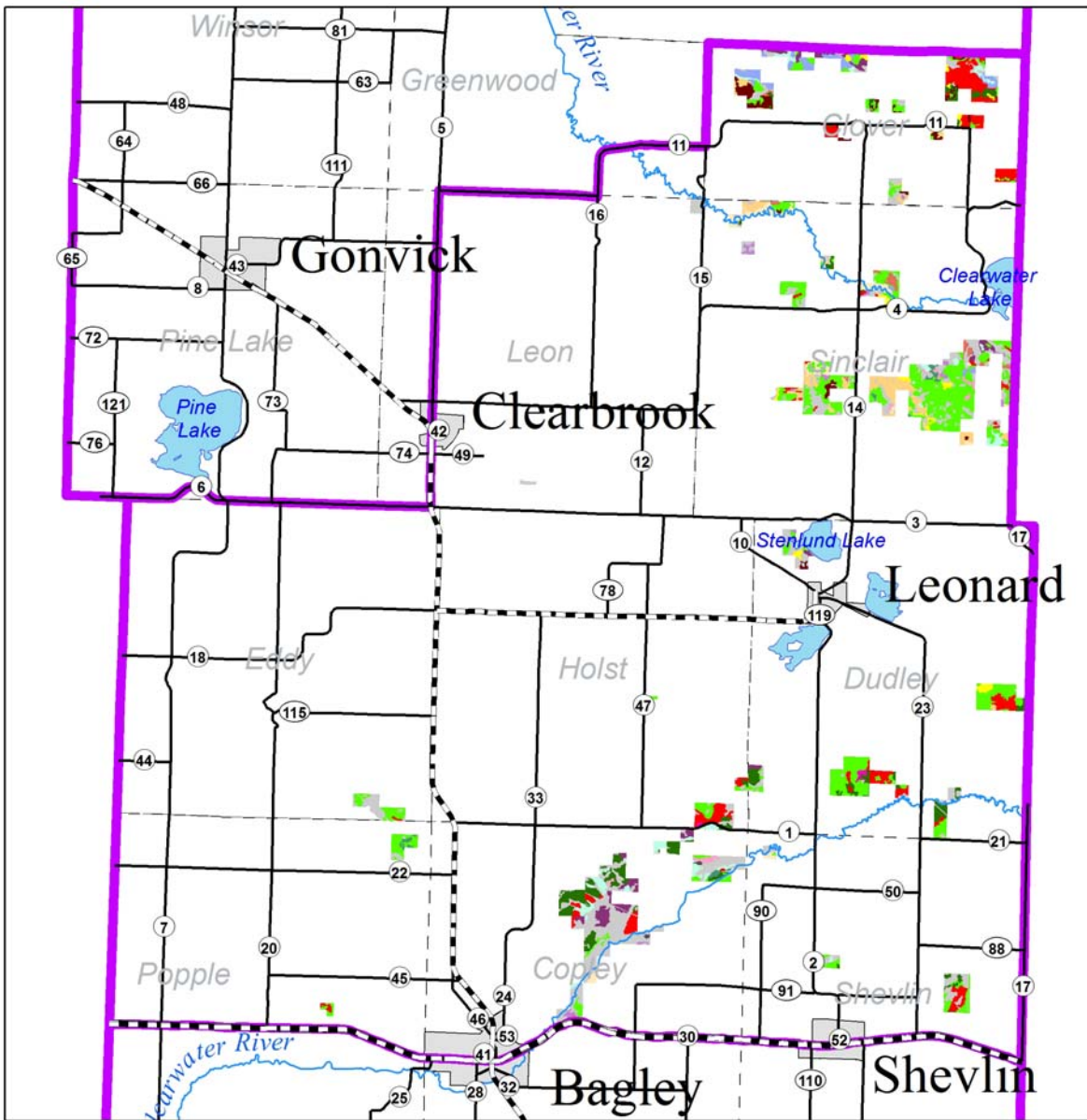
This area contains 8,541 acres of county tax forest land. Of that, approximately:

- 29% is aspen;
- 34% are softwoods of various types;
- and 11% are hardwoods.

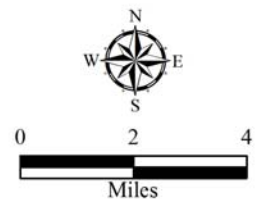
| Stand Type | Acres | Percent |
|-----------------------|-------------|----------------|
| Ash | 270 | 3.17% |
| Aspen | 2440 | 28.57% |
| Balm of Gilliadi | 94 | 1.10% |
| Balsam Fir | 77 | 0.90% |
| Birch | 149 | 1.75% |
| Black Spruce, Lowland | 311 | 3.64% |
| Black Spruce, Upland | 10 | 0.11% |
| Cotton Wood | | 0.00% |
| Jack Pine | 642 | 7.51% |
| Lowland Hardwoods | 63 | 0.74% |
| Northern Hardwoods | 414 | 4.85% |
| Norway/Red Pine | 906 | 10.61% |
| Oak | 197 | 2.31% |
| Scotch Pine | | 0.00% |
| Stagnant Spruce | 21 | 0.24% |
| Stagnant Tamarack | 10 | 0.12% |
| Tamarack | 329 | 3.85% |
| White Cedar | 225 | 2.64% |
| White Pine | 22 | 0.26% |
| White Spruce | 91 | 1.07% |
| Non Commercial | 2014 | 23.58% |
| Unknown | 255 | 2.99% |
| Grand Total | 8541 | 100.00% |

Opportunities, Challenges and Issues. The scattered ownership pattern, the different species mix and the different ecosystem suggest opportunities and challenges that are very different from those presented in the two planning areas to the south. Following is a brief listing of each, along with a brief description.

- *Access to isolated parcels.* This is a similar issue to the one described in the south central planning unit. While the County has access to these parcels for management activities, the public has little opportunity to access isolated lands for recreational pursuits.
- *Wildlife enhancement opportunities.* While a mixed private/public land ownership pattern, with much of the surrounding private land in agricultural use, provides management challenges, it also provides an opportunity to enhance wildlife habitat
- *Opportunity for more jack pine in Clover and Pine Twp's.* Existing forest cover suggest that there are opportunities for expanding this particular cover type.



North Central
Planning Unit



North Planning Unit

The north planning unit extends north to the County boundary, and south to the northern township boundaries of Eddy, Leon, and Clover. This unit is split between three ecological subsections: the Hardwood Hills, Aspen Parklands, and the Agassiz Lowlands (located almost entirely within the Red Lake Reservation). The vast majority of the lands in this unit, outside the Reservation, are agricultural in nature. The majority of County lands are found in Winsor/Greenwood Township in the Aspen Parklands subsection.



**This area contains
1,488 acres of county
tax forest land.**

Inventory

This area contains 1,488 acres of county tax forest land. Of that, approximately:

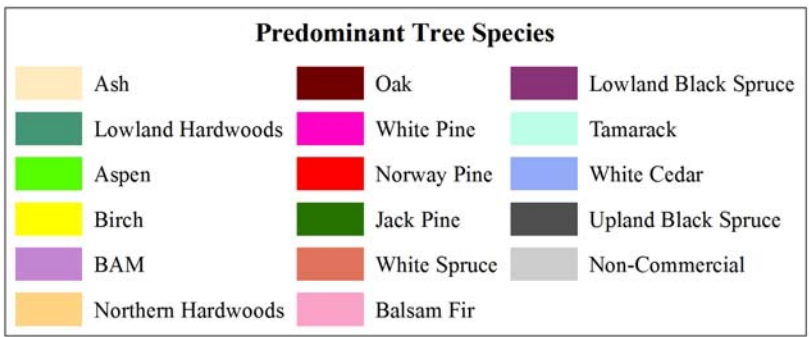
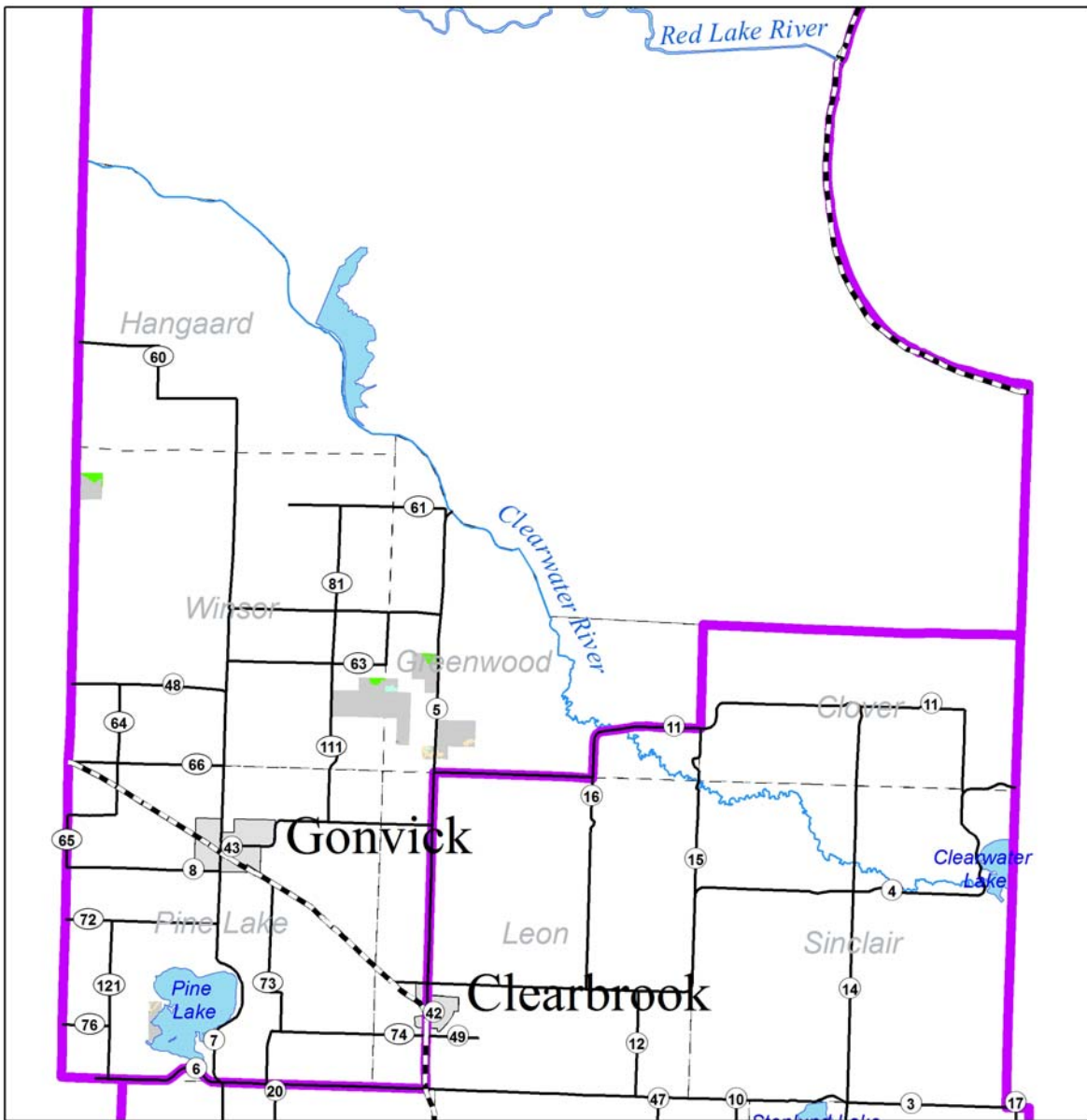
- 5% is aspen;
- and 5% are hardwoods of various types.

Much of the rest of the public land consists of non-commercial cover types.

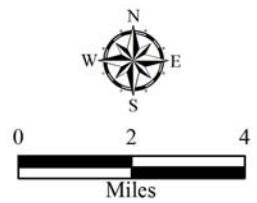
| Stand Type | Acres | Percent |
|-----------------------|-------------|----------------|
| Ash | 53 | 3.53% |
| Aspen | 73 | 4.92% |
| Balm of Gilliad | 9 | 0.58% |
| Balsam Fir | 0 | 0.00% |
| Birch | 0 | 0.00% |
| Black Spruce, Lowland | 0 | 0.00% |
| Black Spruce, Upland | 0 | 0.00% |
| Cotton Wood | 0 | 0.00% |
| Jack Pine | 0 | 0.00% |
| Lowland Hardwoods | 1 | 0.05% |
| Northern Hardwoods | 0 | 0.00% |
| Norway/Red Pine | 0 | 0.00% |
| Oak | 0 | 0.00% |
| Scotch Pine | 0 | 0.00% |
| Stagnant Spruce | 0 | 0.00% |
| Stagnant Tamarack | 0 | 0.00% |
| Tamarack | 20 | 1.36% |
| White Cedar | 0 | 0.00% |
| White Pine | 0 | 0.00% |
| White Spruce | 0 | 0.00% |
| Non Commercial | 1323 | 88.88% |
| Unknown | 10 | 0.67% |
| Grand Total | 1488 | 100.00% |

Opportunities, Challenges and Issues. The different ecological area, the lack of a substantial public land base, and the different forest composition all suggest that this land is valuable for a variety of non-commercial timber activities. Following is a brief listing of some of these opportunities, with accompanying narrative.

- *Enhancement of sharptail grouse habitat.* There is an uncommon opportunity to enhance this habitat for the benefit of area residents.
- *Wildlife viewing.* Minor improvements could result in an increased wildlife viewing opportunity related to above habitat.
- *DNR/County land exchange opportunities.* As in an earlier discussion contained in the narrative for the south central planning unit, there may be opportunities to enter into land exchange agreements with DNR that would allow a consolidation of ownership.



**North
Planning Unit**



The Plan

Desired Future for the Clearwater Forest

In 2050 the Clearwater Forest will consist of a healthy and productive diversity of tree species...will...provide a range of recreation opportunities...and be managed for the benefit of the entire Clearwater community.

Vision

In 2050 the Clearwater Forest will consist of a healthy and productive diversity of tree species that have a diverse age mix. It will contain more conifer and less aspen, and have pockets of productive hardwoods.

The forest will also provide a range of recreation opportunities, including trails for both motorized and non-motorized use, hunting, wildlife viewing opportunities and access to enhanced traditional use areas.

The future Clearwater forest is managed for the benefit of the entire Clearwater community; for those that make a living from the woods, and for those that derive enjoyment from it active and passive recreational pursuits.

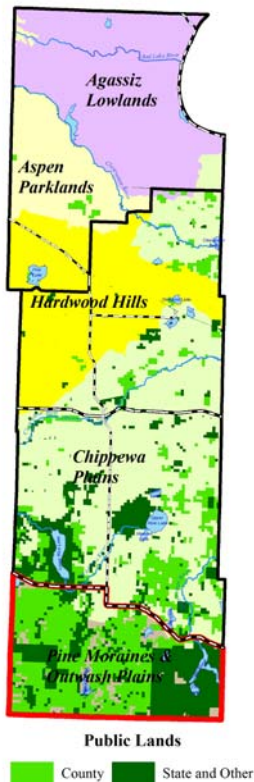
Goals

- Support the local timber industry and the regional economy.
- Provide opportunities for multiple uses, including recreation and traditional uses.
- Maintain a healthy, diverse and productive forest over the long-term.
- Protect and enhance the environment of the County, including its wildlife habitat and water quality.
- Provide a sustainable revenue stream for the County, enabling it to be a steward of this resource for future generations.

Objectives & Strategies

South Planning Unit

The following section provides background information on the South Planning Unit, identifies mid-range objectives to be achieved, and short-term strategies to meet those objectives.



Background. As indicated in a previous section, the south planning unit is bordered on the north by TH 200 and the County boundary to the south. The unit is the least populated area in the County with development scattered; one exception would be the concentration of residential development around Long Lost Lake; 87% of the land in this unit is public.

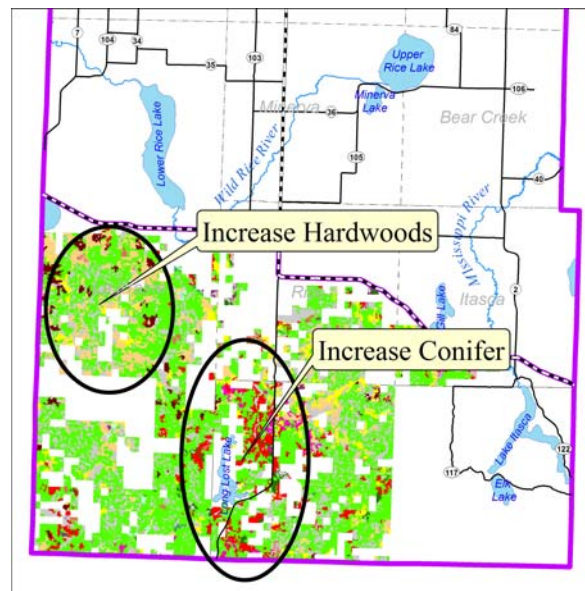
The area contains 52,884 acres of county tax forest land; 58% of the County’s tax-forfeited land. Of that, approximately 53% is aspen, 13% are softwoods of various types, and 11% are hardwoods.

Fully two-thirds of the County’s tax-forfeited aspen acreage is found in this area.

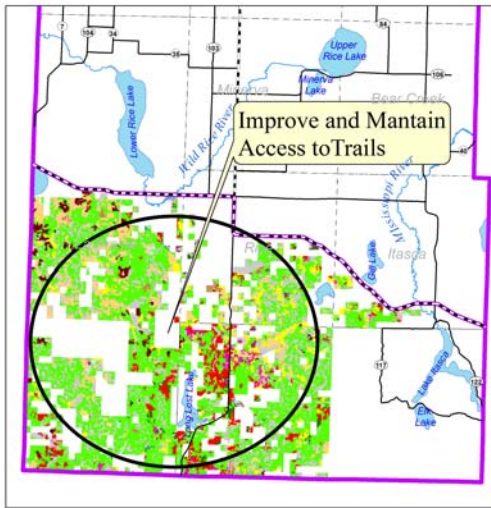
While there are a handful of scattered parcels in the north-central part of this planning area, much of the tax-forfeited acreage consists of large blocks of land. There are three somewhat distinct tracts – that area west of Long Lost Lake, another in the northwest quadrant of the area (south of Lower Rice Lake), and a third from Long Lost Lake to Itasca State Park.

Objectives; Strategies

The following objectives describe in concrete terms the type of changes that will be pursued in the South Planning Unit. For each objective, one or more strategies are also identified that will be implemented to meet the objective.



- *Objective: Reduce the amount of over-mature aspen in the unit over the next 10 years.*
 - Strategy:*
 - *Target over-mature aspen stands for harvest*



- *Objective: Increase the presence of conifers in the unit over the next 20 years.*
Strategy:
 - *Identify 3-5 sites over the next 5 years to convert to conifer.*
 - *Implement a variety of conifer reforestation techniques to determine those that maximize tree survivability.*
- *Objective: Develop a multi-use non-motorized vehicle trail system, and a system for motorized uses.*
Strategy:
 - *Work to develop and nurture trail user groups that can be partners with the County*
 - *Design, develop and maintain, in partnership with these groups, a trail system for both motorized and non-motorized users.*
- *Objective: Increase the health and presence of hardwoods in the planning unit.*
Strategy:
 - *Identify area(s) best suited for hardwood generation.*
 - *Implement selected techniques to enhance the health and presence of hardwood in this area(s)*
- *Objective: Preserve and, where appropriate, enhance access to traditional use (bough-cutting, berry picking and sugaring) areas.*
Strategy:
 - *Identify high quality traditional use areas*
 - *Determine access needs for each site.*
 - *Where needed, enhance access to selected sites.*
- *Objective: Increase the age diversity of the forest in the South Planning Unit.*
Strategy:
 - *Complete timber sales that meet the agreed-upon allowable cut for this Planning Unit.*
 - *Implement Strategies for conifer and hardwood forest regeneration as found under Objectives 2 and 4.*

South Central Planning Unit

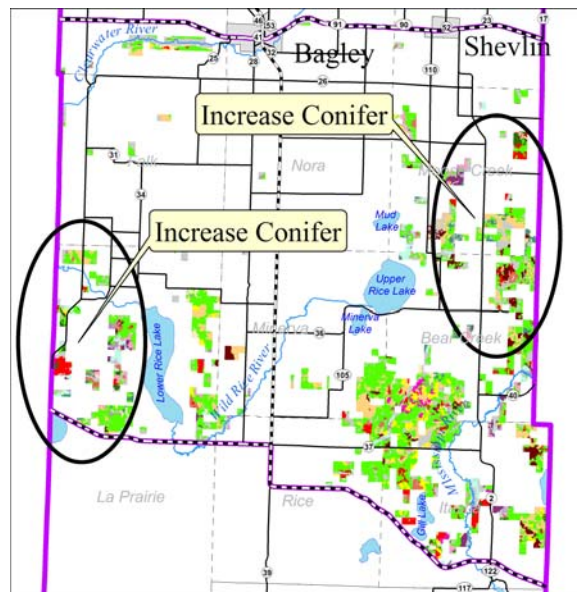
The following section provides background information on the South Central Planning Unit, identifies mid-range objectives to be achieved, and short-term strategies to meet those objectives.



Background. As indicated in a previous section, the south central planning unit is bordered on the south by TH 200 and US Hwy. 2 on the north. Much of the land in the south part of this area is forested, while increasing agricultural use is seen in the northern part of the planning unit. The unit contains three large contiguous blocks of public land. Only one of those substantial tracts consists mostly of county land, and that tract is located south of Upper Rice Lake; the remainder of county lands are scattered on the east and west boundaries of the county.

This area contains 27,663 acres of county tax forest land. Of that, approximately 42% is aspen, 23% are softwoods of various types and 17% are hardwoods.

This planning unit contains the second-largest quantity of over-mature aspen, with approximately 3,000 acres over 40 years old.



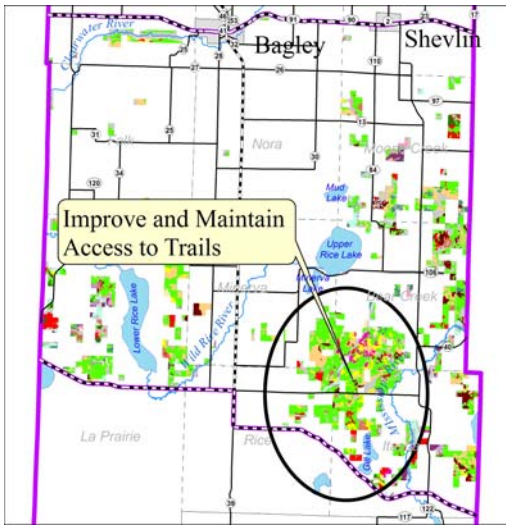
Objectives;

Strategies

The following objectives describe in concrete terms the type of changes that will be pursued in the South Planning Unit.

For each objective, one or more strategies are also identified that will be implemented to meet the objective.

- *Objective: Reduce the amount of over-mature aspen in the unit over the next 10 years.*
Strategy:
 - *Target over-mature aspen stands for harvest*
- *Objective: Increase the presence of conifers in the unit over the next 20 years.*
 - *Strategy: 1-3 sites over the next 5 years to convert to conifer.*
 - *Implement a variety of conifer reforestation techniques to determine those that maximize tree survivability.*



- *Objective: Develop a motorized vehicle connector trail system between the trails systems to the south and the trail systems in the Solway/Shevlin/Bagley area.*
Strategy:
 - *Work to develop and nurture trail user groups that can be partners with the County*
 - *Design, develop and maintain, in partnership with these groups, a connector trail system for motorized use.*
- *Objective: Increase the health and presence of hardwoods in the planning unit.*
Strategy:
 - *Identify area(s) best suited for hardwood generation.*
 - *Implement selected techniques to enhance the health and presence of hardwood in this area(s)*
- *Objective: Improve Access to high priority county land parcels that are now without adequate access*
Strategy:
 - *Conduct an investigation to determine parcels where increased access should be a priority and to determine appropriate strategies for creating access*
 - *Implement access plan*
- *Objective: Consolidate County land holdings to increase management effectiveness*
Strategy:
 - *Conduct investigation to identify parcels that may be priority candidates for land exchange discussions with DNR and others*
 - *Enter into discussions with DNR and others to implement policy.*
- *Objective: Increase the age diversity of the forest in the South Central Planning Unit.*
Strategy:
 - *Complete timber sales that meet the agreed-upon allowable cut for this Planning Unit.*
 - *Implement Strategies for conifer and hardwood forest regeneration as found under Objectives 2 and 4.*

North Central Planning Unit



The following section provides background information on the North Central Planning Unit, identifies mid-range objectives to be achieved, and short-term strategies to meet those objectives.

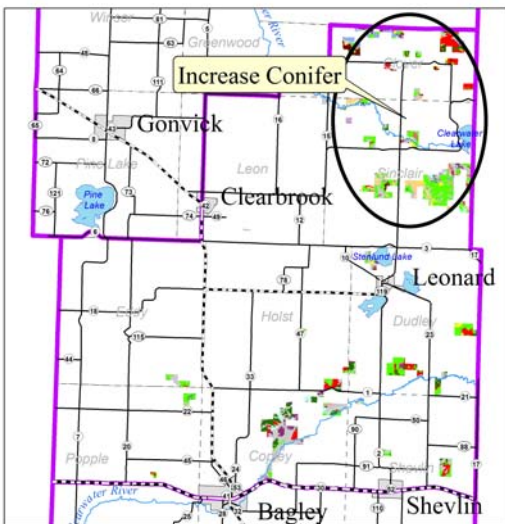
Background. As indicated in a previous section, the north central planning unit is bordered on the south by TH 2, and extends north to the northern twp. boundaries of Eddy, Leon, and Clover. This unit is split between two ecological subsections and this is reflected by development patterns in this area of the County. The Hardwood Hills portion of this unit is dominated by development that is agricultural in nature and the Chippewa Plains portion trends toward a larger mix of forest cover within smaller areas cleared for agriculture. The County's lands are scattered throughout the area, but a significant majority are located in the Chippewa Plains portion of the unit.

This area contains 8,541 acres of county tax forest land. Of that, approximately 29% is aspen, 34% are softwoods of various types and 11% are hardwoods.

Objectives; Strategies

The following objectives describe in concrete terms the type of changes that will be pursued in the North Central Planning Unit. For each objective, one or more strategies are also identified that will be implemented to meet the objective.

- *Objective: Enhance wildlife habitat in 2-4 areas of the Planning Unit.*
Strategy:
 - *Develop and implement wildlife habitat improvement plans for selected areas.*
- *Objective: Improve Access to high priority county land parcels that are now without adequate access*
Strategy:

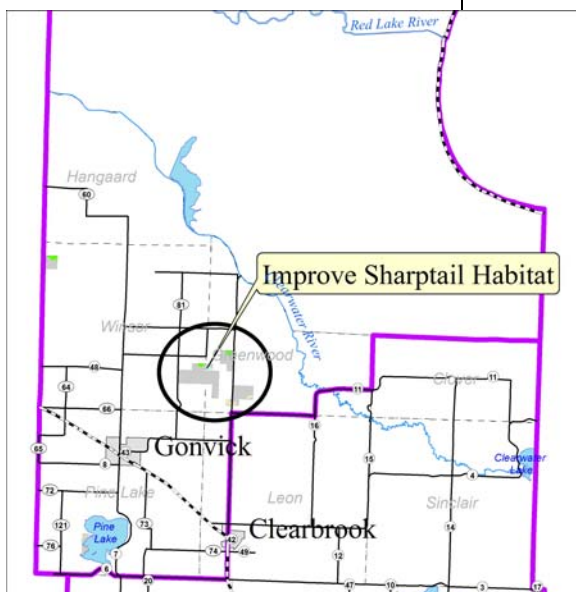


- Conduct an investigation to determine parcels where increased access should be a priority and to determine appropriate strategies for creating access
- Implement access plan
- Objective: Increase the presence of jackpine in the unit over the next 20 years.
 - Strategy:
 - Identify 1-3 sites over the next 5 years to convert conifer.
 - Implement a variety of conifer reforestation techniques to determine those that maximize tree survivability.

North Planning Unit

The following section provides background information on the North Planning Unit, identifies mid-range objectives to be achieved, and short-term strategies to meet those objectives.

Background. As indicated in a previous section, the north planning unit extends north to the County boundary, and south to the northern twp. boundaries of Eddy, Leon, and Clover. This unit is split between three ecological subsections: the Hardwood Hills, Aspen Parklands, and the Agassiz Lowlands (located almost entirely within the Red Lake Reservation). The vast majority of the lands in this unit, outside the Reservation, are agricultural in nature. The majority of County lands are found in Greenwood Township in the Aspen Parklands subsection.



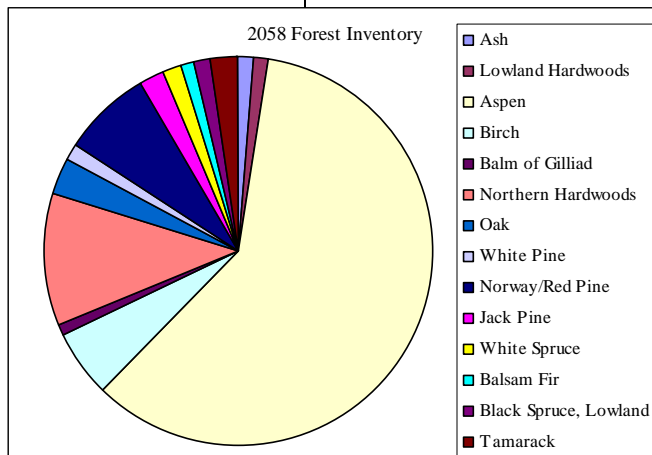
This area contains 1,488 acres of county tax forest land. Of that, approximately 5% is aspen and 5% are hardwoods of various types. Much of the rest of the public land consists of non-commercial cover types.

Objectives; Strategies

The following objectives describe in concrete terms the type of changes that will be pursued in the North Planning Unit. For each objective, one or more strategies are also identified that will be implemented to meet the objective.

- *Objective: Enhance existing sharptail grouse habitat and viewing opportunities*
Strategy:
 - *Develop and implement actions to enhance the existing habitat area(s)*
 - *Develop and implementation plans for enhancing viewing opportunities for this species.*
- *Objective: Consolidate County land holdings to increase management effectiveness*
Strategy:
 - *Conduct investigation to identify parcels that may be priority candidates for land exchange discussions with DNR*
 - *Enter into discussions with DNR to implement policy.*

Future Forest Composition



The future composition of the forest at the species level will remain largely unchanged but the diversity of age classes will increase among the various species. The composition of the forest in 2058 will be a reflection of the County’s goals which are to increase the presence of conifer in select sites where they will do well, improve the quality of their hardwoods and even out the age classes of many of the species, especially Aspen.

| 2058 Forest Inventory | | | | | | | | | | | | | | | | |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|---------|---------|------|-------------|
| Acres by Age Class | | | | | | | | | | | | | | | | |
| | 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-110 | 111-120 | 121-130 | 131-140 | >141 | Total Acres |
| Ash | 100 | 103 | 100 | 166 | 118 | 0 | 36 | 60 | 32 | 31 | 25 | 93 | 130 | 0 | 0 | 996 |
| Lowland Hardwoods | 110 | 116 | 103 | 108 | 103 | 0 | 9 | 0 | 19 | 0 | 0 | 127 | 0 | 0 | 0 | 694 |
| Aspen | 9,413 | 8,000 | 9,759 | 6,847 | 8,045 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,066 |
| Birch | 803 | 295 | 511 | 1,625 | 859 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,093 |
| Balm of Gilliad | 26 | 36 | 76 | 217 | 118 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 473 |
| Northern Hardwoods | 1,522 | 1,000 | 1,168 | 1,165 | 833 | 208 | 453 | 0 | 28 | 81 | 344 | 972 | 0 | 0 | 0 | 7,774 |
| Oak | 240 | 246 | 500 | 239 | 257 | 36 | 166 | 36 | 0 | 6 | 38 | 423 | 137 | 0 | 0 | 2,325 |
| White Pine | 40 | 179 | 66 | 0 | 1 | 63 | 89 | 6 | 3 | 0 | 47 | 0 | 101 | 85 | 176 | 855 |
| Norway/Red Pine | 487 | 534 | 582 | 522 | 54 | 632 | 1,319 | 789 | 83 | 182 | 38 | 0 | 0 | 0 | 8 | 5,230 |
| Jack Pine | 21 | 225 | 480 | 477 | 330 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,533 |
| White Spruce | 136 | 97 | 56 | 22 | 80 | 687 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,078 |
| Balsam Fir | 127 | 104 | 176 | 381 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 891 |
| Black Spruce, Lowland | 98 | 99 | 98 | 98 | 136 | 0 | 91 | 3 | 22 | 0 | 58 | 88 | 83 | 57 | 0 | 931 |
| Tamarack | 255 | 255 | 258 | 255 | 270 | 0 | 61 | 72 | 3 | 99 | 0 | 0 | 0 | 0 | 0 | 1,530 |

Land Management Activities

This section of the Plan details: responsibilities of the Land Department, the methodology and tools that the Land Department will employ to achieve the Desired Future Forest, general administration of tax forfeit lands, forest transportation network, and management of lands for recreation purposes.

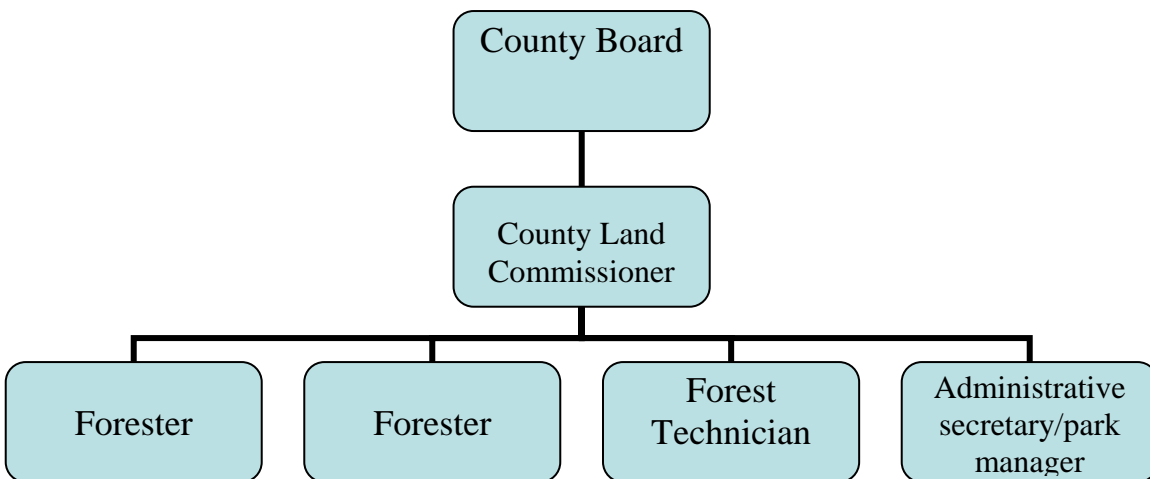
Land Department

Clearwater County Land Department consists of the County Land Commissioner (appointed by the County Board), two foresters, a forest technician, and an administrative secretary/park manager. The Land Commissioner, under the direction of the County Board, provides overall direction and administration of the department and the tax forfeited lands.

The two foresters share responsibilities across the ownership with one providing lead responsibility for forest development and the other lead responsibility in forest inventory and information systems. The forest technician provides technical assistance to the land management across the land base. The administrative secretary/park manager provides clerical support to the department as well as serving as manager of the county park facility.

It is the mission of the County Land Department to fulfill the County's obligation as trustee for the local governmental jurisdictions of Clearwater County by being a responsible steward who sustains the forest for future generations, generates income for

the County and local governmental jurisdictions, and properly utilizes the land base and renewable forest resources to sustain the region's economic and social well being.



The primary task of the Land Department is to manage the County's lands to the benefit of the County's residents by controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

Projected Harvest Levels

The County expects to harvest approximately 1,200 acres per year for the next six decades. The majority of those acres will be from Aspen stands. The table below summarizes the Land Department's harvest goals for the next six decades.

Desired Harvest Summary By Decade

| Treatment Acres | | Rotation Age | 2008-2017 | 2018-2027 | 2028-2037 | 2038-2047 | 2048-2057 | 2058-2067 | 60 Year Total |
|-----------------------------|--------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| Ctype 1 Ash | Normal | 100 | 118 | 166 | 100 | 103 | 100 | 100 | 687 |
| | ERF | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 9 LH | Normal | 100 | 103 | 108 | 103 | 116 | 110 | 127 | 667 |
| | ERF | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 12 Aspen | Normal | 45 | 8,045 | 6,847 | 9,759 | 8,000 | 9,413 | 8,045 | 50,109 |
| | ERF | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 13 Birch | Normal | 50 | 1,559 | 1,625 | 511 | 295 | 803 | 651 | 5,444 |
| | ERF | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 14 BAM | Normal | 40 | 118 | 217 | 76 | 36 | 26 | 118 | 591 |
| | ERF | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 20 N. Hardwoods | Normal | 95 | 833 | 1,165 | 1,168 | 1,000 | 1,522 | 1,172 | 6,860 |
| | ERF | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 30 Oak | Normal | 100 | 257 | 239 | 500 | 246 | 240 | 237 | 1,719 |
| | ERF | 125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 51 White Pine | Normal | 130 | 1 | 0 | 66 | 179 | 40 | 176 | 462 |
| | ERF | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 52 Red Pine | Normal | 100 | 54 | 522 | 582 | 534 | 487 | 128 | 2,307 |
| | ERF | 170 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 53 Jack Pine | Normal | 50 | 330 | 477 | 480 | 225 | 21 | 160 | 1,693 |
| | ERF | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 61 White Spruce | Normal | 55 | 80 | 22 | 56 | 97 | 136 | 196 | 587 |
| | ERF | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 62 Balsam Fir | Normal | 45 | 198 | 381 | 176 | 104 | 127 | 198 | 1,184 |
| | ERF | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 71 Black Spruce, L | Normal | 95 | 136 | 98 | 98 | 99 | 98 | 98 | 627 |
| | ERF | 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ctype 72 Tamarack | Normal | 60 | 270 | 255 | 258 | 255 | 255 | 235 | 1,528 |
| | ERF | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Desired Harvest Goals | | | 12,102 | 12,122 | 13,933 | 11,289 | 13,378 | 11,641 | 74,465 |

Forest Stand Selection Process

The harvest projections identified in this plan represent the allowable harvest over a ten year period. The allowable harvest acreages are calculated utilizing the Minnesota DNR Extended Rotation Forest model and Treatment Calculator for each major cover type. The stands for harvest are then selected from the forest inventory based on several criteria including; species age, size, stand density and overall health.

There are three overall parts to the site selection process.

1. Field staff will identify candidate stands for timber sales based upon:
 - a) Allowable cut guidelines;
 - b) Timber type;
 - c) Stand age;
 - d) Stand condition;
 - e) Protected waters and wetlands information;
 - f) Silvicultural requirements;
 - g) Natural heritage and cultural heritage databases; and
 - h) Adjacency to previous timber harvests.

Resources used to identify sites for harvest include air photos, topographic maps, cover inventory maps, biophysical inventory, soil maps, cultural resources database, natural heritage database, and field staff knowledge of the area.

2. Field staff will inspect sites identified as candidates for timber sales to verify that they are appropriate sale candidates. Prior to their visit, staff will collect and review a wide variety of information pertinent to the site.
3. Field staff will then visit the site and determine how timber type size and density will affect timber sale operations and will be incorporated into the site prescription.

Procedures for selecting stands for harvest are included in Forest Management Policy (LD-OP2) Harvest Management.

General Silvicultural Practices

The Clearwater County land Department manages both even aged and uneven aged forests. Even-aged stands have trees of similar age growing together through out the stand. Aspen, birch and pine are good examples. These stands are typically referred to as

pioneer stands and regeneration requires full sun light. Uneven-aged stands grow with a diversity of age classes through the stand. Northern hardwood stands are a good example of this. The age structure occurs to shade tolerance of the represented tree species through out the stand. Regeneration in these stands can be encouraged through partial harvest treatments.

Even aged management

Even aged management requires the removal of the majority of the stand to provide full sunlight for regeneration of the stand. Silvicultural systems to achieve this include the following:

- Clearcutting - This system harvests the entire stand except trees left for wildlife and visual purposes. Logging debris is left on site for nutrient retention and erosion control.
- Seed tree - This systems involves removal of all but 10-20 seed trees per acre which provide a seed source for regeneration. Harvest generally provides the soil disturbance necessary for seed establishment.
- Shelter wood - This systems requires more trees to be left on site as they will provide subsequent protection to the regeneration. Once the regeneration is established, a second harvest would remove the remaining overstory.
- Partial Harvest - This system is generally referred to as thinning and involves the removal of competition to crop trees and can be used in both softwood and hardwood management.

Uneven aged management

Uneven aged management seeks to maintain the imbalance of age structure but often times yields higher quality timber. Harvest will encourage good form and quality in the overstory and provide understory disturbance necessary for regeneration. Silvicultural systems to achieve this include:

- Group selection - This system involves the removal of small groups of trees which creates small gaps in the forest where regeneration can occur. Soil disturbance is necessary to encourage regeneration.
- Individual tree selection - This system is the most rigorous to employ as each tree selected for harvest must be tallied and marked. The purpose of the system is to remove competition from the future crop trees while maintaining their form and providing them with more sunlight, moisture, and nutrients.

- Forest regeneration - The systems used to regenerate the forest include those already listed which provide natural regeneration in the forest. Natural regeneration is not always achievable thus we must use artificial means for establishment of the new stand. This involves good site preparation and planting seedling or seeding. See LD-OP6.

Management of Tax Forfeit Lands

The County will manage the County's lands for the benefit of all Clearwater County residents. Management will focus on three broad areas: forest commodities, recreation, and wildlife habitat. To ensure that the County can continue to provide these benefits to its residents' the preservation of the land base, providing access to these lands, and enhancing forest diversity will be primary objectives of the Land Department.

Retention, Acquisition, Retention and Disposition (LD-P1, LD-P2)

The County seeks to retain a tax forfeit land base that provides a continues flow of timber, recreational opportunities, protection of significant ecological and cultural features, and one that helps to minimize the cost of infrastructure to the tax payers.

The County at times will acquire land through tax forfeiture that is better suited for retention as conservation lands. The County may at times consider acquiring lands through purchase that may help to reduce the fragmented nature of the land base and improve the ability to manage the land base.

The County is open to the possibility of land exchanges with both public and private entities in order to consolidate its land holdings. Parcels open for consideration for exchange would include those that are:

- Small in nature and far from other County holdings,
- Lack good access
- Have little timber or recreation value

The dispossession of low value lands and consolidation of its land holdings will create opportunities for better management of resources through larger contiguous management areas, and a decrease in operational expenses through increased efficiencies.

Where public lands are scarce and access to particular high value County land holdings is poor the County will seek means to improve the access to those lands for timber management and/or recreation purposes.

Recreation (LD-OP8)

The County manages one on Long Lake in southern Clearwater County. The County also maintains seventeen (17) public water accesses throughout the county. The County will consider expansion of park opportunities to other areas of the county as opportunities emerge.

The County's primary involvement with recreation will be providing access to its lands through the network of roads that it maintains for logging purposes. This network of roads are often thought of as trails and used as such by County residents to access forest lands for recreational purposes, which includes:

- Hunting
- Fishing
- Berry Picking, sugar bushing, and other "traditional use" activities
- ATV and OHV trail use

The biggest challenge facing the County over the next 10 years will be managing the forest in terms of motorized and non-motorized use. There will be some areas or trails where the County will want to promote motorized use, and there will be some areas where the County will want to discourage or restrict motorized use. The County does not currently have a set of policies that delineates where or when motorized vehicles will and will not be permitted.

The tax forfeit lands are currently classified as managed for off highway vehicle (OHV) use. This means they are open to OHV use unless posted closed. Off trail use is limited to the exemptions as stated in Minnesota Statute. OHV use is informal as there are no designated use trails or areas. The Mississippi State Forest is designated limited for OHV use which means OHVs on state administered land may only ride on trails posted open. The White Earth State Forest is currently proposed as limited as well. OHV users must be aware of these designations as they differ from the county designation.

Transportation System (LD-OP1)

The county has a forest road network of nearly ninety (90) miles. The vast majority is minimum maintenance and is travel at own risk. Approximately thirty (30) miles of this network are system roads and are bladed during the summer and have

improvements such as gravel additions, culvert maintenance and weed control.

New road construction primarily occurs to facilitate timber management activities. These roads are generally closed following an activity and even permanently debilitated if the need to re-enter the area is deemed to be no sooner than a rotation of timber or it provides no further access need.