



Executive Summary

Carlton County administers and manages for the public benefit approximately 72,400 acres of tax-forfeited land. In 1992 the County adopted its first-ever written plan to guide the management of these lands. This document updates that plan. In general terms, this updated plan affirms the County's intent to retain and actively manage its tax-forfeited lands as a valuable, renewable resource meeting a variety of economic, social, and ecological values. The following summarizes key elements of the plan.

Mission & Goal

The mission of the Carlton County Land Department is *to professionally manage the County's forest land base in accord with Minnesota Statutes 282 and to improve the quality and value of the County's forest land resources.*

The overall goal for managing the County administered tax forfeited lands is:

Maintain a natural resource base which generates sustained timber yields as determined by the quality of the land, establishes a diversity of habitats and ecosystems appropriate to the region, and encourages multiple use within the framework of a forest ecosystem management approach that recognizes the potential and limitations of the County resource as one part of a larger resource and management perspective.

The Resource

The following summarizes the land and resource base administered by the Carlton County Land Department:

- Not quite two-thirds of Carlton County's 72,400 acres of tax forfeited lands are covered by forest. Lowland brush and grass account for 10,300 acres. Marsh, muskeg, permanent and non-permanent water occupy over 13,000 acres.
- In general, Carlton County's forests reflect the forest inherited across northern Minnesota – a forest shaped by extensive logging followed by fire and conversion to agriculture followed by reconversion of poor agricultural lands back to forest. Only in the past 30 years has the aspen-birch forest been professionally managed and aggressive pine regeneration efforts undertaken.
- Aspen is the major forest cover type, lying on 24,000 acres of the roughly 44,000 acres of forested land. However, nearly 2,300 acres located on the steep slopes and river bottoms of the Nemadji River basin cannot be actively managed through harvesting.
- About 13,300 acres of tax forfeited lands lie within the Nemadji River basin. Nearly 4,500 of these acres are on the highly erodible red clay slopes and valley bottoms. Another 2,000 acres of the high ground is covered by alder swamps. The remaining 6,800 acres are basically a boreal hardwood-conifer forest with varying site quality and generally older age. The erodible slopes and valleys are removed from future active management. The complex nature of the uplands will require experimentation to determine the best management approaches.
- Approximately 1,050 acres of potentially prime peatland is on County tax forfeited

lands; there are another 12,180 acres of secondary valued peatlands. Currently 120 acres of the prime land and 800 acres of the secondary land are leased for private peat harvesting operations.

- The County maintains a number of recreational trails and allows miles of other trails across its lands. There are no County owned or maintained campgrounds, boat accesses, or picnic areas.

Sustainable Forestry

As a certified forest manager under the Sustainable Forestry Initiative® (SFI) program, Carlton County is committed to managing its lands in accord with the following principles

- Sustainable Forestry: To practice sustainable forestry to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing and harvesting of trees for useful products with the conservation of soil, air and water quality, biological diversity, wildlife and aquatic habitat, recreation and aesthetics.
- Responsible Practices: To use forests, and promote among other forest landowners, sustainable forestry practices that are economically, environmentally and socially responsible.
- Forest Health and Productivity: To protect forests from wildfire, pests, diseases and other damaging agents to maintain and improve long-term forest health and productivity.
- Protecting Special Sites: To manage forests and lands of special significance (e.g., biologically, geologically, culturally or historically significant) in a manner that takes into account their unique qualities.
- Legal Compliance: To comply with applicable federal, state or local forestry and related environmental laws and regulations.
- Continual Improvement: To continually improve the practice of forest management and also to monitor, measure and report performance in achieving the commitment to sustainable forestry.

Principles

County management activities are further guided by the following principles.

- ***Strategic management is based upon those landscape elements (landforms, soils, and site vegetation potential) which are the most constant and enduring over time.***
- ***Retain forest integrity as being essential to the ongoing health, diversity, and productivity of the forest.***
- ***Manage stands so their forest type, cover type, and related characteristics are in accord with the underlying biophysical / ecological potential of the land.***
- ***The general objective is to manage the resource, not to manage for specific outputs.***
- ***Humans are fundamental influences in ecological processes and cannot be***

considered external factors. Human values and ethics play a dominant role in directing management initiatives and setting goals.

- *Management seeks to secure a representative distribution of **vegetational growth stages** (i.e., successional stages or phases) across the aggregated stands for each biophysical region or native plant community. Within this parameter certain cover types will be managed to establish an appropriate balance of age class groups.*
- *Strategic management **planning is dynamic** reflecting changes in ecological, social and economic conditions, and, is an on-going effort necessarily involving all interested and affected publics.*
- *Application of the above **principles may be modified** at the stand or aggregated stand level due to consideration of factors including but not limited to the following: Wildlife; Recreation; Ownership; Historical and cultural resources; Aesthetics / views; Water quantity or quality; or Natural disturbance.*

Initiatives

Carlton County will undertake the following strategic initiatives to implement the core elements of this plan:

- **Aspen:** The County manage this resource with three primary objectives in mind: retain the amount of acreage on lands that can be managed and harvested; balance the age class distribution of the resource so as to ensure a relatively sustained, even yield over time; and, maintain the mix of tree species within the general aspen cover type.
- **Nemadji River Basin:** Roughly 18% of the County's tax forfeited lands are located in the Nemadji River basin. Of this amount, about 34% are situated on the steep red clay slopes and erodible valleys; these lands are being removed from active management of any kind including timber harvesting – they will be allowed to naturally succeed into old spruce-fir forests. The upland portions of the "flats" within the basin will be managed as boreal hardwood-conifer mixed forests. The County will experiment with a variety of management approaches on these lands to determine which are best for securing quality stands and insuring vigorous regeneration of desired species.
- **Wildlife Management Areas:** While most management will be determined by the ecological potential of the landscape and cover type-specific silvicultural practices, on designated wildlife management areas habitat and wildlife values will take precedence.
- **Staff Transition:** Both the current Land Commissioner and Forester are long-term employees who will retire at approximately the same time within the next decade. Between them they possess an incredible amount of knowledge and experience that will be invaluable to succeeding land managers. It is critical that this knowledge be captured, preferably directly as part of the inventory's electronic database, so it is readily accessible to future foresters.

The Future

If the management initiatives contained within this plan are followed over the next 100 years and the effects of markets, natural disturbance, and climate change are assumed to be neutral, then the following changes to Carlton County's tax forfeited lands, the resource upon them, and the uses of them are likely to occur:

Aspen Resource

The acres of aspen as a *cover type* are reduced from 24,000 to 19,000 acres and brought into relatively balanced age classes. The reduction occurs as stands on the slopes and valleys of the Nemadji River Basin are allowed to naturally succeed to spruce-fir and as stands in the Nemadji uplands are managed as mixed species boreal hardwood-conifer forest.

Conifer Forest

White spruce and balsam fir gain as cover types through natural succession in the slopes and lowlands of the Nemadji River Basin and through active management in the Nemadji uplands. Overall the spruce-fir cover types grow by 300% but the harvestable acres increase by 350%.

Nemadji River Basin

Representing roughly 18% of the County's total tax forfeited lands, the complex terrain of this area will be the focal point of experimental forestry. The highly erodible red clay slopes and valleys will naturally succeed, generally into spruce-fir forest, with no harvesting or other forms of active management occurring there. The uplands will be managed as a mixed species boreal hardwood-conifer forest with an emphasis on the conifer component (white spruce or balsam fir depending upon the site). Experiments will be used to determine the best means of securing quality regeneration and preventing expansion of alder swamps.

Timber Resource

After two decades of slightly accelerated harvesting to address the mature condition of the aspen resource, aspen harvesting will settle into a relatively even flow. Because of the generally limited extent of the other cover types, their harvesting will occur in a predictable but uneven flow as resource becomes available. Among key resource species, balsam fir, as a cover type, will experience no harvesting for 20 years (2014-2033) but then as the greatly expanded resource base comes into play it develops into a productive timber supply. Similarly, white spruce, which currently sees little harvesting on its small resource base, will emerge around 2034 as a significant timber source.

Recreation

Additional recreational trails will likely cross County administered lands. No new facilities such as camping or picnicking areas will be developed. Pressures on public lands for recreational uses will increase.

Department Administration

The Department will have employed a variety of mechanisms to insure a smooth transition from its long-standing current staff to the succeeding one. In addition, data management will have been enhanced to permit more effective management of the resources.