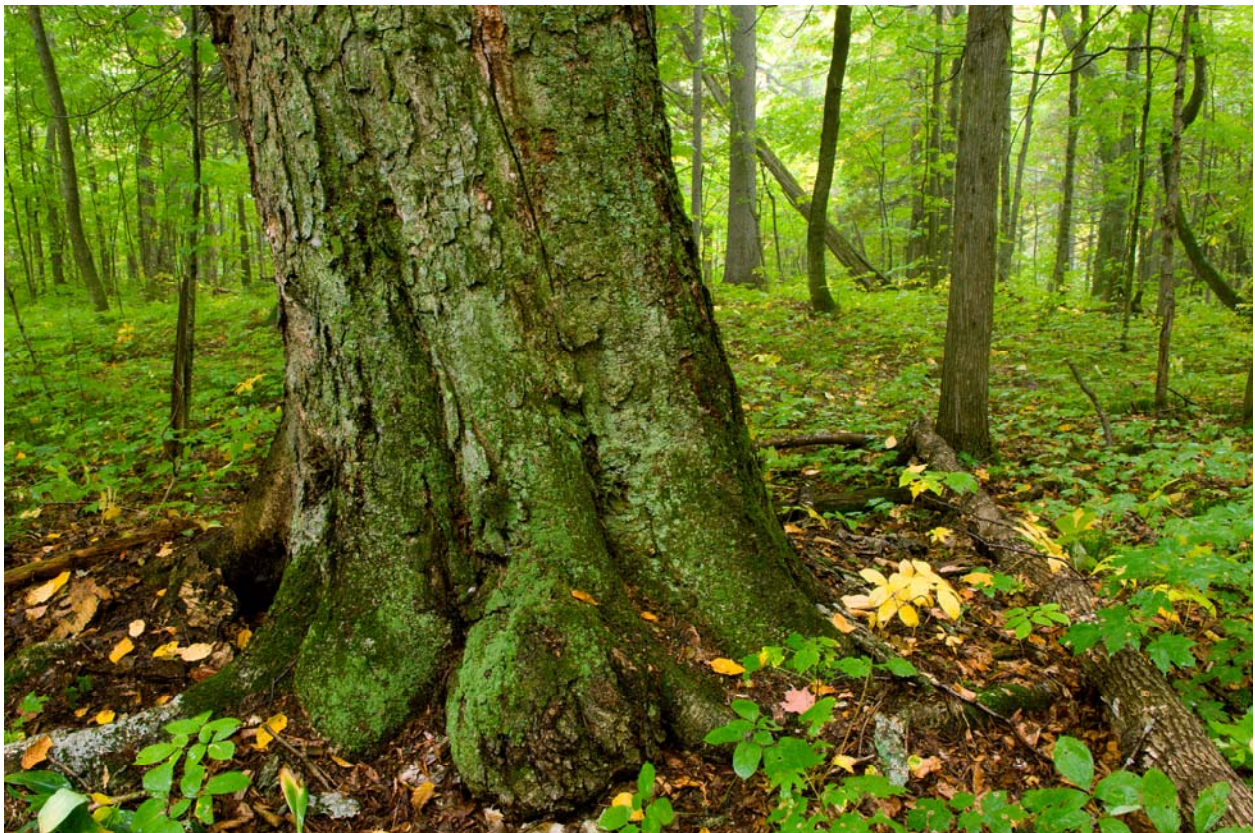


August 2010

Old-growth Forest Policy

At-A-Glance Fact Sheets



Minnesota Department of Natural Resources

Contents — Fact Sheets

- I What is an old-growth forest?
- II Old growth: Minnesota rarest forests
- III Old growth: An essential part of sustainable forest management
- IV Importance of old-growth forests
- V DNR old-growth forest policy: A brief history
- VI DNR old-growth forest policy: An intractable conflict resolved
- VII The old-growth forest database system
- VIII Designated old-growth forest on DNR lands
- IX Resources

Cover photo: Old-growth yellow birch at Crosby
Manitou State Park, by Gary Alan Nelson

Prepared by DNR OMBS Policy, Research, and Planning Section
Keith Wendt, Section Manager; Jim Manolis, Conservation Science Team Leader

What is an old-growth forest?

Natural forests over 120 years of age that have not experienced significant human disturbance (logging, grazing) or severe natural disturbance (fire or windstorms). Old-growth forests have the following traits not found in younger forests:

- Dominant trees are at least 120 years old (often at least 2-3 feet across).
- Large, dead standing trees (snags) are common.
- Large fallen trees and branches lie on the ground.
- A mix of tree ages with wind tipped trees and fallen logs create a complex forest structure with many microhabitats.



This old white pine stand is about 400 years old.



Massive Basswood trunks dwarf researcher



Northern white cedar old growth in Crosby Manitou State Park.



Old-growth sugar maples at Spring Beauty Scientific and Natural Area Photo by Gary Alan Nelson

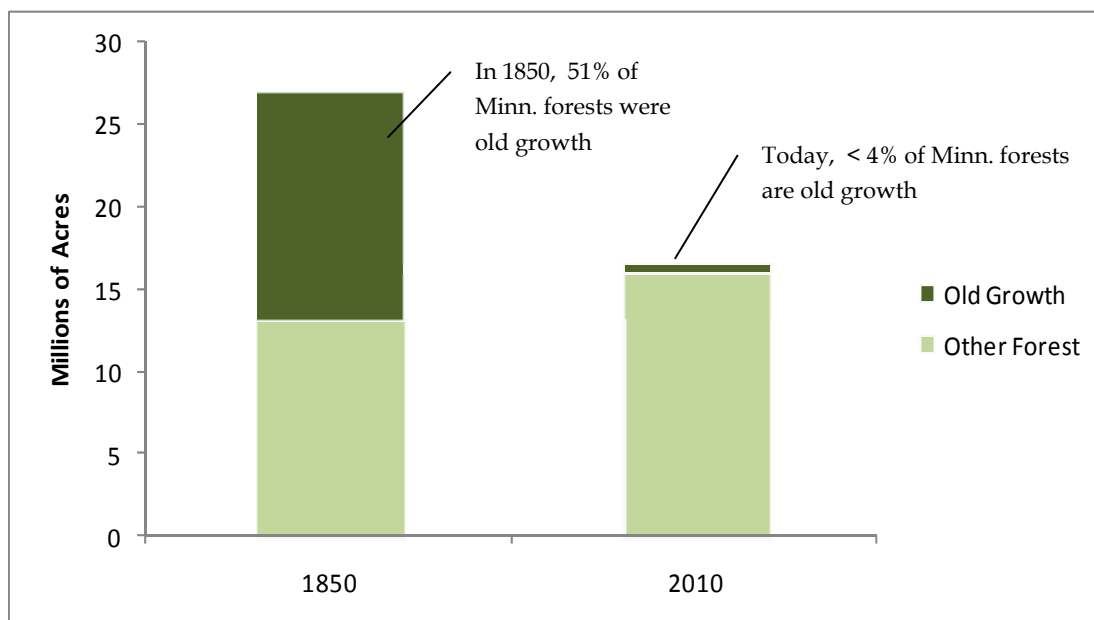
Old-Growth Fact Sheet

Old growth: Minnesota's rarest forests

Before European settlement, about half of Minnesota's forest were old growth. Today that figure is less than 4 percent.



**Old Growth in Minnesota Relative to Total Forest
1850 and 2010**

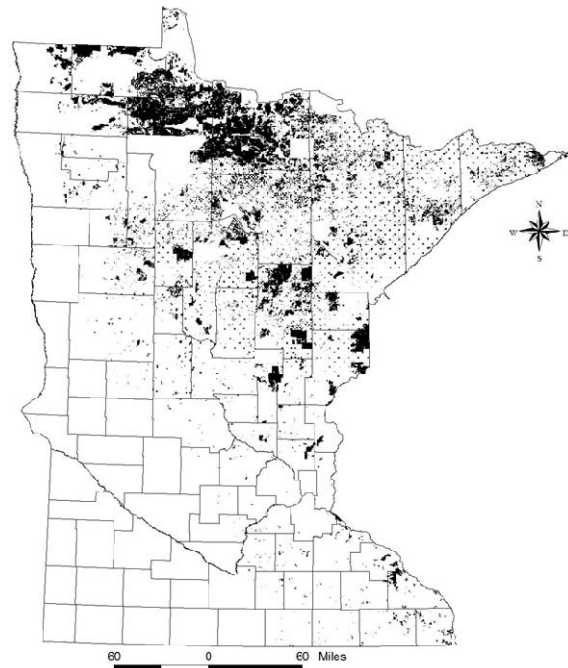


Old growth: an essential part of sustainable forest management (1 of 2)

Old-Growth forest protection is one component of sustainable forest management. Standards for sustainable forestry and old-growth protection are established in state law, third-party forest certification, and forest management guidelines.

Forest Certification

- Forest certification (specifically, third-party audited certification) is a credible system to evaluate and verify sustainable forest management practices.
- Sourcing from certified forests is now a prerequisite for doing forest product business (e.g., Time inc. requires sourcing 80% of its paper from certified forests and mills; Home Depot, Lowe's and IKEA all give preference to certified wood products.
- DNR achieved dual Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) certification in 2005. Minnesota forest market competitiveness improves with each additional certified land base.
- Protecting old-growth forests is required under FSC and SFI certification standards. Cutting timber is not permitted in old-growth forests.



DNR completed certification of 4.8 million acres of state-administered forest land in 2005. DNR's annual target is to maintain certification of these lands.



Minnesota's forest-dependent communities and businesses are looking for certified wood.

Old growth: an essential part of sustainable forest management (2 of 2)

State Forest Law

- The 1995 Sustainable Forest Resources Management Act (MS 89A) creates a foundation for management of forest resources:

“It is the policy of the state to pursue the sustainable management, use, and protection of the state’s forest resources to achieve the state’s economic, environmental, and social goals.”

Forest resources are defined as “. . .those natural assets of forest lands, including timber and other forest crops; biological diversity; recreation; fish and wildlife habitat; wilderness; rare and distinctive flora and fauna; air; water; soil; climate; and educational, aesthetic, and historic values.”

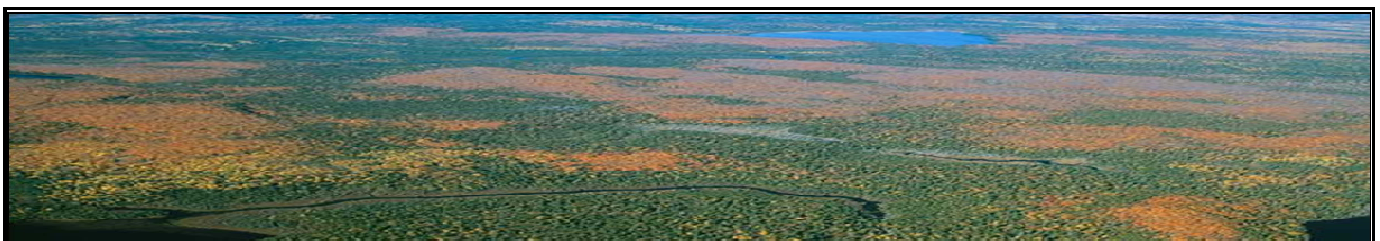
- Old-growth forests are a “forest resource” representing one of the rarest elements of biodiversity.

Timber Harvest Mitigation

- In 1994, a state-wide, Generic Environmental Impact Statement (GEIS) recommended old-growth protection to mitigate environmental impacts of timber harvesting.
- As a basic sustainability requirement, all GEIS impact scenarios assumed that state and federal managers would protect 115,000 acres of forest in old-growth reserves.



Photo by Gary Alan Nelson



Importance of old-growth forests (1 of 2)

Unique habitat

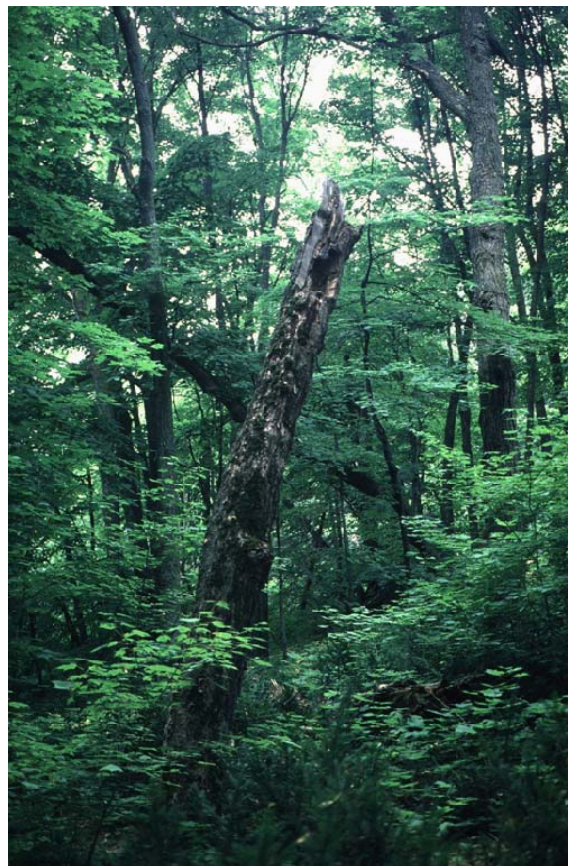
- Snags (dead trees) provide nesting, foraging, and denning sites for more than 40 species of forest birds and mammals.
- Old pine trees provide nesting sites for bald eagles and ospreys, and escape routes for young bears.
- Large fallen logs and branches provide habitat for animals such as salamanders and small mammals and plants such as yellow birch tree seedlings, mosses, and lichens.



A fisher den in cavity of old tree



Blue spotted salamander.



Tree snags with cavities are critical den sites for many species of birds and mammals.



Bald eagle nest in old-growth white pine

Importance of old-growth forests (2 of 2)

Species Benefits

- Woodpeckers, 39 species of songbirds, and cavity nesting waterfowl are more frequently found in old forest compared to younger forest
- More species of lichens and fungi are found in old-growth forests than in younger forests
- Mammals such as pine marten, fisher, bats and squirrels commonly use old forest habitat.



Pileated woodpecker

Scientific Benefits

- Old-growth forests serve as benchmarks to help foresters and ecologists understand how forests function. Knowledge gained from old-growth forests will improve our ability to manage forests for many benefits, including wood production.
- “To keep every cog and wheel is the first rule of intelligent tinkering” Aldo Leopold



Aesthetic Benefits

- People enjoy observing large, old trees while recreating in the outdoors

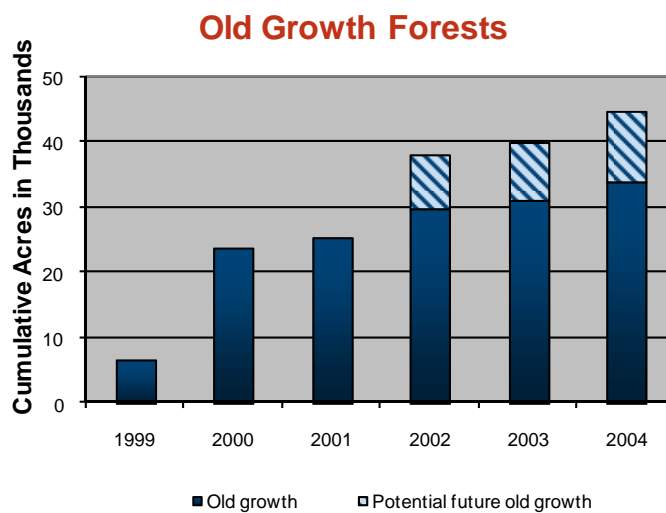
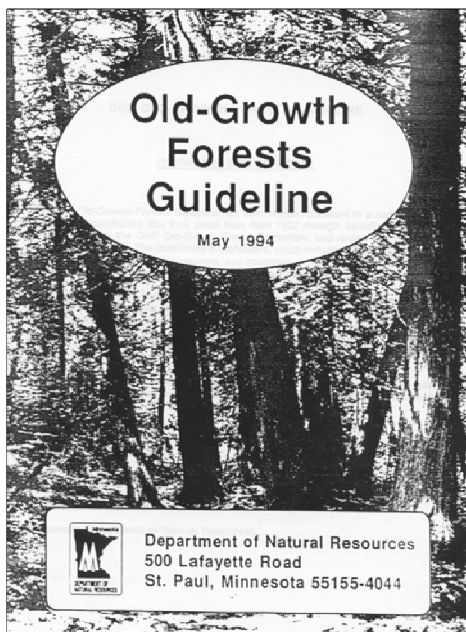


Lichen on old-growth trees. Photo by Gary Alan Nelson



DNR old-growth forest policy: A brief history

- **1983** – Old-growth forest issue emerges and DNR begins policy discussions on how much and where to protect old growth, using the Forestry/Wildlife Coordination Guidelines.
- **1988** – DNR forms task force to develop Old-Growth Forests Guidelines.
- **1990** – DNR Commissioner approves Old-Growth Forests Guideline following public review and in response to an out-of-court settlement.
- **1994** – Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota (GEIS) recommends process to inventory, designate, and reserve old-growth forest.
- **1994** – DNR Old-Growth Committee convenes a Stakeholders Round table of forest industry and environmental interests. Groups agree on goals for protecting the highest quality old-growth forests on state lands; Guideline is revised.
- **1998** – Old-Growth Guideline is implemented with systematic inventory, evaluation, and designation using an old-growth database.
- **2003** – Old-growth forest designation of highest quality stands completed.
- **2005** – DNR achieves forest certification under the Forest Stewardship Council and Sustainable Forestry Initiative certification standards. Old-growth forest protection is required under these standards.



Old-growth forest acres on DNR lands. DNR will maintain a 44,000-acre network.

DNR old-growth policy: An intractable conflict resolved *1990—1999: Controversy and polarized debate*

Kawishiwi Old-Growth Pines Threatened by Herb Johnson 1990

"I now feel that this whole concept [old growth] is being carried too far, and if left unchecked, will harm or kill the sawmill industry in Minnesota"

- Forest industry member

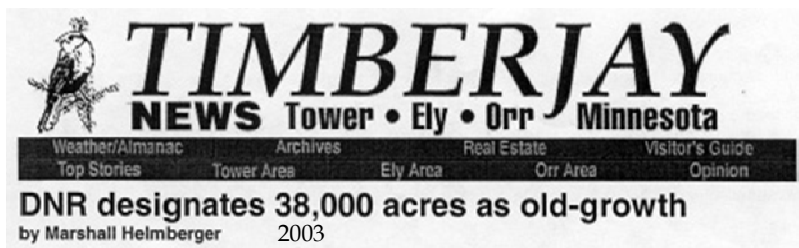
"I can not think of a more shameful legacy to our children than to cut down the last few big trees in the state"

- Biology teacher

**Fight over
old-growth
timber is
heating up**
DNR must decide:
to cut or not to cut

By Dean Rebuffoni
Staff Writer 1990

1999–2003: Policy implemented with informed consent

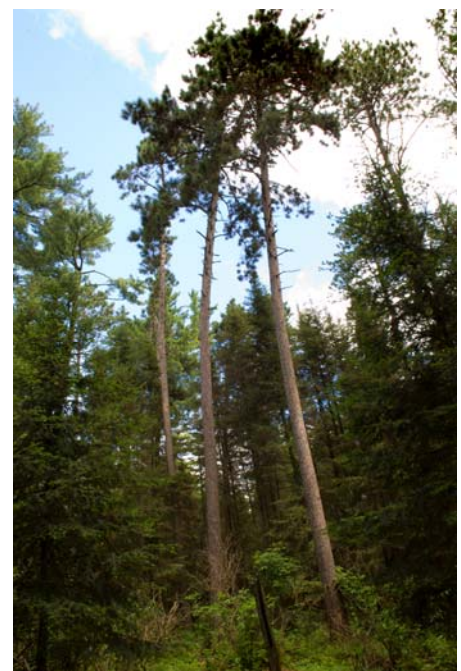


"Overall, I'd give the DNR a 'B' for the (old-growth) guidelines and implementation."

- Forest industry representative

"They've probably done the best job that they could"

- Audubon society representative



Pine Island on Lake Vermilion.

Photo by Gary Alan Nelson

Old-Growth Fact Sheet

The old-growth forest database system

An integrated database:

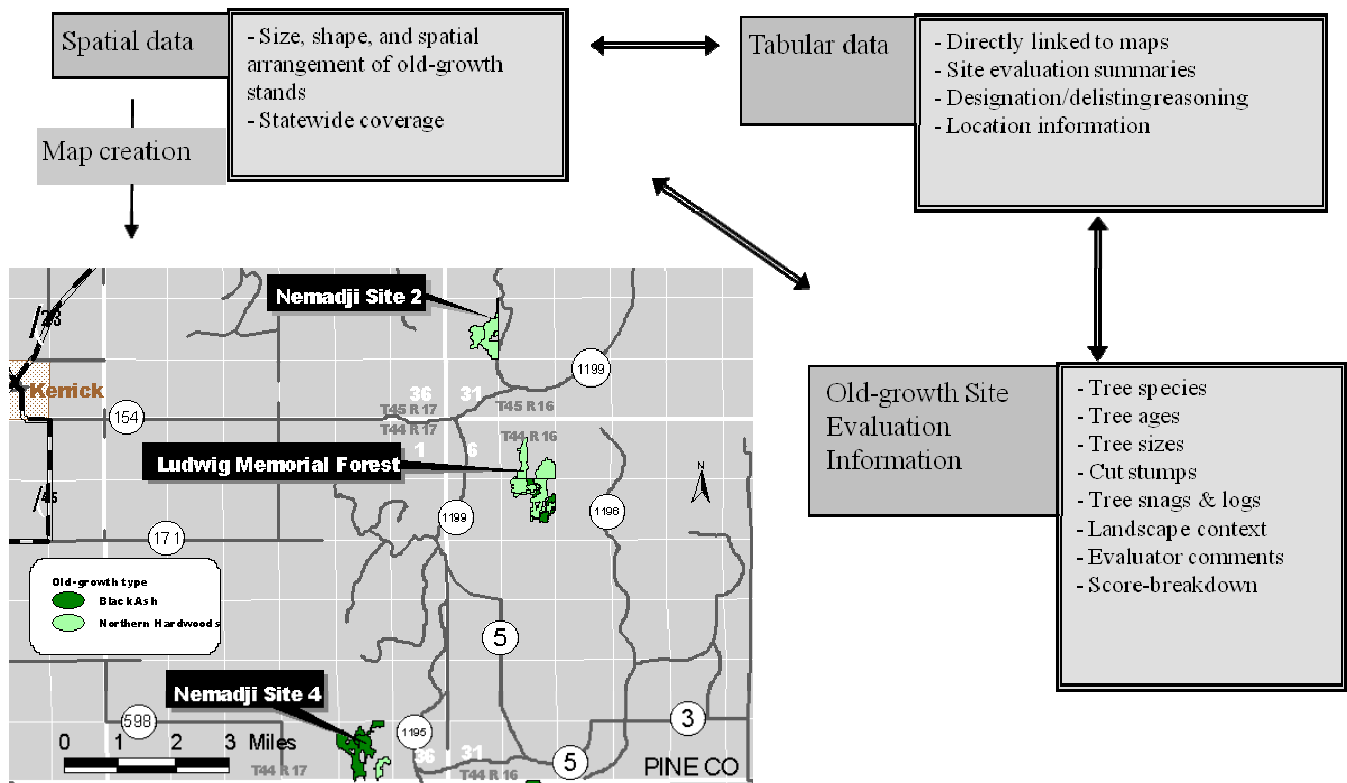
- houses standardized inventory, evaluation, and monitoring data, and
- provides the foundation for making, documenting, and reporting decisions on the status of old-growth forest on DNR-administered lands.



Old Growth Evaluation and Designation

More than 70,000 old-growth candidate acres were evaluated, of these:

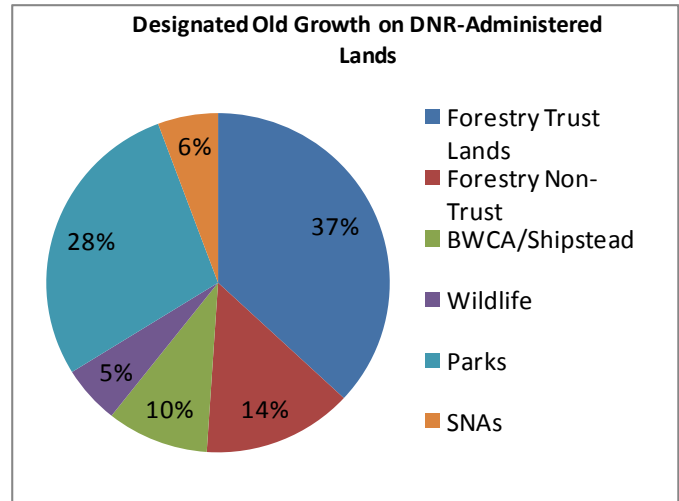
- 32,000 acres de-listed for other uses
- 44,000 acres designated as old-growth



Designated old-growth forest on DNR lands

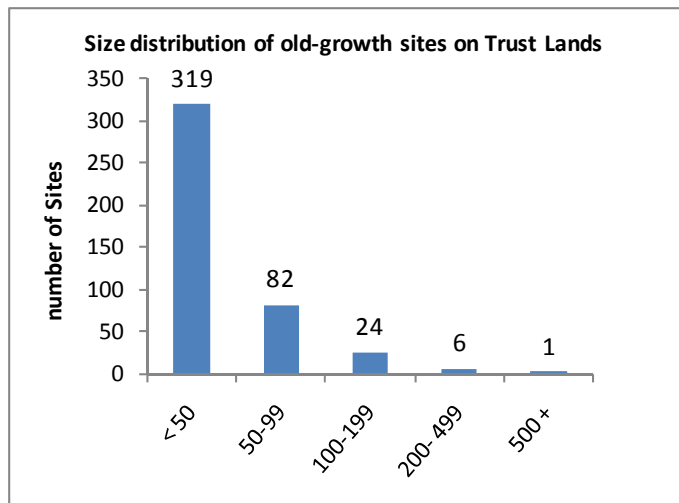
Acreage

- Total = 44,000 Acres
- Distributed across Wildlife, Parks, SNAs, Forestry, and BWCA lands
- Designated old growth = 0.9% of DNR forest lands
- Designated old growth on trust lands = 1.2% of commercial forested trust lands



Size and number of stands on Trust Lands

- 432 stands
- Average size = 43 acres
- 74% are < 50 acres
- Total old growth on trust lands = approximately 18,000 acres



Accessibility

- Remnant old-growth forest stands are often found on rocky, steep, swampy remote areas where loggers and fires never quite reached.
- Large stands of old-growth forest are mostly restricted to the Boundary Waters Canoe Area Wilderness and in Itasca State Park, the state's first public sanctuary (1938) for the protection of old-growth forest.



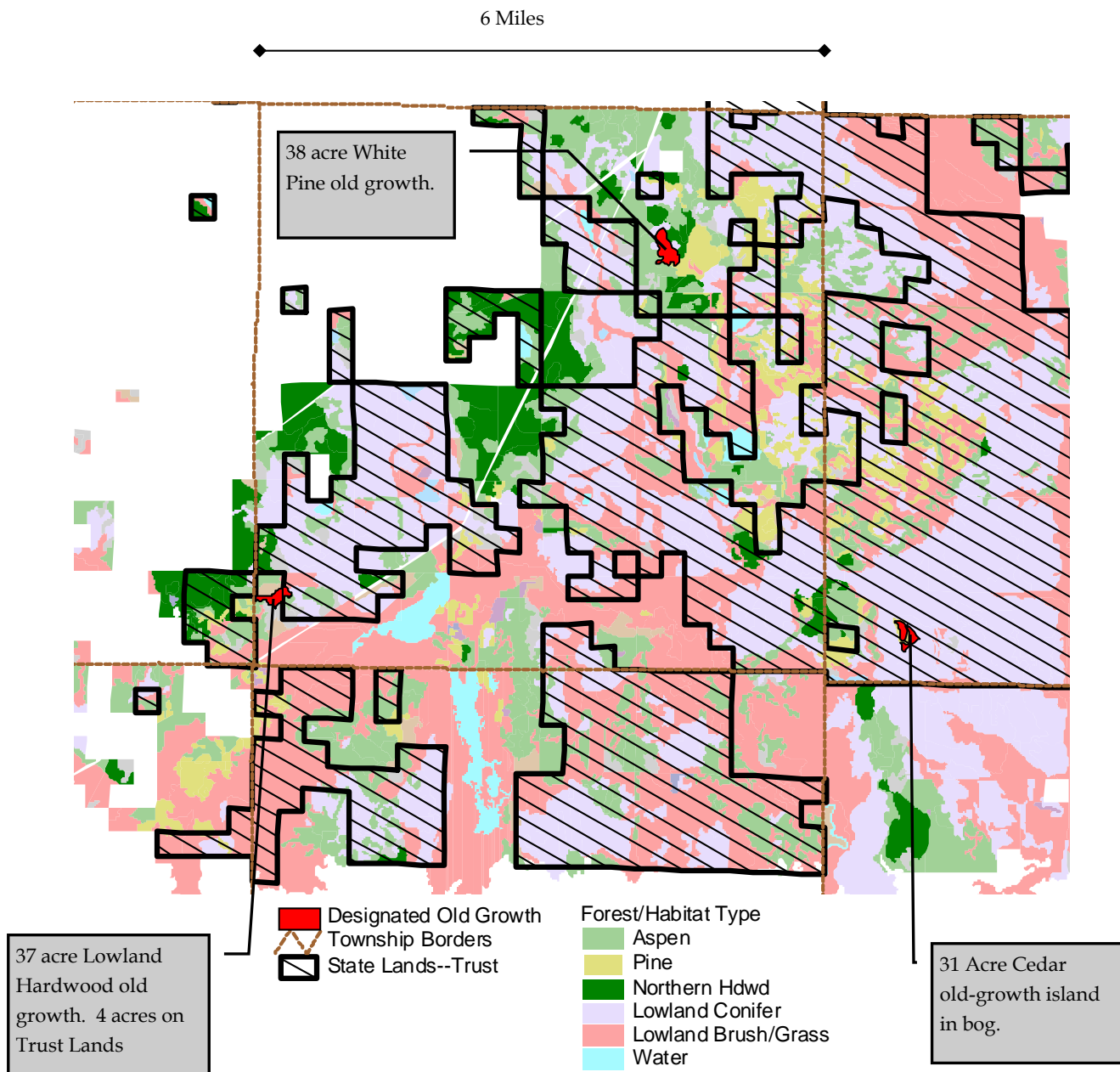
Old-growth red oaks – over 150 years old – growing on steep south facing ridges in Tettegouche State Park. Photo by Gary Alan Nelson

Old-Growth Fact Sheet

Designated old-growth on DNR Lands

Example from Aitkin County

- Designated old-growth stands (red) tend to be isolated, small, and scattered.
- Old growth (red) and different forest types (light colors) are natural features and do not follow administrative boundaries.
- Trust Lands (hatched) and non-trust lands (colored, non-hatched) are often intermingled in complex patterns.



Resources

"The provision for true old growth should be regarded as an essential activity of forestry just as the provision for wood, wildlife, recreation, and water"

Minnesota Society of American Foresters 1992

- MN DNR Old-Growth Website: http://www.dnr.state.mn.us/forests_types/oldgrowth/index.html
- MN DNR. 1994. Old-Growth Forests Guideline. St. Paul, MN: Department of Natural Resources.
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- MN DNR Forest Certification Website: <http://www.dnr.state.mn.us/forestry/certification/index.html>
- Jaakko Pöyry Consulting, Inc. 1994. Final Generic Environmental Impact Statement Study on Timber Harvesting and Forest Management in Minnesota. Tarrytown, NY: Jaakko Pöyry Consulting, Inc.



Old-growth white pine, photo by Steve Schneider / Photography