Section IV:

Managing Lands now and for the Future

The purpose of Section IV is to define the overall vision for County forest lands and the objectives, strategies and policies that will guide forest managers toward achieving that vision.

Vision and Mission

Beltrami County Vision Statement

For Beltrami County to be a friendly, healthy, safe, culturally sensitive community that encourages people to understand and value each other.

Beltrami County Mission Statement

To understand, value, serve, and protect the general health, safety, and welfare of the people to the best of our ability within the means afforded us by them and under law.

Natural Resource Management Vision Statement

It is the vision of the Natural Resource Management department to be stewards of County managed forestland by:

- Managing for long term forest health and productivity
- Achieving third party certification
- Providing opportunities for multiple public use
- Maintaining and improving the County's land base
- Sustaining a financial return that supports continued County stewardship of public lands
- Supporting the local timber industry and the regional economy

Natural Resource Management Mission Statement

Beltrami County Natural Resource Management's mission is to responsibly manage the approximate 147,000 acres of tax forfeited lands in Beltrami County in a sustainable manner that benefits the citizens of the County. The department is committed to a sustainable harvest and multiple use management of its lands. It also recognizes the impacts its activities can have on aesthetics, wildlife, riparian areas, cultural resources, soils, and water quality.

Adoption of and Forest Certification Principles

Third party certification is the key strategy for verifying the county's success in managing a healthy forest according to this plan. It is also critical for maintaining the competitiveness of county timber in the world market.

It is the stated goal of Beltrami County to become third party certified in all forest management activities. Therefore, certification principles and objectives for certified forests in our region are hereby incorporated by reference.

The Natural Resource Management department is committed to ensuring a sustainable harvest that maximizes local economic, social and environmental values. Achieving third party certification will communicate to the public, suppliers, purchasers and other

The purpose of this section is to broadly identify how the business of the NRM department will be conducted.

regional forest managers that Beltrami County has achieved a high standard in sustainable forest management practices.

Organizational Structure

The purpose of this section is to broadly identify how the business of the NRM will be conducted. For simplicity, general objectives and strategies are listed that describe how to capitalize on the strengths or modify the weaknesses of the current management structure as outlined in Section II.

Objectives/Strategies

- Continue to emphasize a model where one forester is responsible for each management district or special use area, thereby vesting responsibility and accountability for that district in one person.
    - Designate one forester per management district, special use areas and recreation facilities.
    - Continue the certification audit process to ensure accountability.

- Support recreation uses through the dedication of professional staff to manage the County's recreational plans and facilities.
    - Continue support for a Recreation Resource Manager.

- Support and improve internal office functions through increased use of technology to track and report on required paperwork while providing greater employee mobility and efficiency.
    - Continually identify software and hardware solutions that help to streamline and automate basic office functions.
    - Provide formal and ongoing informal training on the use of new products.
    - Eliminate redundant systems.

- Increase integration and use of technology in the field and office to track sales and inventory for management purposes.
    - Continually identify software and hardware solutions that help streamline and automate forest management information collection and use
    - Provide formal and ongoing informal training on the use of new products.

The following objectives and policies represent a 10-year planning horizon for organizational and management purposes.

Count-Wide NRM Objectives:

1. *Protect the integrity and longevity of forest lands under NRM management*
2. *Comply with all applicable laws, regulations and voluntary guidelines*
3. *Pursue third party certification of forest management*
4. *Require ongoing professional development for staff and contractors*
5. *Promote and incorporate applied research and technology*
6. *Solicit public input to supplement forest management decision making*
7. *Enhance public recreation and use values for the forest*
8. *Provide public education on forest ecology, sustainable forest management and the economic value of forests*
9. *Encourage efficient use of the forest's products for environmental, economic and social benefits*
10. *Improve internal processes and data collection/utilization*
11. *Communicate our performance to the County Board and public*

County-wide NRM Objectives/Policies

The following eleven objectives and their subsequent policies provide planning-level guidance to NRM staff in setting specific operational policy and identifies key opportunities and challenges that need to be addressed to help achieve the county's vision.

On May 2, the county board approved the Sustainable Forest Management Policy (LD-P1) and Statement of Operational Commitments, which provide additional detail and support for these policies.

1. Protect the integrity and longevity of forest lands under NRM management
   - 1.1 All short term harvest plans will be consistent with the Forest Management Plan's long term forest modeling projection for a sustainable harvest.
   - 1.2 Promote a variety of native forest cover types across the forest.
   - 1.3 Forest managers will develop regeneration plans for all treated stands that consider the water, ecological classification, health, soils and historical cover type for that site.
   - 1.4 Maximize the use of voluntary guidelines to preserve water quality and protect lake, stream and wetland integrity.
   - 1.5 Consistently enforce all harvest contract requirements and site-level guideline prescriptions.
   - 1.6 Implement appropriate silvicultural techniques and intermediate treatments that improve the long-term health and productivity of stands prior to final harvest, including thinning of commercial stands and biomass removal in commercial and non-commercial stands following guidelines prepared by the Minnesota Forest Resources Council (MFRC).
   - 1.7 Continue working relationships with adjacent forest managers to promote the overall diversity, health and use of the forest across the landscape.
   - 1.8 Control road construction to reduce impacts on the environment, minimize the construction of new permanent roads and ensure the decommissioning of all temporary roads.
   - 1.9 Encourage the MnDNR to conduct a County Biological Survey.

Polidy LD-PS5 promotes diviersity at the stand and landscape level, maintains and improves wildlife habitata and fosters a greater understanding of the biophysical and social influenced on the landscape.

Policyt LD-OP2 sets the framework for ensuring that harvest activities are consistant with the county's commitments and are executed effectively and efficiently.

1.10 Cooperate with the County Highway Department, MNDNR and local trappers to reduce the amount of beaver damage on county land.

1.11 Encourage hunting and trapping on all County forest land where practical to promote forest appreciation and maintain manageable populations of game species.

2. Comply with all applicable laws, regulations and voluntary guidelines
   - 2.1 The Minnesota Forest Resources Council's *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines* will guide all site-level decision making.
   - 2.2 Ensure compliance with all federal, state, and local laws.
   - 2.3 Maximize the effectiveness of and minimize the use of chemical treatments through the implementation of best management practices, ecological classification and following all herbicide label application guidelines.

3. Pursue third party certification of forest management
   - 3.1 Conduct third party performance audits to achieve and maintain certification.

4. Require ongoing professional development for staff and contractors
   - 4.1 Require staff to attend continuing forestry education per departmental policy LD-MS5.
   - 4.2 Require responsible operators to have achieved MLEP training consistent with board policy.
   - 4.3 Develop high-level capacity within the staff team on native plant community classification, GIS and related technologies, forest inventory management, recreation management and a variety of silvicultural treatments.

5. Promote and incorporate applied research and technology
   - 5.1 Continue to be an active participant and supporter of the Minnesota Forest Resource Council's North

The County's Recreational Trails Plan and Parks and Recreation Areas Plan provide additional detail on the management of the County's recreational resources.

Central Landscape Committee and its research efforts.

5.2 Create an environment for staff to regularly discuss opportunities and challenges within their areas of responsibility, with the goal of matching solutions with problems department-wide.

5.3 Establish pilot projects where feasible to test new technology, silvicultural techniques or equipment that may help the County achieve its forest vision.

6. Solicit public input to supplement forest management decision making

6.1 Create a County Forest Advisory Council to serve as an advisory body providing recommendations to the Beltrami County Board and Natural Resource Management on policy issues related to sustainable forest management and long term forest management plans.

6.2 Develop a well-documented response mechanism to deal with public inquiries and complaints in a timely and accountable manner.

6.3 Nurture a working relationship with adjoining forest management agencies, including federal, state, county and tribal natural resource departments.

7. Enhance public recreation and use values for the forest

7.1 Adopt and implement a county-wide recreational trails plan and a park and recreation areas plan that is multiple-use oriented and provides a well-designed experience for users.

7.2 Encourage the use of portable hunting stands and establish rules to minimize damage to trees from hunting operations and support state efforts to regulate permanent hunting stands on public lands

7.3 Continue use of visual harvest techniques along all public roads and along waterways that are consistent with visual management guidelines.

7.4 Foresters will manage the use of roads to correct impacts as identified in the County Recreational Trails Plan and to protect the forest and habitat resource.

7.5 Continue forest management and silvicultural treatments within recreation areas with a higher level of awareness of visual and multiple use impacts than on non-recreation sites.

8. Provide public education on forest ecology, sustainable forest management and the economic value of forests.
   - 8.1 Create a semi-annual department e-newsletter to communicate department activities and accomplishments to partners, industry and the public.
   - 8.2 Conduct an annual public presentation on sustainable county forest management.
   - 8.3 Support the work of the local Timber Producers Association to publish the economic impact of forest management on the local and regional economy.
   - 8.4 Create opportunities within designated recreation areas to showcase and explain forest management practices.
   - 8.5 Highlight the positive impact of County forest management to local government budgets.
   - 8.6 Create media opportunities at least twice per year to highlight county forest management practices, impacts and successes.
   - 8.7 Continue to participate in the local Bemidji Forestry Affairs Council.

9. Encourage efficient use of the forest's products for environmental, economic and social benefits
   - 9.1 Mandate harvest techniques that reduce waste and minimize site impact for every timber sale or intermediate treatment.
   - 9.2 Promote and support the full utilization or recycling of all harvested forest products within the manufacturing process or through secondary markets, such as biomass fuels.
   - 9.3 Conduct all major forest operations on a competitive open market business model.
   - 9.4 Utilize secondary forest products in a fee for harvest permit system that covers the real cost of implementation.
   - 9.5 Support local contractors, loggers and manufacturing facilities where feasible through the contracting process and County economic development strategy.
   - 9.6 Encourage the market for marginal or new forest products, such as small diameter trees or brush.
   - 9.7 Reduce the burning of residual slash.

10. Improve internal processes and data collection/utilization

10.1 Continue to streamline internal documents, databases and recordkeeping into a computerized system.
10.2 Update the forest inventory database on a continuous basis.
10.3 Use the project planning and inspection database as the basis for planning and tracking all projects.
10.4 Utilize Forest Development Records database for documenting actual reforestation activities

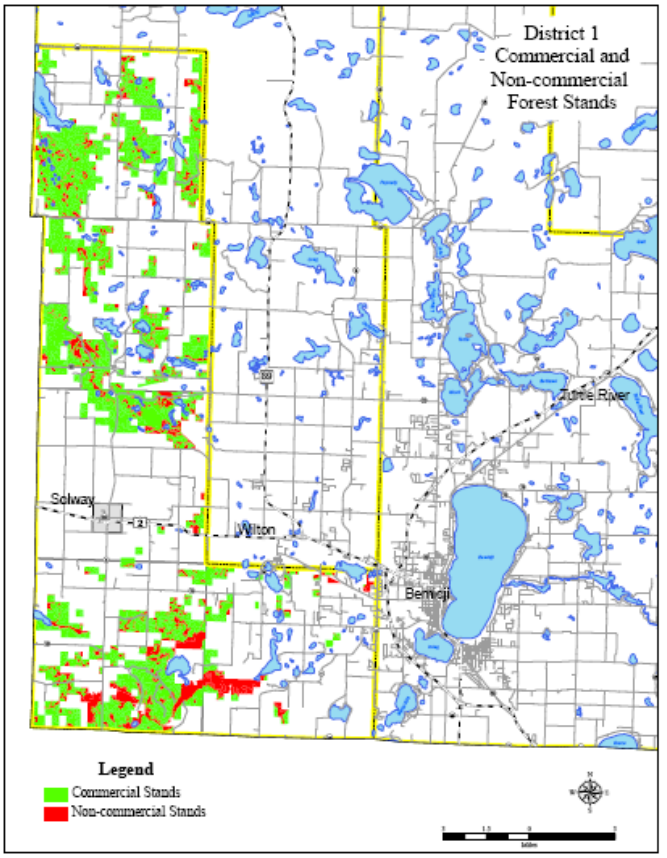
11. Communicate our performance to the County Board and public
11.1 Collect and report data on harvest sales, permits, regeneration activities, recreation investments/facilities and partnership activities to the County Board at least annually.
11.2 Provide a written copy of that report on the County NRM website.
11.3 Annually report activities as required by the SFI standard.

This section outlines the 10 year management objectives unique to or receiving special emphasis within each forestry district, in addition to the forest-wide objectives and policies.

Management Unit Objectives

This section identifies the broad vision and objectives to deal with management issues in each district of the NRM department. These objectives were created through the detailed cooperation of each district forester.

Map 4-1



<u>District 1</u>

Vision: To create a more natural appearing landscape providing wildlife habitat diversity and positive visual impact.

Objectives:

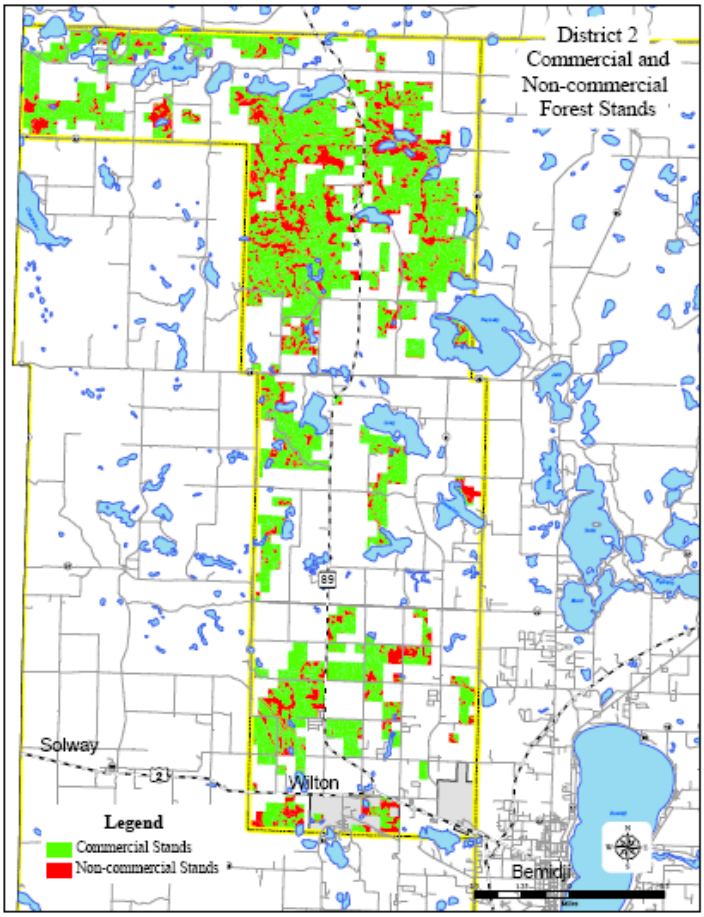
- Carefully design harvests to protect the

- Mississippi and Clearwater Rivers for water quality and recreation purposes.
- Work with other staff and the North Central Landscape Committee to find effective solutions to a heavy deer predation problem on new pine plantations.Create more legacy patches of mature red and white pine.
- Select unique stands for no harvest/old forest classification.

District 2

Vision: Create a younger, healthier population of trees with larger stands and more interior space.

Map 4-2



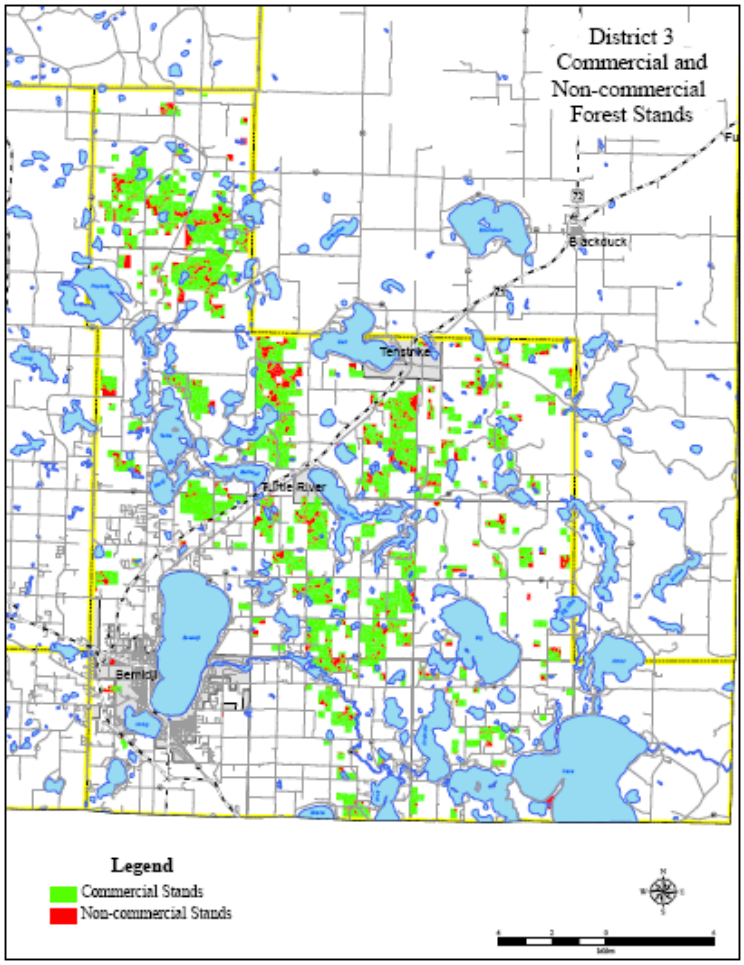
Objectives:

- Harvest old stands in a pattern that will produce revenue during gaps in age classes.
- Work with the Recreation Manager to keep public use of the forest while reducing impacts from permanent deer stands and ATV access.
- Maintain the island on Puposky Lake as an old growth forest.
- Regenerate the existing species whenever possible.

Map 4-3

District 3

Vision: Maintain a healthy forest base that provides a sustainable harvest while meeting the needs of an increasingly suburbanizing district.



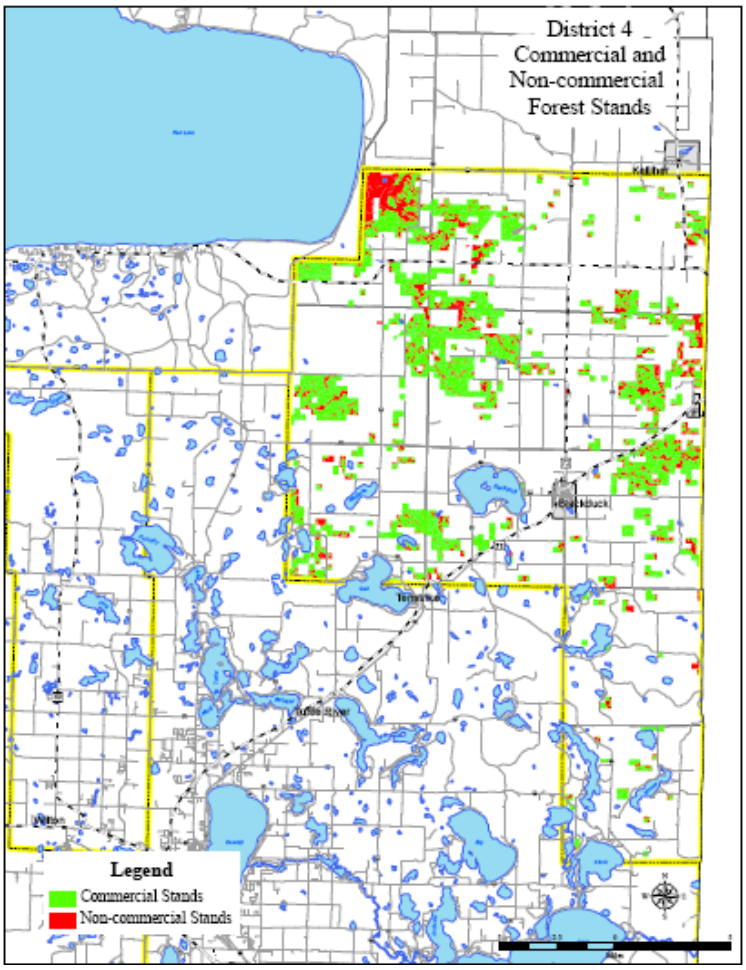
Objectives:

- Create a diverse forested landscape with stand designs that facilitate treatments and buffers compatible with the urban interface zone.
- Work with the County Recreation Manager to ensure good management of recreation area forests.
- Develop a working relationship with state and tribal land managers in the area.
- Carefully design harvests to protect the Mississippi River for water quality and recreation purposes.

District 4

Vision: To develop a forest with a balanced age structure that supports the local hunting, recreational and cultural use requirements.

Map 4-4



Objectives:

- Intensively manage aspen to harvest old, degrading stands and regenerate new aspen.
- Develop a working relationship and open communication with private landowners and citizens in the area.
- Maintain and improve the hunting habitat of this area.

The North Central Landscape DFFC *provides a broadly defined goal for forests of the Northern Minnesota Drift and Lake Plans. Beltrami County has actively participated in the creation of this DFFC by the Minnesota Forest Resource Council Landscape Committee. Specific goals are listed in this section that supports the DFFC where practical.*

Desired Future Forest Condition

The following Desired Future Forest Conditions Statement was developed by the North Central Landscape Committee of the Minnesota Forest Resources Council. This broad DFFC was created through a separate public involvement process that included Beltrami County. Specific Landscape Ecosystem Objectives for Beltrami County are listed below that support the DFFC where practical.

The future forest of the North Central landscape will have the following characteristics when compared to the current forests of the year 2000.

- There will be an increased component of red, white and jack pine, cedar, tamarack, spruce and fir.
- The forest will have a range of species, patch sizes, and age classes that more closely resemble natural patterns and functions within this landscape.
- The amount of forestland and timberland will not decrease using FIA definitions for timberland and forestland. Large blocks of contiguous forest land that have minimal inclusion of conflicting land uses will be created and/or retained for natural resource and ecological benefits and to minimize land use conflicts (hereafter referred to as “natural resource emphasis areas”).
- In large blocks of contiguous forestland retain critical natural shoreline on lakes for scenic, wildlife, water quality and other natural resource values.

Landscape Ecosystem Objectives

Ecosystem Objectives provide broad direction for covertype and resource management within each Landscape Ecosystem. The timeframe for these objectives is 60 years.

The following objectives highlight the resource-based objectives for each landscape ecosystem. The objectives listed here reflect Beltrami County’s contribution to the North Central Landscape’s goals and objectives.

Foresters will look for opportunities to implement strategies that contribute to landscape ecosystem objectives during the timer sale planning process.

<u>Forest-wide</u>
Objectives

- Maintain Red Pine covertype acreage
- Increase White Pine covertype component
- Increase Jack Pine covertype component

Operational policies for inventory and survival checks are found in the Resource Data Management Policy (LD-PS2)

Increase Spruce and Fir covertype component
- Engage in land exchanges to consolidate ownership

Boreal Hardwood-Conifer
Objectives
- Increase White Pine, Upland Tamarack/Cedar and Spruce/Fir component
- Maintain Aspen acreage
- Emphasize mixed stands

Strategies
- Manage 70+ year old aspen to retain existing natural conifer regeneration.
- Regenerate to aspen if no natural conifer regeneration exists
- Focus short-term management on 81+ year old aspen

Dry-Mesic Pine
Objectives
- Maintain existing covertype acres of Red Pine, White Pine and Tamarack
- Increase oak/hardwood composition

Strategies
- Restore white pine in aspen stands in the 41-80 year growth stage
- Introduce White Pine in Red Pine in 21-40 year growth stage

Beltrami County Landscape Ecosystems:
- *Boreal Hardwood-Conifer*
- *Dry-Mesic Pine*
- *Mesic-Northern Hardwood*
- *Dry-Mesic Pine Oak*
- *Dry Pine*

Mesic-Northern Hardwood
Objectives
- Maintain aspen acreage using even-aged management
- Establish or maintain conifers as stand components at 21-40 year old growth stage

Strategies
- Use shelterwood harvests in northern hardwoods and underplant conifers
- Maintain aspen inclusions on good sites

Dry-Mesic Pine Oak
Objectives
- Increase jack pine and oak in 1-20 and 21-40 year old growth stages

- Increase red and white pine in the 81+ year old growth stage

Strategies
- Manage pine and longer-lived hardwoods by retaining and/or underplanting
- Manage pine and hardwood in mixed stands
- Underplant red pine in 21-40 year old growth stage with white pine
- Focus short-term harvest on regenerating 60-70 year old jack pine and aspen

Dry Pine
Objectives
- Increase younger age classes of jack pine (0-40)
- Increase older growth stages (81+) of red and white pine

Strategies
- Focus harvests in the 41-80 year growth stage to regenerate jack pine
- Regenerate to mixed pine stands, harvesting jack pine and holding red and white pine

Other
Minimize loss of forest and timberland by:
- Educating landowners of the value of forestland
- Encourage establishment of forests in areas previously forested

Retain contiguous blocks of forest by:
- Encouraging the creation/retention of “natural resource emphasis areas”
- Minimizing parcelization
- Minimize the loss of publicly held shorelines by discouraging the sale and development of publicly held shorelines.
    - Establish an accountability system compatible with third party certification standards that ensures the continual updating of management information.

- Identify and develop specialized skill sets in forestry staff that will allow them to collaborate on solutions to tough issues.
    - Encourage staff to receive training on topics of professional interest to that person.

- Create in-house professional development sessions led by individual staff members on a rotating basis.
- Establish a regular forum for staff members to discuss forestry issues that another staff member may have experience/training with.
- Add additional technical staff when needed for growth.

Beltrami County DFFC Summary

The following table describes the target rotation age for Beltrami County forest cover types. Each species is listed by normal rotation age, as well as the extended rotation (ERF) age for a select number of stands.

Important Note:
Each stand is identified by its primary cover type, meaning that it is the most prevalent species within that stand. Intra-stand diversity is common in Beltrami County forests, and will continue to be. Forest managers will provide for and encourage intra-stand diversity, while setting overall stand management goals based on the primary cover type.

DFFC Summary Table
Rotation ages shown are modified from the Division of Forestry Recommended Rotation Ages for Forest stands in the Chippewa Plans.

Treatment Acres
Normal – Those acres considered part of normal management.

ERF – Extended Rotation Forest, or those areas that receive special management consideration and are harvested on a longer rotation.

Beltrami DFFC Summary Table – Rotation Age

Commercial Types Only	Treatment	Percent ERF	Rotation Age
Cover type 1	**Normal**		**100**
Ash	**ERF**	**10**	**125**
Cover type 9	**Normal**		**100**
Lowland Hardwoods	**ERF**	**10**	**125**
Cover type 12	**Normal**		**45**
Aspen	**ERF**	**5**	**60**
Cover type 13	**Normal**		**50**
Birch	**ERF**	**5**	**65**
Cover type 14	**Normal**		**40**
Balm of Gilead	**ERF**	**5**	**60**
Cover type 20	**Normal**		**95**
Northern Hardwood	**ERF**	**10**	**120**
Cover type 30	**Normal**		**100**
Oak	**ERF**	**10**	**125**
Cover type 51	**Normal**		**130**
White Pine	**ERF**	**10**	**200**
Cover type 52	**Normal**		**100**
Red Pine	**ERF**	**10**	**170**
Cover type 53	**Normal**		**50**
Jack Pine	**ERF**	**5**	**65**
Cover type 61	**Normal**		**55**
White Spruce	**ERF**	**5**	**75**
Cover type 62	**Normal**		**45**
Balsam Fir	**ERF**	**5**	**60**
Cover type 71	**Normal**		**95**
Black Spruce, Lowland	**ERF**	**10**	**130**
Cover type 72	**Normal**		**60**
Tamarack	**ERF**	**10**	**105**

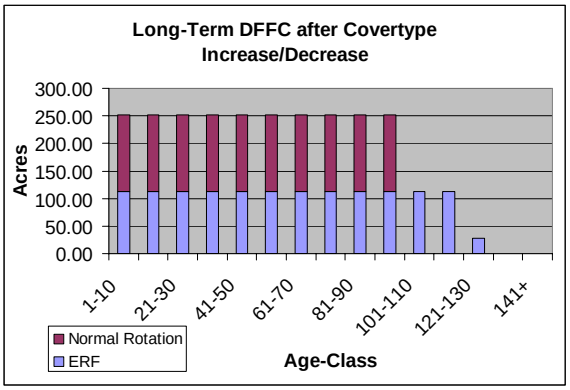
Note:
Extended rotation areas will typically include those conservation areas identified in Section II, based on the specific management requirements listed for the site.

DFFC by Species

Each species has an identified DFFC, as depicted below. The targeted number of acres in each age class, both for the normal rotation stands and extended rotation stands, are shown for each species.

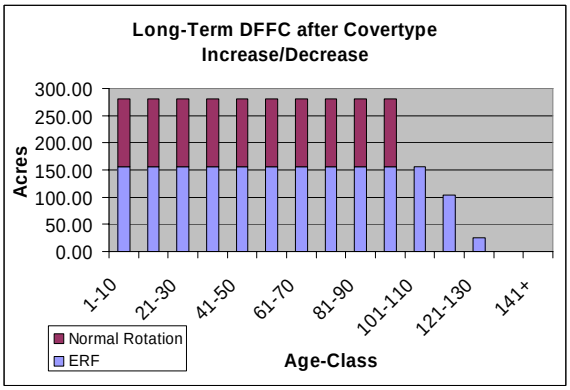
Ash

There are a total of 2,799 acres of ash-dominant stands in Beltrami County. The normal rotation for ash is 100 years, with 10% (280 acres) held in extended rotation until 125 years. Forest managers will target approximately 250 acres of ash in each age class through the normal rotation age.



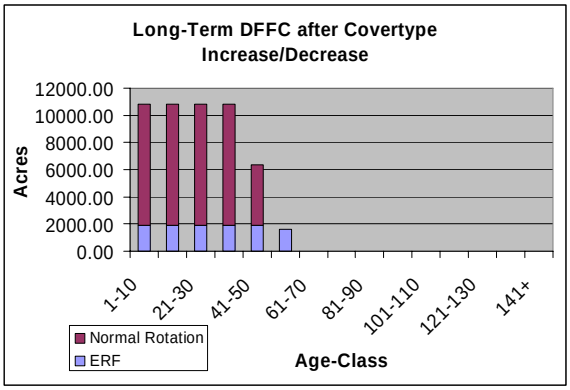
Lowland Hardwoods

There are a total of 3,115 acres of lowland hardwood-dominant stands in Beltrami County. The normal rotation for lowland hardwoods is 100 years, with 10% (312 acres) held in extended rotation until 125 years. Forest managers will target approximately 125 acres of lowland hardwoods in each age class through the normal rotation age.



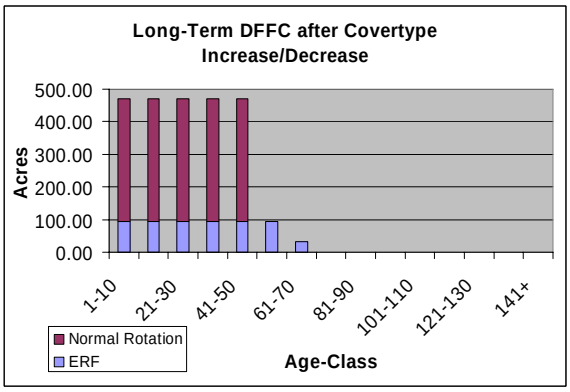
Aspen

There are a total of 51,131 acres of aspen-dominant stands in Beltrami County. The normal rotation for aspen is 45 years, with 5% (2557 acres) held in extended rotation until 60 years. Forest managers will target approximately 8,877 acres of aspen in each age class through the normal rotation age.



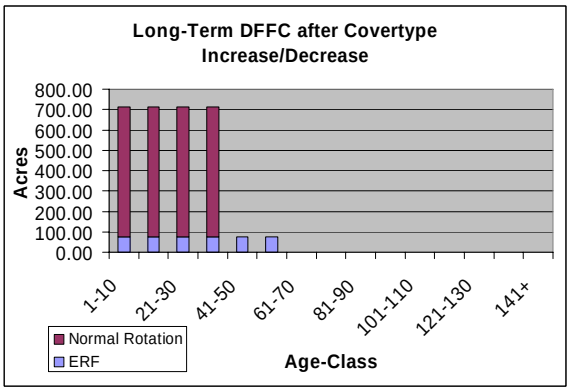
Birch

There are a total of 2,478 acres of birch-dominant stands in Beltrami County. The normal rotation for birch is 50 years, with 5% (124 acres) held in extended rotation until 65 years. Forest managers will target approximately 378 acres of birch in each age class through the normal rotation age.



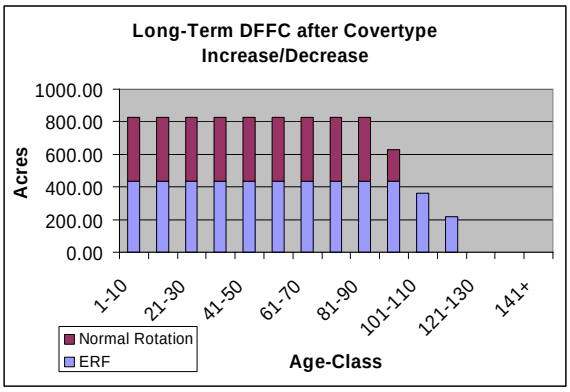
Balm of Gilead

There are a total of 3,001 acres of Balm of Gilead-dominant stands in Beltrami County. The normal rotation for Balm is 40 years, with 5% (150 acres) held in extended rotation until 60 years. Forest managers will target approximately 638 acres of Balm in each age class through the normal rotation age.



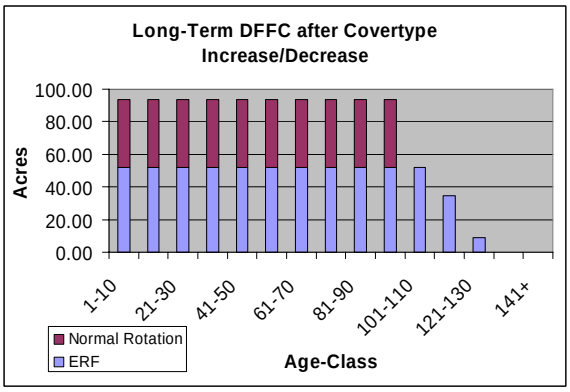
Northern Hardwoods

There are a total of 8,707 acres of northern hardwoods-dominant stands in Beltrami County. The normal rotation for northern hardwood is 95 years, with 10% (871 acres) held in extended rotation until 120 years. Forest managers will target approximately 390 acres of northern hardwoods in each age class through the normal rotation age.



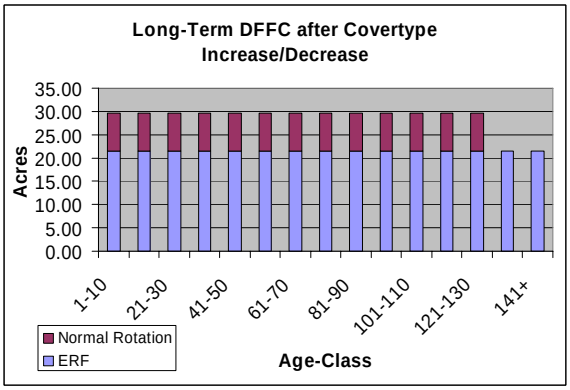
Oak

There are a total of 1,040 acres of oak-dominant stands in Beltrami County. The normal rotation for oak is 100 years, with 10% (104 acres) held in extended rotation until 125 years. Forest managers will target approximately 42 acres of oak in each age class through the normal rotation age.



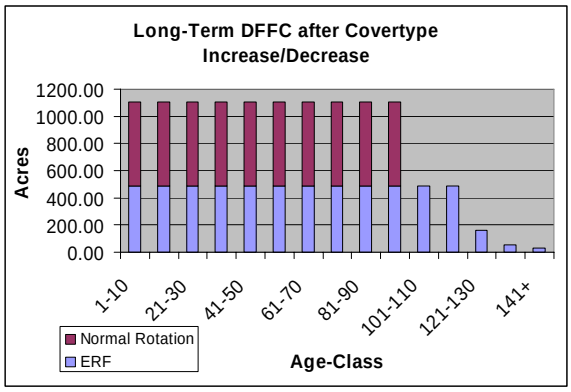
White Pine

There are a total of 428 acres of white pine-dominant stands in Beltrami County. The normal rotation for white pine is 130 years, with 10% (43 acres) held in extended rotation until 200 years. Forest managers will target approximately 8 acres of white pine in each age class through the normal rotation age.



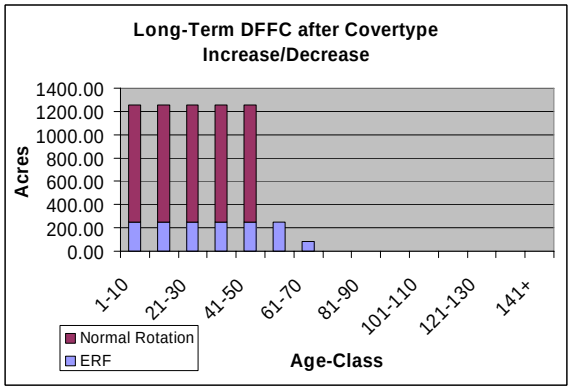
Norway Pine

There are a total of 12,242 acres of Norway pine-dominant stands in Beltrami County. The normal rotation for Norway pine is 100 years, with 10% (1224 acres) held in extended rotation until 170 years. Forest managers will target approximately 612 acres of Norway pine in each age class through the normal rotation age.



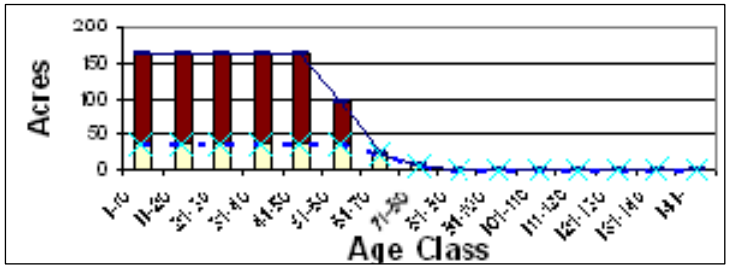
Jack Pine

There are a total of 6,616 acres of jack pine-dominant stands in Beltrami County. The normal rotation for jack pine is 50 years, with 5% (331 acres) held in extended rotation until 65 years. Forest managers will target approximately 1009 acres of jack pine in each age class through the normal rotation age.



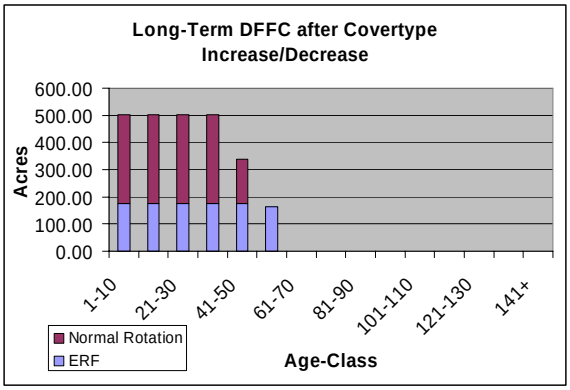
White Spruce

There are a total of 6,616 acres of white spruce-dominant stands in Beltrami County. The normal rotation for white spruce is 55 years, with 5% (218 acres) held in extended rotation until 75 years. Forest managers will target a limited number of acres of white spruce in each age class through the normal rotation age.



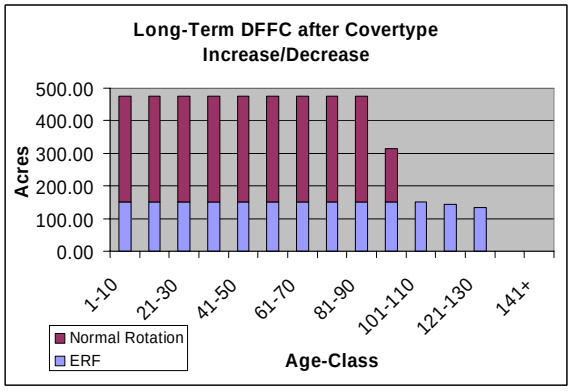
Balsam Fir

There are a total of 2,511 acres of balsam fir-dominant stands in Beltrami County. The normal rotation for balsam is 45 years, with 10% (251 acres) held in extended rotation until 60 years. Forest managers will target approximately 326 acres of balsam in each age class through the normal rotation age.



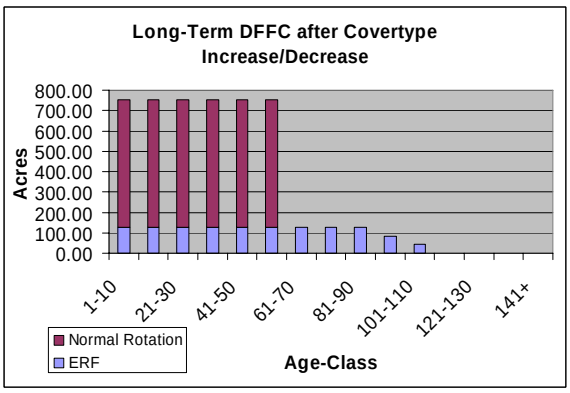
Black Spruce

There are a total of 5,024 acres of black spruce-dominant stands in Beltrami County. The normal rotation for black spruce is 95 years, with 10% (502 acres) held in extended rotation until 130 years. Forest managers will target approximately 325 acres of black spruce in each age class through the normal rotation age.



Tamarack

There are a total of 5,024 acres of tamarack-dominant stands in Beltrami County. The normal rotation for tamarack is 60 years, with 10% (502 acres) held in extended rotation until 105 years. Forest managers will target approximately 628 acres of tamarack in each age class through the normal rotation age.



Non-Commercial Stands

There are a number of stands across the County's forest that are not listed here as a commercial species. Some of those species, such as lowland brush, are not currently considered a commercial cover type. Others, such as white cedar, have commercial value but do not have any stands under consideration for treatment during the 60 year planning horizon.

These non-commercial stands vary widely in site capability and characteristics. Some stands may harbor rare species. Management alternatives are either undesirable or not well understood and require further consideration. Until such time, it is recommended that these stands be unmanaged, except as needed to deal with special threats or new market opportunities after extraordinary consideration.

The long term harvest schedule projects the number of acres to be harvested each decade to achieve the DFFC. Intermediate treatments such as thinning are not included in these totals.

Long Term Harvest Schedule

The following tables describe the expected number of acres in normal and extended rotation for each species, as well as the number of acres to be harvested over the course of each decade within the planning timeframe. The total treatment indicated for each decade only describes harvest treatments. Intermediate silvicultural treatments may be possible or desirable in certain instances, at the discretion of the district forester, and may impact the County's total sales. Detailed harvest projections are available at the NRM department.

Ash	Acre per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	1594	1594	1594	1594	1594	1594
	Extended Rotation	1205	1205	1205	1205	1205	1205
	Total Inventory	**2799**	**2799**	**2799**	**2799**	**2799**	**2799**
	Normal Treated	500	264	241	231	140	134
	Extended Treated	112	112	112	112	112	112
	Total Treated	**612**	**376**	**353**	**343**	**252**	**246**

Lowland Hardwoods	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	2032	2032	2032	2032	2032	2032
	Extended Rotation	1083	1083	1083	1083	1083	1083
	Total Inventory	**3115**	**3115**	**3115**	**3115**	**3115**	**3115**
	Normal Treated	597	409	173	200	188	189
	Extended Treated	156	156	156	156	156	135
	Total Treated	**753**	**565**	**329**	**356**	**344**	**324**

Aspen	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	39416	39416	39416	39416	39416	39416
	Extended Rotation	11715	11715	11715	11715	11715	11715
	Total Inventory	**51131**	**51131**	**51131**	**51131**	**51131**	**51131**
	Normal Treated	8877	3590	4619	8877	8877	8877
	Extended Treated	1917	1917	1917	1917	1917	1917
	Total Treated	**10794**	**5507**	**6536**	**10794**	**10794**	**10794**

Birch	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	2206	2206	2206	2206	2206	2212
	Extended Rotation	272	272	272	272	272	272
	Total Inventory	**2478**	**2478**	**2478**	**2478**	**2478**	**2484**
	Normal Treated	1074	1039	99	0	0	466
	Extended Treated	93	93	19	46	16	5
	Total Treated	**1167**	**1132**	**118**	**46**	**16**	**471**

Balm of Gilead	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	2615	2611	2611	2611	2611	2611
	Extended Rotation	386	386	386	386	386	386
	Total Inventory	**3001**	**2997**	**2997**	**2997**	**2997**	**2997**
	Normal Treated	1246	1015	0	146	204	623
	Extended Treated	75	0	75	86	75	75
	Total Treated	**1321**	**1015**	**75**	**232**	**279**	**698**

Northern Hardwoods	Acres per Decade					
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	5687	5709	5709	5709	5709	5709
Extended Rotation	3020	3020	3020	3020	3020	3020
Total Inventory	**8707**	**8729**	**8729**	**8729**	**8729**	**8729**
Normal Treated	81	1842	2209	1316	261	0
Extended Treated	397	364	435	435	435	435
Total Treated	**478**	**2206**	**2644**	**1751**	**696**	**435**

Oak	Acres per Decade					
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	703	703	703	703	703	703
Extended Rotation	337	337	337	337	337	337
Total Inventory	**1040**	**1040**	**1040**	**1040**	**1040**	**1040**
Normal Treated	55	0	115	273	200	41
Extended Treated	17	43	52	46	52	46
Total Treated	**72**	**43**	**167**	**319**	**252**	**87**

White Pine	Acres per Decade					
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	259	259	259	259	259	206
Extended Rotation	169	169	169	169	147	125
Total Inventory	**428**	**428**	**428**	**428**	**406**	**331**
Normal Treated	0	0	0	23	30	3
Extended Treated	0	0	0	0	0	0
Total Treated	**0**	**0**	**0**	**23**	**30**	**3**

Red Pine

Acres per Decade						
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	7660	7660	7660	7660	7660	7660
Extended Rotation	4582	4582	4582	4582	4582	4582
Total Inventory	**12242**	**12242**	**12242**	**12242**	**12242**	**12242**
Normal Treated	0	572	289	87	0	0
Extended Treated	0	0	46	108	422	490
Total Treated	**0**	**572**	**335**	**195**	**422**	**490**

Jack Pine

Acres per Decade						
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	5045	5045	5045	5045	5045	5045
Extended Rotation	1571	1571	1571	1571	1571	1571
Total Inventory	**6616**	**6616**	**6616**	**6616**	**6616**	**6616**
Normal Treated	1778	1587	844	305	386	145
Extended Treated	248	248	248	248	248	248
Total Treated	**2026**	**1835**	**1092**	**553**	**634**	**393**

White Spruce

Acres per Decade						
Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
Normal Rotation	715	712	712	712	712	712
Extended Rotation	218	218	218	218	218	218
Total Inventory	**930**	**930**	**930**	**930**	**930**	**930**
Normal Treated	14	13	0	57	242	468
Extended Treated	35	35	3	16	1	23
Total Treated	**49**	**48**	**3**	**73**	**243**	**491**

Balsam Fir	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	1773	1773	1773	1773	1773	1773
	Extended Rotation	738	738	738	738	738	738
	Total Inventory	**2511**	**2511**	**2511**	**2511**	**2511**	**2511**
	Normal Treated	1089	475	209	0	0	0
	Extended Treated	163	176	176	128	0	71
	Total Treated	**1252**	**385**	**385**	**128**	**0**	**71**

Black Spruce	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	3252	3252	3252	3252	3252	3252
	Extended Rotation	1772	1772	1772	1772	1772	1772
	Total Inventory	**5024**	**5024**	**5024**	**5024**	**5024**	**5024**
	Normal Treated	510	326	325	325	325	623
	Extended Treated	150	150	151	151	151	151
	Total Treated	**660**	**476**	**476**	**476**	**476**	**774**

Tamarack	Acres per Decade						
	Acres	**2006**	**2016**	**2026**	**2036**	**2046**	**2056**
	Normal Rotation	3879	3879	3879	3879	3879	3879
	Extended Rotation	1145	1145	1145	1145	1145	1145
	Total Inventory	**5024**	**5024**	**5024**	**5024**	**5024**	**5024**
	Normal Treated	1040	568	639	689	628	315
	Extended Treated	126	126	126	126	126	126
	Total Treated	**1166**	**694**	**765**	**815**	**754**	**441**

Summary - Total Treatment Acres (by Decade)

Summary Total Treatment Acres (By Decade)	Covertype	2006	2016	2026	2036	2046	2056
	Ash	612	376	353	343	252	246
	Lowland Hardwoods	753	565	329	356	344	324
	Aspen	10794	5507	6536	10794	10794	10794
	Birch	1167	1132	118	46	16	471
	Balm of Gilead	1321	1015	75	232	279	698
	Northern Hardwood	478	2206	2644	1751	696	435
	Oak	72	43	167	319	252	87
	White Pine	0	0	0	23	30	3
	Red Pine	0	572	335	195	422	490
	Jack Pine	2026	1835	1092	553	634	393
	White Spruce	49	48	3	73	243	49
	Balsam Fir	1252	385	385	128	0	71
	Black Spruce	660	476	476	476	476	774
	Tamarack	1166	694	765	815	754	441
	Total Harvest	***20350***	***14854***	***13278***	***16104***	***15192***	***15276***

Details on the day to day operation of the stand selection process can be found in the Harvest Management Policy (LD-OP2)

Forest stand selection process

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

The harvest projections identified in the forest plan are only the beginning of the harvest process. The broad numbers presented in this plan represent the allowable harvest over a ten year period. Annual harvest targets will be applied using similar techniques based on the allowable ten year harvest plan. Annual harvest targets will further be broken down into district wide targets based on the available timber per cover type within each district. That target will then be used by the county forester for that district to determine what stands are eligible for management.

The allowable harvest and extended rotation forest acreages are calculated utilizing the Minnesota DNR *Extended Rotation Forest model and Treatment Calculator for each major covertype.* The stands for harvest or ERF are then selected from the forest inventory based on several criteria including; species age, size, stand density and overall health. The ERF stands are also identified. Fifty percent of the ERF acres are selected from some of the higher productive sites and fifty percent of the ERF acres are selected from the low productive sites.

Sites with a higher site index will typically provide a better opportunity to grow trees for an extended period of time. It must also be recognized that sites with a high site index will also provide a better opportunity to harvest trees on a shorter rotation basis.

Stand selection will ultimately be a cooperative venture between the land commissioner and each district forester. It is the land commissioner's responsibility to approve the initial targets for annual harvest based on the current inventory. The district foresters will then utilize the sale site selection process identified and defined in county policy to verify and select stands.

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.

Following this process the site will be prepared and documented for timber sales per county policy. It is also the county's policy to follow each timber sale with an update of the inventory to allow for the most efficient process for maintaining the database.

Silvicultural Treatments

Silvicultural Strategy

Based on the vision presented in this plan, there is an expectation that County forest managers will continue to utilize the best treatments and technology in managing the forest. A wide variety of tools are available today, some of which are similar but much improved compared to the past. For instance, clearcutting is still a preferred technique to regenerate several cover types, even though it looks nothing like it did in years past. Often, total stand harvest are modified to reduce the size of the cut, to leave residuals or to be selective about the species harvested, or to leave buffers along waterways or roads.

Continuous professional development will be sought to ensure that the best knowledge and technology is used to achieve a healthy and productive forest.

The following recommendations, as identified by Dr. Alan Ek, Professor and Department Head of Department of Forest Resources, University of Minnesota, St. Paul, MN 55108 (July 18, 2005), will be incorporated into management

considerations to increase productivity of the timber resources.

Harvest Scheduling

1. Incorporate forest growth yield modeling within 5 years to calculate and predict available volume for harvest. Better managed forests will provide more volume on fewer acres.

Stand Treatment

1. Utilize ecological classification system to improve site species site matching. This will reduce mortality and therefore increase production.
2. When available and appropriate for the site, utilize genetically improved plant materials that have been developed through conventional breeding programs.
3. Utilize appropriate site preparation and early competition control including release to help insure survival and increase early growth rates.
4. Thinning to salvage mortality before it occurs and to improve residual tree growth.

- Red pine, white pine: Pre-commercial thinning and commercial thinnings.
- Aspen and jack pine: Monitor and evaluate aspen pre-commercial and commercial thinnings.
- Northern Hardwoods: Selective harvest and thinning to improve quality and volume.

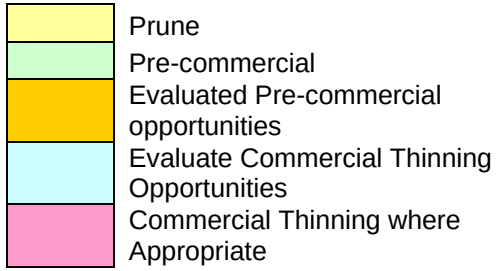
5. Thinning early (in rotation), light, and often in order to salvage mortality, improve residual tree growth, extend tree life and rotation ages and allow for large tree sizes and dramatically increase stand yields
6. In white pine stands, prune to increase the growth and yield and reduce risk for white pine blister rust.
7. Utilize herbicide options to control herbaceous competition when necessary.

Intermediate Treatments

The following chart identifies opportunities that may be available for the application of intermediate silvicultural treatments. Intermediate treatments provide opportunities to harvest additional forest product and improve the health of existing stands. The colored cells in the chart identify cover types and ages classes where notable intermediate silvicultural treatments may be possible. Staff will incorporate those treatments into the stand selection process as potential projects are identified, based on the chart below.

Cover Type	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	Grand Total
Ash	28	24	128	120	92	203	332	407	415	340	378	120	90	61	87	2825
Lowland Hardwoods	7	104	24		13	45	298	559	342	549	247	277	213	39	443	3160
Aspen	10374	15688	6842	2401	2503	4056	5613	3286	511	7						51281
Birch	5	16	46	19	40	152	491	1098	374	144	6	20				2411
Balm of Gilead	319	188	37	58	58	321	532	481	291	356						2641
Northern Hardwoods	57	53	137	41	155	358	1468	2583	2865	494	291	83	22	52	22	8681
Oak	8	4	71		8	11	134	370	281	46	107					1040
White pine	123	38	3			5		63	21	25	105	45				428
Norway pine	2290	3828	1940	228	599	143	223	563	823	1148	409	129	46			12369
Jack pine	354	637	583	966	483	761	1365	643	170	1						5963
White Spruce	488	286	83	23	14	16	20	49		7	11					997
Balsam fir	24	74	128	221	336	295	388	464	490	20	59					2499
Black Spruce (lowland)	31	114	204	353	85	139	342	455	742	614	531	315	285	110	63	4383
Tamarack	16	191	320	516	308	214	230	887	709	362	407	651	200	116	76	5203
Grand Total	14124	21245	10546	4946	4694	6719	11436	11908	8034	4113	2551	1640	856	378	691	103881

Intermediate Treatments



Tools

The tools most readily available to forest managers are the silvicultural treatments they hire contractors to implement – harvesting, thinning, planting, etc.

The discussion of silvicultural systems and techniques listed here is not intended to be an exhaustive or restricting list. It is provided only to help define the distinction between various basic types of management techniques. The following text is a summary of a much larger discussion in the document *Silvicultural Systems: A Background Paper for a Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota (MnEQB 1992).*

Forest managers are encouraged to research and understand a variety of treatment options in order to best manage a stand according to the values listed in this plan.

Silviculture and Silvicultural Systems

Squire et al. (1991) defines *silviculture* as using ecological, economic, and social knowledge to manipulate a forest ecosystem to achieve specific sustainable benefits specified for it. Silviculture can also be defined as the art of producing and tending a forest (Smith 1962), or more in particular, as the theory and practice of controlling establishment, composition, constitution and growth of forests (Ford-Robertson 1971). A *silvicultural system* is defined as a process, following accepted silvicultural principles, whereby stands are tended, harvested and replaced, resulting in a forest of distinctive form.

Silvicultural systems are most commonly classified according to the reproductive method employed since it has a decisive influence on the form and treatment of the stand (Smith 1986). The reproductive method refers to the method of carrying out the fellings that remove the mature crop with a view to regeneration and according to the type of forest thereby produced (e.g., clear felling, seed tree, shelter wood, and individual tree selective systems) (Burns 1983). The two major management methods in high forests are even aged and uneven-aged management.

Even Aged Management

Even-aged management is the application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together.

Clearcutting.—Any clearfelled area which is greater than or equal to 5 acres. *Clearcutting with standing residuals*.—Any clearfelled area which is greater than or equal to 5 acres with 6 to 9 live and/or dead residuals left standing per acre. This method is usually used to mitigate impacts on wildlife. One example is the USDA Forest Service 3/3/2 rule applied in national forests, where three live standing trees, three dead standing trees and two felled trees are left per acre.

Block cutting.—Any clearfelled area less than 5 acres which is regular (usually square) in shape.

Patch cutting.—Any clearfelled area less than 5 acres which is irregular in shape. Patch cuts are generally more aesthetically pleasing than block cuts.

Alternate strip cutting.—A clearfelled area generally the width of the effective seeding distance of standing trees for a species (usually less than 300 feet), a width at least equal to the tree height, and as long as the effective off-road transport distance for the conditions present (generally less than 1,200 feet), with leave strips left between cut strips.

Progressive strip cutting.—A progressive cut of strips equal to the effective seeding distance of standing trees for a species, and generally starting from the leeward side of a stand. Once a cut strip has reached sufficient stocking the next adjacent strip is removed.

Shelterwood

Shelterwood cutting is used to supply seed or an environment conducive to sprouting, and shelter for the regenerating stand. The shelterwood system requires two (i.e., two-stage shelterwood) or more cuts before the final harvest.

Seed Tree

Seed tree cutting is similar to the shelterwood cutting, except fewer trees are left per acre. Seed trees can be left evenly distributed over the cutover or in groups. The number of seed trees left depends on the species and can vary from 10 to 20 dominant, good quality trees per acre.

Thinning
Thinning is not a silvicultural system, but an intermediate cutting in an even aged stand used to increase diameter growth on the remaining stems, salvage natural mortality, reduce the rotation age, increase stand quality and hygiene, increase the content of more desirable species within a stand, and in some cases allow the more successful use of shelterwood and seed tree methods.

Selective thinning.—The removal of individual trees (generally suppressed and poor quality trees) evenly throughout the stand. It is the best thinning method from biological, stand quality and aesthetic views.

Row/strip thinning.—The removal of complete rows (e.g., in plantations) or swaths (e.g., in naturally regenerated stands) of trees at regular intervals throughout the stand, with no regard to the characteristics of the trees removed or left. It is usually the most economical thinning method.

Selective thinning within leave strip.—A combination of selective and row thinning, where rows or swaths are removed at regular intervals and selective thinning is done in the leave strips or rows.

Uneven-aged Management
Uneven-aged management is the application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees though a wide range of diameter and age classes; preferably in all age and diameter classes within a rotation (Burns 1983).

Individual (single) tree selection logging.—Individual trees are selected for removal uniformly throughout the stand due to overmaturity, poor hygiene, poor form, or some other selection criterion.

Group selection logging – Groups of 3 to 4 overstory tress, as well as any understory trees beneath then, are removed throughout a stand to produce a patchwork pattern. Depending on the size of the opening this system could be also classed as patch cutting.

Appendix A

Beltrami County Forest Management Plan **Comment Review Process** The following written comments were received during the review process for the Forest Management Plan. The County's response is listed at right.	
Comment	**Response**
Obtaining and implementing a forest management plan is an excellent move. Identifying, working towards and accomplishing goals is to be complimented and an intimate part of managing a modern organization. Plan looks to be "Comprehensive" and well thought out.	We appreciate the supportive comment
Please try to strike a balance between "conservation" and "preservation".	The County NRM department recognizes the need for balance between competing interests and will continually re-evaluate our programs to maintain that balance.
A "multiple use objective" is to be complimented. Good work!	We appreciate the supportive comment
In 1.2 and 1.3, managers should promote a variety of growth stages in each ecosystem and adjust management practices to achieve natural regeneration of all native species. Manage for a high level of structural and compositional complexity within stands, using variable density thinning and variable retention final harvests. There has been much recent research demonstrating the importance of structural and species diversity in maintaining forest health. Diversity greatly increases the resilience of a natural community to unpredictable fluctuations in climate, disease, and insect infestations.	Language directing readers to Policy LD-PS5 (Stand and Landscape Biodiversity) was added to the document to clarify the County's position on these issues. This policy includes language promoting structural and species diversity.
In 1.9 the NRM should not rely on a hypothetical DNR County Biological Survey to absolve it from responsibility for documenting rare species on its lands. The Plan overall ignores identification of non-game species of plants and animals and their habitat needs. There doesn't appear to be any mechanism for recognition and protection of old growth forests, calcareous fens, or threatened or endangered species on county lands.	Language directing readers to Policy LD-PS5 (Stand and Landscape Biodiversity) was added to the document to clarify the County's position on these issues. This policy includes an objective to maintain and improve wildlife habitat as an integral part of a comprehensive land management program on Land Department Managed Lands. Additional guidance and documentation are identified in Policy LD-OP2 (Harvest Management), and Policy LD-PS4 (Conservation Areas).
In 4.3 we note that staff development will continue to raise the level of professional expertise in the department. We strongly support this ongoing effort because modern	We appreciate the supportive comment

forestry demands considerable knowledge of ecological processes and up-to-date management techniques	
In 6.1 through 6.3 we applaud the department's efforts to incorporate public input. The Bemidji area is rich with forestry and wildlife expertise, much of it readily available to the department's staff. As citizens of Beltrami County we all have an interest in seeing that our lands are managed in a sustainable fashion that ensures ecological integrity and long-term viability. Being respectfully responsive to the public helps build support for NRM plans and can validate proposed management activities.	We appreciate the supportive comment
In Objectives 7, 8, and 9, there is a heavy emphasis on recreation, silvicultural treatments, and economic impacts, but little recognition of the intrinsic values of a forest. A forest is an ecosystem of great complexity, able to sustain itself without human intervention. A forest is much more than the trees – they represent only the stored fiber that can be extracted for human use. The draft management plan fails to recognize the many other functions of a forest. Residents of Beltrami County universally recognize that forests create our quality of life, not just a source of dollars.	The County NRM department recognizes the need for balance between competing interests and will continually re-evaluate our programs to maintain that balance.
On page 35 it appears that the only area of old growth-no management is the island in Lake Puposky. All other conservation areas will be subject to some sort of management. While waiting for a comprehensive survey by the County Biological Survey all potential old growth areas and sites with high potential for rare species should be set aside and targeted for minimal management. This practice of identification and special management is routine on state and federal lands and Beltrami County, as the largest land owner in the county, should have a similar approach.	Language directing readers to policy LD-PS4 (Conservation Areas). Beltrami County's NRM department is committed to managing an early to mid growth stage forest, but will continue to manage specific parcels as "Special Management Areas" as circumstances for each parcel warrant.
On page 78, harvests should be carefully designed to protect the Mississippi, Clearwater, and Little Mississippi Rivers for water quality and recreation purposes. The water quality can be monitored by working with citizen volunteers participating in the MPCA Citizen Stream-Monitoring Program http://www.pca.state.mn.us/water/csmp.html	District managers will consider these suggestions in the management of their district. Through recreation planning and the integration of Landscape Ecosystem management objectives, most of these comments will be met over time.

Manage some stands through intermediate treatments until the natural stand replacement return interval is reached. Utilize the information on stand life history in the Native Plant Communities of Minnesota: Laurentian Mixed Forest. In a dry pine landscape, manage some stands as multi-aged. For instance, the Plan says: Regenerate the existing species whenever possible. Revise this statement to read: Regenerate stands with species that are well suited to the existing native plant community and soil conditions. Also, the plan indicates several cover types that will increase in acreage, but does not indicate which will be reduced in acreage.	
The Management Plan should recognize that the Little Mississippi River provides an excellent canoeing experience and should be regarded as one of the most scenic recreational assets in the county. Forest management along the river should have the primary goal of maintaining or enhancing aesthetic values.	The Mississippi River corridor is identified in the Recreational Trails Plan as a key recreation resource, and will be managed under that framework.
On page 84, rather than relying solely on the concept of Extended Rotation Forests, designate stands that will be managed in a mature or old forest growth stage, as described in the Natural History sections for each native plant community in the LMF guide mentioned above. Target harvests for the estimated natural return interval for stand replacement. Setting aside only 5 to 10% of each forest type is too rigid and fails to allow the flexibility to designate additional acres of old forest.	Language directing readers to policy LD-PS4 (Conservation Areas). Beltrami County's NRM department is committed to managing an early to mid growth stage forest, but will continue to manage specific parcels as "Special Management Areas" as circumstances for each parcel warrant.
Page 86, the specific recommendations for various cover-types should encourage uneven-aged management for Ash, Lowland Hardwood, and Northern Hardwood.	Uneven-aged management is regularly considered as a silvicultural tool for management of ash, lowland hardwood, and northern hardwood cover-types. This helps promote a diverse forest as well as growing higher quality hardwoods. As staff expertise in managing for Native Plant Communities grows, future generations of the forest plan will provide more details.
Page 101, we recommend pre-commercial	This comment will be considered when

thinning in White Spruce to protect forest health and improve habitat and productivity.	planning intermediate treatment activities.
The document does not address the fire dependent origins of most of the county's forests. Although we cannot restore the fire frequency and extent of pre-settlement conditions, prescribed fire is used extensively by state and federal foresters who recognize its benefits. We suggest that NRM explore the option of using fire as a management tool.	Fire is among many silvicultural techniques available to foresters. Beltrami County at this time has no expertise or capacity to utilize fire as a management tool. Future generations of the plan may include fire as the department's technical capacities grow.
Mississippi Headwaters Audubon Society regards the Draft Forest Management Plan as a positive step forward, one that begins to address the difficult task of managing our forests for the long term. We look forward to reviewing future plans and providing useful input.	We appreciate the supportive comments.