

<b>Document Title</b>	<b>Source</b>	<b>Date</b>	<b>URL or Address</b>
<b>Border Lakes Subsection Forest Resources Management Plan: Strategic Direction and Stand Selection Results Final</b>	Minnesota Department of Natural Resources	2005	<a href="http://www.dnr.state.mn.us/forestry/subsection/borderlakes">http://www.dnr.state.mn.us/forestry/subsection/borderlakes</a>

## **VISION(S)**

None identified.

### **Final issues, goals, and strategies are broken down into two categories.**

A: Providing for a sustainable harvest.

B: Management of forest-related habitats.

*(Retrieved from 3-1. Final Issues, DFFC, and Recommended Strategies section of Border Lakes SFRMP.)*

### **A. Issues, goals, and strategies related to PROVIDING FOR A SUSTAINABLE HARVEST**

#### **ISSUES**

1. What is the appropriate timber harvest level on state lands with consideration of sustainability of all forest resources?
2. Should there be more intensive forest management on some forest lands to increase timber productivity? If so, what are the appropriate methods?
3. How can the DNR best provide access to the stands identified for management during the 10-year plan period?

#### **GOALS (number links to issue)**

1. State forest lands in the subsection provide a sustainable timber harvest level, which considers current and future ecological, economic, and social needs (1).
2. Timber productivity on state forest lands is increased through more intensive management on some lands (2).
3. Access is provided for management of state forest lands while protecting or minimizing negative effects on other forest resources (3).

#### **STRATEGIES (number links to goal)**

1. Integration of strategies for all the issues (1).
2. Harvest stands closer to the recommended rotation age (2).
3. Evaluate high-risk and decadent stands (2).

4. Increase the use of intermediate stand treatments (2).
5. Convert stands of low-site-quality birch and aspen to conifers (2).
6. Maximize soil impacts to protect long-term site productivity (2).
7. Control forest insects and diseases as appropriate (2).
8. Manage some ERF stands for large sawtimber (ERF not explained in document but think it refers to older forests) (2).
9. Continue maintenance of state forest roads classified as system roads (3).
10. Follow policies and guidelines for natural resource management access routes (3).
11. Cooperate with other landowners in forest road planning (3).
12. Complete a timber access transportation plan (3).

## **B. Issues, goals, strategies related to MANAGEMENT OF FOREST-RELATED HABITATS**

### **ISSUES**

4. What is the appropriate habitat mix, including species composition and distribution, structural characteristics, patch sizes, and age distribution, necessary to provide for the full spectrum of wildlife species (endangered, threatened, and special concern species; game species; and nongame species)? How should state lands be managed to contribute to this mix?
5. Are additional riparian management recommendations needed to maintain and enhance habitats and connective corridors for wildlife and aquatic species?
6. How do we maintain native plant communities, ecological processes, and biodiversity when managing forest vegetation? Which plant communities and processes are at risk? How will genetic diversity, and rare plants, animals, and native plant communities be protected?

### **GOALS (number links to issue)**

1. Acres of upland conifer cover types in the subsection have increased (4).
2. More acres of the upland brush cover type are identified in the subsection (4).
3. Species diversity within stands has increases, especially in mixed conifer/hardwood stands, and structural diversity has been maintained or increased (4).
4. Age diversity within conifer and hardwood stands has increased, especially in white pine stands (4).
5. Even-aged managed forest cover types have a balanced age-class structure (4).
6. State lands have more old pine and other conifers (4).
7. Old forest component is retained on state lands (4).
8. Average patch size is larger (4).
9. Connectivity between patches is maintained (4).
10. Some large old patches are maintained across the subsection (4).
11. Patches are distributed in a range of sizes and ages (4).
12. Patches are representative of the cover types in the subsection (4).

13. Water quality is protected and natural processes are allowed to occur (5).
14. Rare and sensitive species and plant communities are protected (6).
15. Genetic variability of tree species is retained (6).
16. Ecological processes and biodiversity are protected when managing forest vegetation (6).

**STRATEGIES (number links to goal)**

1. Allow natural succession of some aspen, birch, and balsam of Gilead stands to conifers (1,16).
2. Convert some aspen, balsam of Gilead, and birch stands to conifers (1,16).
3. Manage for understory white pine and white cedar (1,16).
4. Use selective harvest favoring conifer regeneration on appropriate sites (1,16).
5. Use uneven-aged management to favor conifer regeneration (1,16).
6. Reserve conifer seed trees during harvest or site preparation operations (1,3,16).
7. Use timber harvest systems that protect advance conifer regeneration (1,3,16).
8. Use prescribed fire (1,3,7,11,16).
9. Time harvest to take advantage of conifer natural seeding opportunities where desirable (1,16).
10. Do a better job of identifying upland brush cover types in the DNR forest inventory (2,16).
11. Map upland brush types large scale enough to make a stand of five acres or more in the cooperative stand assessment (CSA) forest inventory (2,16).
12. Recognize that upland brush in small patches (inclusions) is often a stand component of other cover types (2,16).
13. Maintain existing upland brush cover types (2,16).
14. Primarily use uneven-aged management in white pine, lowland hardwoods, ash, northern hardwoods, cedar, and on a portion of mixed white spruce and balsam fir cover types (3,16)
15. Use the MFRC voluntary site-level forest management guidelines designed to maintain a diversity of tree species and structural diversity within a stand (3,16).
16. Retain tree species diversity and structural diversity within stands when thinning stands or applying other selective harvest prescriptions (3,16).
17. Allow some stands to regenerate to the next successional species (3,16).
18. Use measures to reduce herbivory effects on plant diversity (3,16).
19. Increase the white pine component on suitable sites in other cover types (3,16).
20. Increase the upland cedar, oak, yellow birch, and tamarack component on suitable upland sites through silvicultural practices and artificial regeneration (3,16).
21. Manage plantations to resemble natural stands (3,16).
22. Maintain some lowland black spruce, jack pine, and red pine as pure stands (3,16).
23. Use uneven-aged management to develop multi-aged conifer stands (4,16).
24. Use uneven-aged management in lowland hardwoods, ash, and northern hardwoods cover types (4,16).
25. Select ERF stands from a variety of age classes (5,16).
26. Manage for multi-aged and multi-layered stand structure (6,16).
27. Manage some lowland mixed-conifer stands as all-aged stands beyond age 160 (6,16).
28. Maintain an adequate representation of cover types in ERF (7,16).
29. Manage riparian areas so they are composed primarily of older forest (7,16).

30. Allow some stands to succeed to other forest cover types without harvest (7,16).
31. Use riparian corridors and existing old forest to enlarge large old patches (8,16).
32. Restore or maintain original stand size in forest management activities (8,16).
33. Harvest adjacent to other recently harvested sites to increase the size of young patches (8,16).
34. Use selective harvest on some stands to retain old forest patches (8,16).
35. Work with the MFRC Northeast Regional Landscape Committee to coordinate patch management with other landowners in the subsection (8,16).
36. Reserve areas from timber harvest (8,16).
37. Use riparian corridors and existing old forest to connect large old patches (9,16).
38. Manage some large patches as ERF (10,16).
39. Establish definitions and goals for patches (11,16).
40. Plan harvest across a range of timber sale sizes (11,16).
41. Increase the percentage of upland conifer cover types in large and medium patches (12,16).
42. Manage for ERF in most riparian areas (13,16).
43. Favor balsam fir, white pine, white spruce, and cedar in upland, low-fire-frequency areas (13,16).
44. Favor red pine, aspen, birch, and jack pine in upland, high-fire-frequency areas (13,16).
45. Favor ash, elm, maple, yellow birch, black spruce, tamarack, and cedar in forested lowlands (13,16).
46. Apply Shipstead-Newton-Nolan Act and Little-Shipstead-Newton-Nolan Act restrictions where applicable (13,16).
47. Apply the MFRC voluntary site-level forest management guidelines (13,16).
48. Maintain adequate shading along designated trout streams (13,16).
49. Protect old-growth plant communities (14,16).
50. Identify and protect EILC sites (14,16).
51. Begin the Minnesota County Biological Survey (MCBS) in the subsection (14,16).
52. Reference the Natural Heritage database during stand selection (14,16).
53. Employ *Field Guide to the Native Plant Communities of Minnesota: The Laurentian Mixed Forest Province* (14,16).
54. Protect sensitive and high-quality native plant communities and species (14,16).
55. Use appropriate seed sources (15,16).