

## 25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests



### Statewide Forest Vision

The Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership suggest the following vision as a framework for the Lessard-Sams Outdoor Heritage Council (L-SOHC) to use in advising the legislature about funding for forest projects that improve fish and wildlife habitat for game and nongame species:

Investments from the L-SOHC in Minnesota forests are made with primary consideration given to maintaining forest habitat and diversity, which provides the foundation for improved fish, game, and wildlife habitat; long-term ecosystem integrity<sup>1</sup>; and public access for hunting, fishing, and other wildlife-oriented recreation. Forest resource policy and management decisions are based on credible science, community values, and broad-based citizen involvement. The public understands and appreciates Minnesota's forest resources and is involved in and supports decisions about their use, management, and protection.

### Goals to Accomplish the Vision

Achieving the following four major goals will allow this vision for Minnesota's forests to be realized over time.

- **Minnesota's forests are restored and enhanced** by forestland management practices that improve fish, game, and other wildlife habitat; water quality; and the health, productivity<sup>2</sup>, and resiliency of Minnesota's forests.
- **Minnesota's forest land base is enlarged and protected** through permanent conservation easements and fee title acquisition. No net loss of forest land occurs and some previously forested areas are returned to forest cover. The forest land base is protected from decreases and wildlife habitat fragmentation caused by land use and ownership changes.
- **Forest-based recreational and economic opportunities are numerous.** Forest policy decisions result in no net loss of access for fishing, hunting, and other types of wildlife-oriented recreation.
- **Forests are managed to ensure healthy fish and wildlife populations and ecological, economic, and social sustainability.** Forest management activities enhance the diversity of the state's forests and support the long-term sustainability and growth of the many sectors that depend on them.

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<sup>1</sup> Maintaining *long-term ecosystem integrity* means that native plants, animals, and microorganisms continue to function together within forest ecosystems and that ecosystem services (e.g., nutrient recycling, water filtration, carbon sequestration) continue to be provided.

<sup>2</sup> *Productivity* refers to improving the quantity and quality of Minnesota's forest resources and the effectiveness of their use. Forest resources include fish, game, and wildlife habitat associated with forests, among other resources.

## Recommended Priorities for L-SOHC Funding

- **Acknowledge the interests, concerns and recommendations of local communities** in which funds are to be expended.

### Statewide Funding Priorities

- **Protect and restore forest cover in riparian areas.** This should be done by permanent easements or fee acquisition, combined with forest restoration. Focus especially on protecting and restoring appropriate tree species in priority riparian corridors to improve water quality and fisheries habitat, in partnership with fishing and fish and/or wildlife habitat organizations.
- **Restore and enhance fish, game, and other wildlife habitat** by:
  - **Conducting silvicultural<sup>3</sup> and other forest habitat and land management work outside the scope of commercial forestry** (e.g., design some timber sales with wildlife habitat as the main objective, perhaps at greater expense than traditional timber sales, to benefit declining species such as moose; restore native tree species such as northern white cedar, white pine, jack pine, and oak).
  - **Conducting habitat work in priority areas** (e.g., create forest openings/young forest for various game and other species that depend on this type of habitat; place nesting boxes for wood ducks, mergansers, and other forest birds in riparian areas; maintain appropriate brushland complexes).

Give preference to cross-ownership coordination projects if they would result in greater habitat restoration and enhancement than would have occurred without such coordination.

### Funding Priorities in L-SOHC Northern Forest Section

- **Protect Minnesota forests and forest wildlife habitat** via permanent conservation easements. Fee acquisition or land exchanges in this section can take place where willing buyer/seller transactions allow for the consolidation of ownership, address critical habitat needs consistent with the L-SOHC mission, and have significant public support in the region.

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<sup>3</sup> *Silviculture* is the art and science of growing trees for one or more purposes.

### Funding Priorities in Other Sections

- **Protect contiguous forest complexes** (and enlarge complexes when ecologically appropriate). This should be done by permanent easements or fee acquisition combined with forest restoration in current forest complexes and on lands contiguous to those complexes. Focus especially on protecting areas with high game populations as well as areas with high levels of biodiversity.

## Recommended 25-year L-SOHC Forest Priorities: Northern Forest Section

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The following is a recommended vision, collaboratively developed by the Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership, for the L-SOHC to use in achieving its unique mission to advise the legislature regarding the protection, restoration and enhancement of *forests<sup>1</sup> and forested habitat in the Northern Forest Section*. Recommendations developed for each of the five L-SOHC sections support the suggested *25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests*.

### Section Description

- The Northern Forest Section covers 23,163,000 acres, of which 47% is in private ownership (10,797,000 acres).
- Pre-settlement forests<sup>2</sup> covered almost 20,420,000 acres (88%) of this section. Today, forestlands cover 16,004,000 acres (69%) of this section.

### Significant Forest Wildlife Species

Key forest game species include moose, white-tailed deer, black bear, fisher, pine martin, ruffed grouse, sharp-tailed grouse (brushland habitat), woodcock, and waterfowl. There are over 55 species in greatest conservation need (SGCN<sup>3</sup>), including the gray wolf, bald eagle, northern goshawk, red-shouldered hawk, black-throated blue warbler, wood turtle, and four-toed salamander, that use forest and woodland habitats in the Agassiz Lowlands, Border Lakes, Chippewa Plains, Glacial Lake Superior Plain, Laurentian Highlands, Littlefork-Vermilion Uplands, Mille Lacs Uplands, Nashwauk Uplands, North Shore Highlands, Pine Moraines-Outwash Plains, St. Louis Moraines, Tamarack Lowlands, and Toimi Uplands subsections.

### Forest and Forest Habitat Conservation Opportunities

- Protecting large, contiguous forests through easements or acquisition of private lands that limit access to public lands (acquisition and easements should be targeted to areas that would consolidate ownerships, address critical habitat needs, and have significant public support in the region).
- Protecting and restoring high ecological value forests, including rare native plant communities, forest habitat for SGCNs, forested riparian areas, old-growth forests, and forest habitat corridors.
- Protecting wild rice lake watersheds.
- Reforesting previously forested areas (e.g., in riparian areas to improve water quality and fish and wildlife habitat).
- Restoring, maintaining and enhancing existing forest habitats (e.g., North shore hardwood restoration, moose habitat improvement, deer thermal cover) using native species.
- Enhancing and restoring forested areas from adverse impacts of invasive species (e.g., ash forests from Emerald Ash Borer).
- Restoring pine and northern white cedar through appropriate silvicultural techniques, including prescribed fire and browse protection.
- Using the Ecological Classification System as an important tool to help maintain and enhance native plant communities.
- Encouraging increased forest wildlife habitat on appropriate sites on private lands.
- Managing brushland complexes, where appropriate in the forest matrix, for early successional species (e.g., in DNR priority open landscapes).
- Restoring, maintaining and enhancing ecosystem services in existing forests.

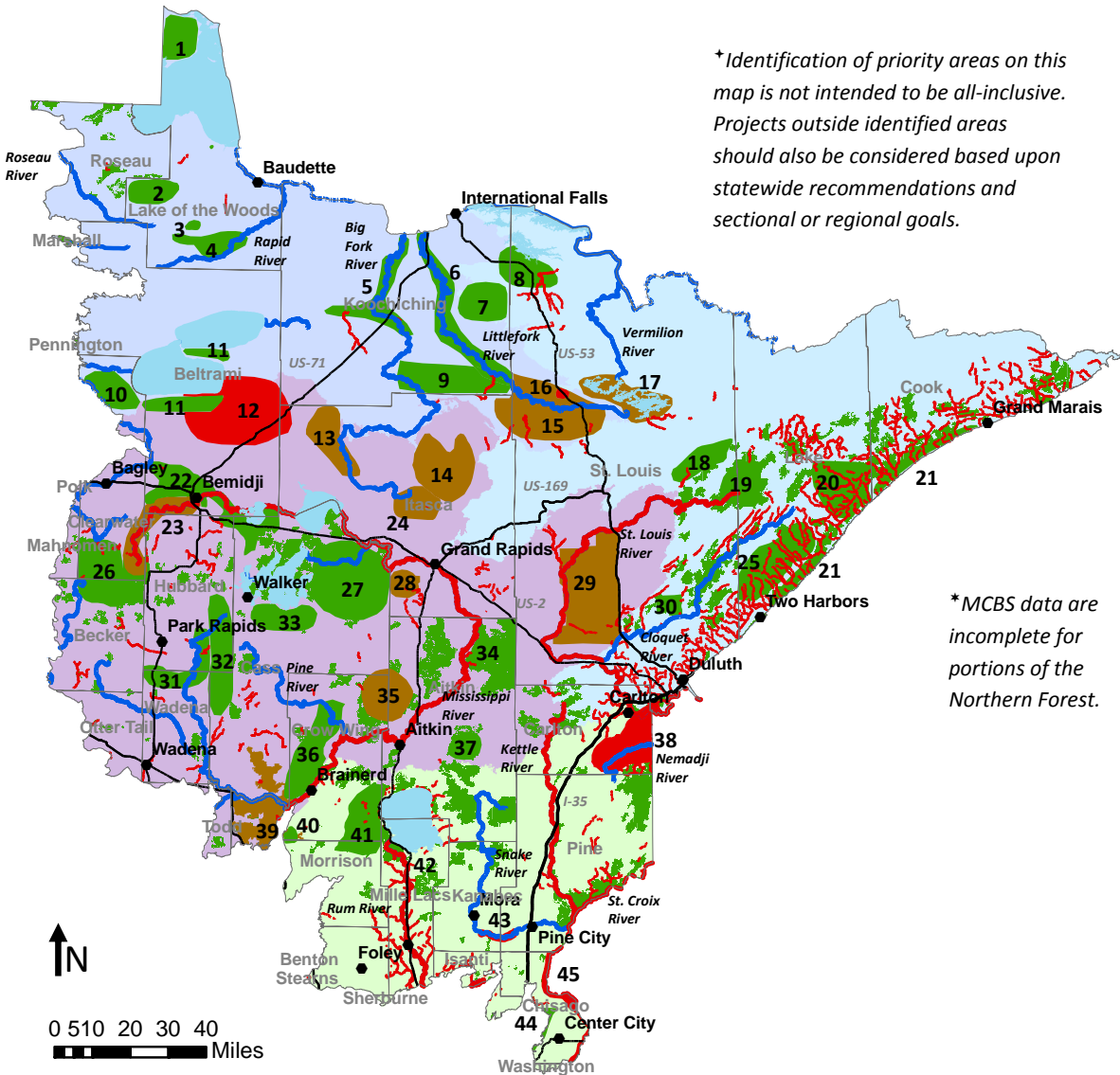
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<sup>1</sup> Oak savanna has not been included in the recommendations for forest habitat within Minnesota, as it is comprised mostly of prairie species. The MFRC and MFRP are supportive of oak savanna protection, restoration and enhancement on appropriate sites.

<sup>2</sup> The resolution of the pre-settlement map is coarse and numerous small patches of habitat were not mapped. As a result, acreages calculated from this coverage may not be appropriate for comparison with data derived from current satellite imagery (e.g., 1990s GAP, NASS 2008).

<sup>3</sup> SGCN species are defined in Minnesota's State Wildlife Action Plan (2006) as those animals whose populations are rare, declining or vulnerable in Minnesota.

# Recommended 25-year L-SOHC Forest Priorities: Northern Forest Section



\* Identification of priority areas on this map is not intended to be all-inclusive. Projects outside identified areas should also be considered based upon statewide recommendations and sectional or regional goals.

\* MCBS data are incomplete for portions of the Northern Forest.

## Restore and Enhance Forest Wildlife Habitat in Priority Areas<sup>+</sup>: Shown north to south

- |                                 |                             |
|---------------------------------|-----------------------------|
| Northwest Angle Cedar (1)       | Tettegouche Till Plain (25) |
| Beach Ridges (2, 4)             | Clearwater/Becker Pine (26) |
| Norris Camp (3)                 | Mud Goose Area (27)         |
| Lower Big Fork Watershed (5)    | Boulder Lake (30)           |
| Lower Littlefork Watershed (6)  | Pine Woodland Area (31)     |
| Koochiching State Forest (7)    | Badoura Pine Area (32)      |
| Kabetogama Area (8)             | Leech Lake Pines (33)       |
| Southern Koochiching (9)        | Cornish Township Area (34)  |
| Red Lake Pine (10, 11)          | Crow Wing Sand Plain (36)   |
| Mesabi Range (18)               | Rice Lake Moraine (37)      |
| Sand Lake/Seven Beavers (19)    | Brainerd Oak Area (40)      |
| Manitou Collaborative Area (20) | Mille Lacs Oak Area (41)    |
| North Shore Conifer (21)        | Chisago Oak Area (44)       |
| Bemidji Sand Plain (22)         |                             |

Additional forested sites of High and Outstanding Biodiversity significance as identified by the Minnesota County Biological Survey\* (non-numbered polygons throughout map)

## Protect Contiguous Forest Complexes:

- |                             |                      |
|-----------------------------|----------------------|
| Alwood Complex (13)         | Suomi Hills (24)     |
| Marcell Moraine (14)        | Sugar Hills (28)     |
| Littlefork Headwaters (15)  | Sax-Zim Bog IBA (29) |
| Lake Vermilion Area (17)    | Ross Lake Area (35)  |
| Mississippi Headwaters (23) | Camp Ripley IBA (39) |

## Protect and Restore Riparian Forests:

- |                                 |                                |
|---------------------------------|--------------------------------|
| Red Lake Watershed Streams (12) | Rum River and tributaries (42) |
| Dark River Area (16)            | Snake River Area (43)          |
| Nemadji River Watershed (38)    | St. Croix River Corridor (45)  |

Mississippi, St. Louis, and Kettle rivers and designated trout streams

**Legend**

<b>Focus Areas</b>	<b>ECS Sections</b>	
Restore and Enhance: Forested Habitat	Northern Superior Uplands	Major Rivers
Protect and Restore: Riparian Forests	N. Minnesota Drift & Lake Plains	Major Lakes
Protect: Forest Complexes	N. Minnesota & Ontario Peatlands	Major Roads
Protect and Restore: Designated Trout Streams	Southern Superior Uplands	Counties and county seats
	Western Superior Uplands	

## Recommended 25-year L-SOHC Forest Priorities: Forest/Prairie Transition Section

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The following is a recommended vision, collaboratively developed by the Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership, for the L-SOHC to use in achieving its unique mission to advise the legislature regarding the protection, restoration, and enhancement of *forests<sup>1</sup> and forested habitat in the Forest/Prairie Transition Section*. Recommendations have been developed for each of the five L-SOHC sections and support the suggested *25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests*.

### Section Description

- The Forest/Prairie Transition Section covers 6,560,315 acres, of which 91% is in private ownership (5,943,153 acres).
- Pre-settlement forests<sup>2</sup> covered 2,656,000 acres (40%) of this section. Today, forestlands cover 1,038,075 acres (16%) of this section.

### Significant Forest Wildlife Species

Key forest game species include a declining, remnant moose population; white-tailed deer; elk; ruffed grouse; and cavity-nesting waterfowl. There are over 45 Species in Greatest Conservation Need (SGCN<sup>3</sup>) including the cerulean warbler and least weasel that use forest and woodland habitats in the Aspen Parklands, Hardwood Hills, and Anoka Sand Plain subsections.

### Forest and Forest Habitat Conservation Opportunities

- Reforesting once forested areas (e.g., in riparian areas to improve water quality and fish and wildlife habitat).
- Protecting forested riparian areas.
- Restoring, maintaining and enhancing existing forest habitats using Ecological Classification and native species.
- Using appropriate tree and shrub plantings for winter cover.
- Managing aspen in Aspen Parklands for more open conditions (e.g., use fire, 10-15 year rotations, and biomass harvest to benefit sharp-tailed grouse and sandhill cranes).
- Maintaining and restoring brushland complexes, where appropriate, for early successional species (e.g., in DNR priority open landscapes).
- Using the Ecological Classification System as a tool to get appropriate species planted on the right sites.
- Encouraging creation of wildlife habitat on private lands using native plant species.
- Enhancing and restoring forested areas from adverse impacts of invasive species (e.g., terrestrial plants, insects and diseases).

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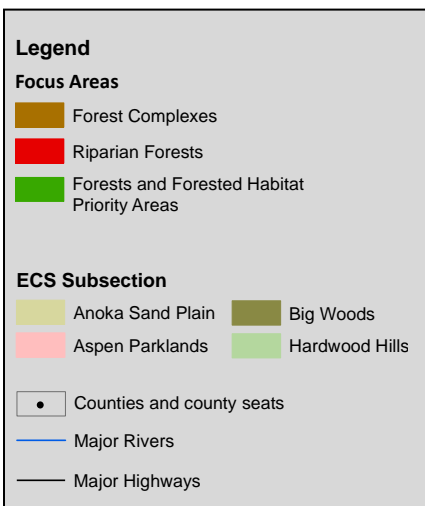
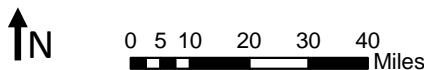
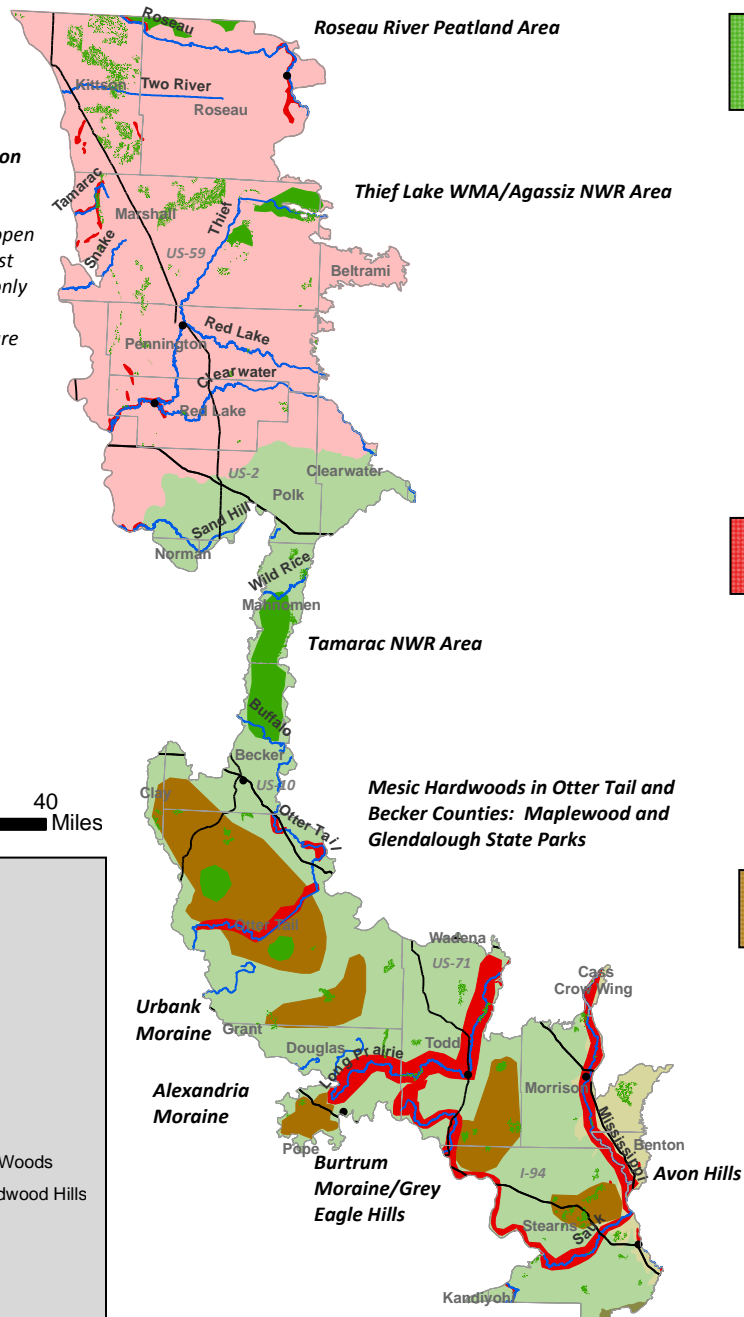
<sup>1</sup> *Oak savanna has not been included in the recommendations for forest habitat within Minnesota, as it is comprised mostly of prairie species. The MFRC and MFRP are supportive of oak savanna protection, restoration and enhancement on appropriate sites.*

<sup>2</sup> *The resolution of the pre-settlement map is coarse and numerous small patches of habitat were not mapped. As a result, acreages calculated from this coverage may not be appropriate for comparison with data derived from current satellite imagery (e.g., 1990s GAP, NASS 2008).*

<sup>3</sup> *SGCN species are defined in Minnesota's State Wildlife Action Plan (2006) as those animals whose populations are rare, declining or vulnerable to decline in Minnesota.*

## Recommended 25-year L-SOHC Forest Priorities: Forest/Prairie Transition Section

The **Aspen Parklands ECS Subsection** has been identified by DNR as a "priority open landscape" to be managed for the maintenance of open land and brushland habitats. Forest projects in this subsection should only be undertaken in places where landscape-level open land values are not adversely affected



### Restore and Enhance Forest Wildlife Habitat in Priority Areas<sup>†</sup>: Shown north to south

- Roseau River Peatland Area
- Thief Lake WMA/Agassiz National Wildlife Refuge Area
- Tamarac National Wildlife Refuge Area
- Maplewood State Park
- Glendalough State Park

Additional forested sites of High and Outstanding Biodiversity significance as identified by the Minnesota County Biological Survey.

### Protect and Restore Riparian Forests:

- Aspen Parklands River Bottom Forests (Marschner – Presettlement)
- Otter Tail River Corridor
- Long Prairie River Corridor
- Mississippi River Corridor
- Lake Osakis - Sauk River Corridor

### Protect Contiguous Forest Complexes:

- Mesic Hardwoods in Central Otter Tail and Becker Counties
- Urbank Moraine
- Alexandria Moraine
- Burtrum Moraine/Grey Eagle Hills
- Avon Hills

<sup>†</sup>Identification of priority areas on this map is not intended to be all-inclusive. Projects outside identified areas should also be considered based upon statewide recommendations and sectional or regional goals.

## Recommended 25-year L-SOHC Forest Priorities: Metropolitan Urbanizing Section

The following is a recommended vision, collaboratively developed by the Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership, for the L-SOHC to use in achieving its unique mission to advise the legislature regarding the protection, restoration, and enhancement of *forests<sup>1</sup> and forested habitat in the Metropolitan Urbanizing Section*. Recommendations have been developed for each of the five L-SOHC sections and support the suggested *25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests*.

### Section Description

- The Metropolitan Urbanizing Section covers 3,291,096 acres, of which 93% is in private ownership (3,071,556 acres).
- Pre-settlement forests<sup>2</sup> covered 1,560,000 acres (47%) of this section. Today, forestlands cover 598,500 acres (18%) of this section.

### Significant Forest Wildlife Species

Key forest game species include white-tailed deer, ruffed grouse, wild turkey and waterfowl species. There are over 50 Species in Greatest Conservation Need (SGCN<sup>3</sup>) including the Acadian flycatcher and red-shouldered hawk that use forest and woodland habitats in the Anoka Sand Plain, Big Woods, Hardwood Hills, Oak Savanna, and St. Paul Baldwin Plains and Moraines subsections.

### Forest and Forest Habitat Conservation Opportunities

- Reforesting once forested areas (e.g., in riparian areas to improve water quality and fish and wildlife habitat, Big Woods).
- Protecting and restoring forested riparian areas where appropriate.
- Restoring, maintaining and enhancing existing forest habitats using native tree species.
- Using tree plantings for winter cover on appropriate sites.
- Using the Ecological Classification System as a tool to get appropriate species planted on the right sites.
- Encouraging increased wildlife habitat on private lands using native plant species.
- Enhancing and restoring forested areas from adverse impacts of invasive species (e.g., terrestrial plants, insects and diseases).

<sup>1</sup> Oak savanna has not been included in the recommendations for forest habitat within Minnesota, as it is comprised mostly of prairie species. The MFRC and MFRP are supportive of oak savanna protection, restoration and enhancement on appropriate sites.

<sup>2</sup> The resolution of the pre-settlement map is coarse and numerous small patches of habitat were not mapped. In addition, some land clearing in the 1830s – 1850s preceded the Public Land Survey in what is currently the metropolitan area of Minnesota, on which Marschner's map was based. As a result, acreages calculated from this coverage may not be appropriate for comparison with data derived from current satellite imagery (e.g., 1990s GAP, NASS 2008).

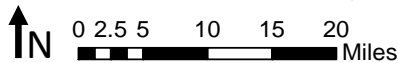
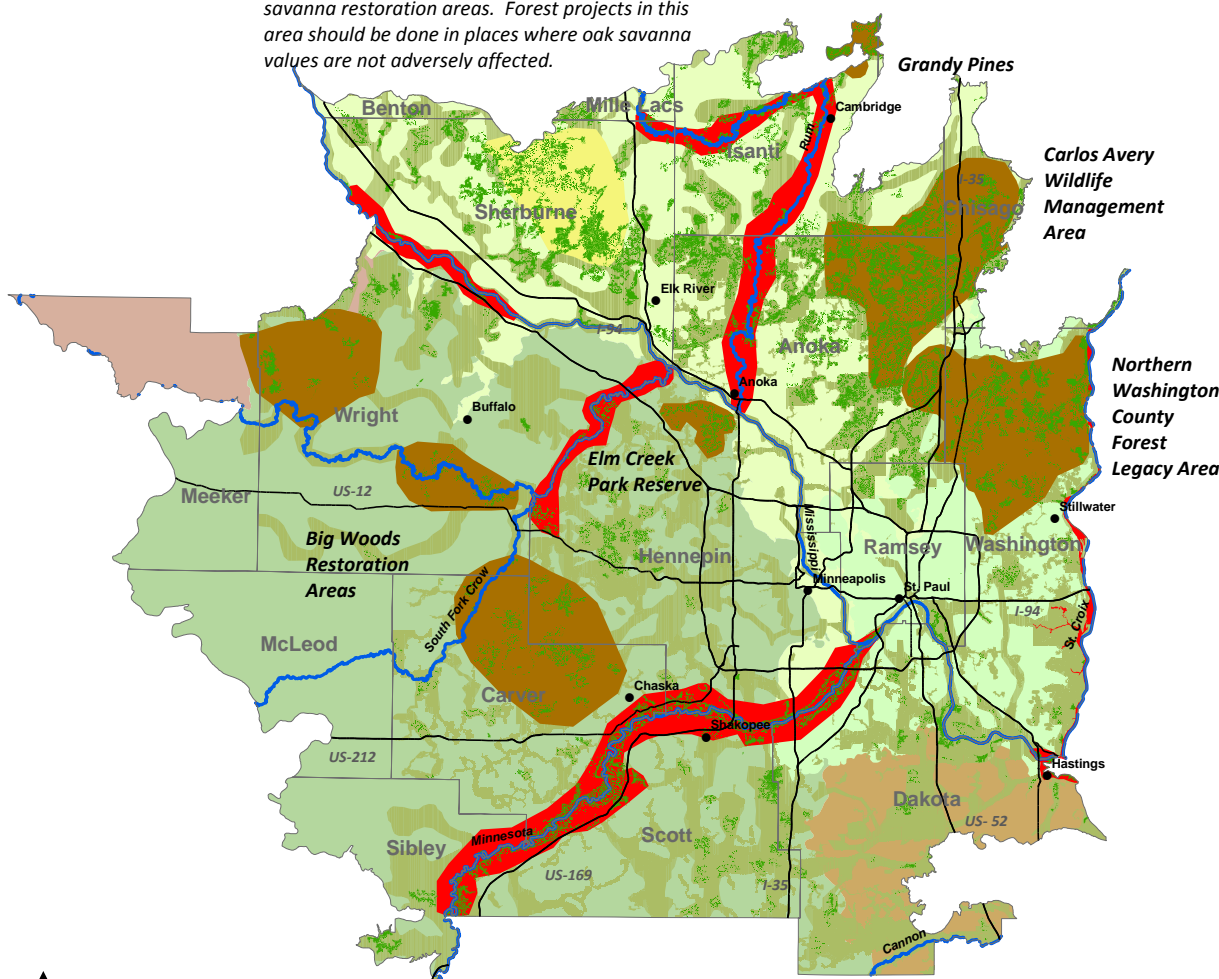
<sup>3</sup> SGCN species are defined in Minnesota's State Wildlife Action Plan as those animals whose populations are rare, declining or vulnerable to decline in Minnesota



## Recommended 25-year L-SOHC Forest Priorities: Metropolitan Urbanizing Section

The **Sherburne Complex** includes high priority oak savanna restoration areas. Forest projects in this area should be done in places where oak savanna values are not adversely affected.

**Four Corners Pilot Project Area**



Legend		
<b>Focus Areas</b>	<b>ECS Subsections</b>	
Forest Complexes	Anoka Sand Plain	Counties and County Seats
Riparian Forests	Big Woods	Major Rivers
High Ecological Value Forests*	Hardwood Hills	Major Highways
	Oak Savanna	Oak Savanna Complex
	St. Paul-Baldwin Plains	Green Infrastructure Corridors

\* High Ecological Value Forests mapped here include forested portions of Minnesota County Biological Survey areas that are of Outstanding or High quality or Central Region Ecologically Significant Areas (score = 3).

### Restore and Enhance Forest Wildlife Habitat in Priority Areas\*: Shown north to south

- High Ecological Value Forests

### Protect and Restore Riparian Forests:

- Rum River Corridor
- Mississippi River Corridor
- Crow River Corridor
- Minnesota River Corridor
- Lower Mississippi River Corridor

### Protect Contiguous Forest Complexes:

- Four Corners Pilot Project
- Grandy Pines
- Carlos Avery Wildlife Management Area
- Northern Washington County Forest Legacy Area
- Elm Creek Park Reserve
- Big Woods Restoration Areas

\*Identification of priority areas on this map is not intended to be all-inclusive. Projects outside identified areas should also be considered based upon statewide recommendations and sectional or regional goals.

## Recommended 25-year L-SOHC Forest Priorities: Southeast Forest Section

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The following is a recommended vision, collaboratively developed by the Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership, for the L-SOHC to use in achieving its unique mission to advise the legislature regarding the protection, restoration, and enhancement of *forests<sup>1</sup> and forested habitat in the Southeast Forest Section*. Recommendations have been developed for each of the five L-SOHC sections and support the suggested *25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests*.

### Section Description

- The Southeast Forest Section covers 2,647,384 acres, of which 95% is in private ownership (2,505,706 acres).
- Pre-settlement forests<sup>2</sup> covered 721,150 acres (27%) of this section. Today, forestlands cover 674,000 acres (25%) of this section.

### Significant Forest Wildlife Species

Key forest game species include white-tailed deer, ruffed grouse and wild turkey. Many watercourses in the Southeast Forest Section are designated trout streams. There are over 50 Species in Greatest Conservation Need (SGCN<sup>3</sup>) including the Louisiana waterthrush, wood thrush, and numerous species of migratory warblers that use forest and woodland habitats in the Blufflands and Rochester Plateau subsections.

### Forest and Forest Habitat Conservation Opportunities

- Reforesting once forested areas (e.g., in riparian areas to improve water quality and fish and wildlife habitat; Big Woods restoration; habitat corridor enhancement).
- Controlling invasive species and enhancing and restoring from relation to adverse impacts of invasive species (e.g., terrestrial plants, insects and diseases).
- Protecting and restoring forested riparian areas and habitat corridors.
- Restoring, maintaining and enhancing existing forest habitats using native species and natural processes (e.g., fire and flooding).
- Use of tree plantings for winter cover on appropriate sites.
- Using the Ecological Classification System as a tool to get appropriate tree species planted on appropriate sites.
- Encouraging increased forest wildlife habitat on appropriate sites on private lands.

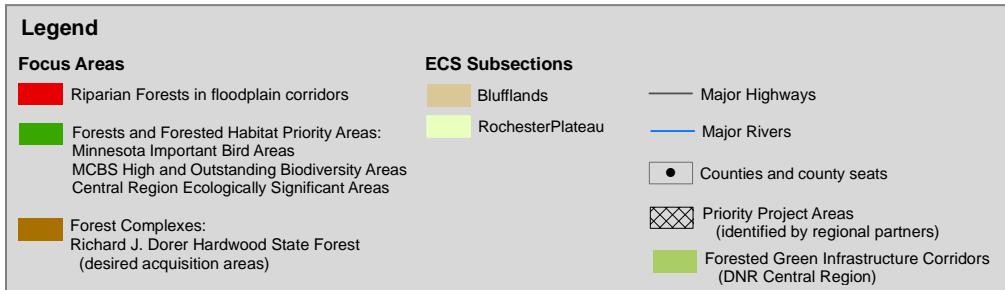
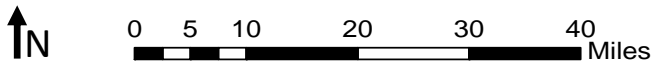
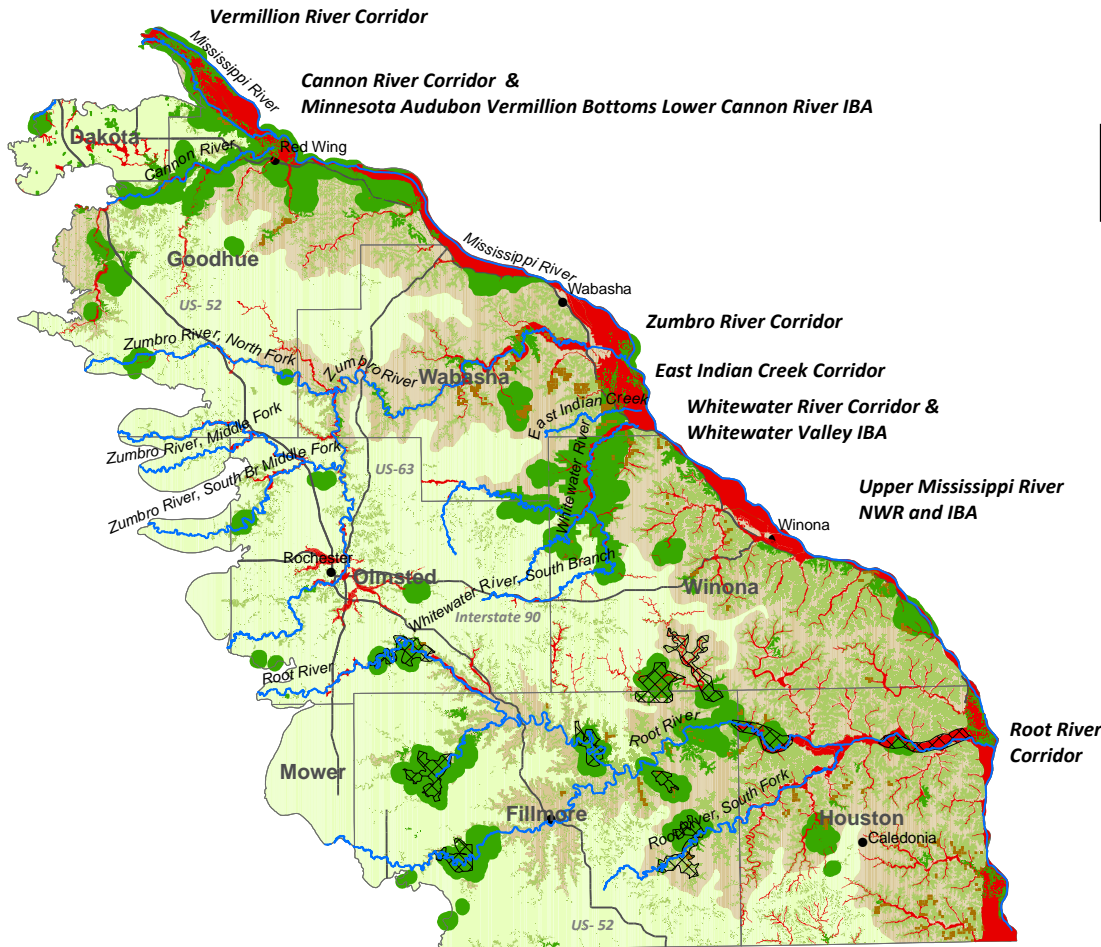
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<sup>1</sup> *Oak savanna has not been included in the recommendations for forest habitat within Minnesota, as it is comprised mostly of prairie species. The MFRC and MFRP are supportive of oak savanna protection, restoration and enhancement on appropriate sites.*

<sup>2</sup> *The resolution of the pre-settlement map is coarse and numerous small patches of habitat were not mapped. In addition, some land clearing in the 1830s – 1850s preceded the Public Land Survey in southeast Minnesota, on which Marschner’s map was based. As a result, acreages calculated from this coverage may not be appropriate for comparison with data derived from current satellite imagery (e.g., 1990s GAP, NASS 2008) and reduction in forest cover since pre-settlement times is likely underestimated.*

<sup>3</sup> *SGCN species are defined In Minnesota’s State Wildlife Action Plan (2006) as those animals whose populations are rare, declining or vulnerable in Minnesota.*

## Recommended 25-year L-SOHC Forest Priorities: Southeast Forest Section



Note: Only a small-to-modest portion of the areas shown in these red and green polygons would be feasible to restore to forest.

### Restore and Enhance Forest Wildlife Habitat in Priority Areas\*:

- High and Outstanding Areas of Biodiversity Significance
- Audubon Minnesota Important Bird Areas
- Invasive species management areas
- Within corridors and complexes

### Protect and Restore Riparian Forests:

- Upper Mississippi River National Wildlife Refuge
- Vermillion River Corridor
- Cannon River Corridor
- Zumbro River Corridor
- Whitewater River Corridor
- Root River Corridor

### Protect Contiguous Forest Complexes:

- Richard J Dorer Memorial Hardwood State Forest.
- High and Outstanding Sites of Biodiversity Significance throughout Southeast Minnesota.
- Watersheds of the tributaries to the Mississippi River.

\*Identification of priority areas on this map is not intended to be all-inclusive. Projects outside identified areas should also be considered based upon statewide recommendations and sectional or regional goals.

## Recommended 25-year L-SOHC Forest Priorities: Prairie Section

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The following is a recommended vision, collaboratively developed by the Minnesota Forest Resources Council and the Minnesota Forest Resources Partnership, for the L-SOHC to use in achieving its unique mission to advise the legislature regarding the protection, restoration, and enhancement of *forests<sup>1</sup> and forested habitat in the Prairie Section*. Recommendations have been developed for each of the five L-SOHC sections and support the suggested *25-Year Vision for Lessard-Sams Outdoor Heritage Council Investments in Minnesota Forests*.

### Section Description

- The Prairie Section covers 18,341,600 acres, of which 97% is in private ownership (17,807,050 acres).
- Pre-settlement forests<sup>2</sup> covered almost 1,193,600 acres (7%) of this section. Today, forestlands cover 664,000 acres (4%) of this section.

### Significant Forest Wildlife Species

Key forest game species include white-tailed deer and wild turkey. There are over 40 Species in Greatest Conservation Need (SGCN<sup>3</sup>) including the eastern wood pewee, red-headed woodpecker, and eastern fox snake that use forest and woodland habitats in the Big Woods, Coteau Moraines, Inner Coteau, Minnesota River Prairie, Oak Savanna, and Red River Prairie subsections.

### Forest and Forest Habitat Conservation Opportunities

- Reforesting once forested areas (e.g., in riparian areas to improve water quality and fish and wildlife habitat; big woods restoration; habitat corridor enhancement). Use the Ecological Classification System (ECS), Minnesota County Biological Survey (MCBS) and Scientific and Natural Area (SNA) priority area information to identify suitable sites and avoid prairie habitats.
- Protecting forested riparian areas.
- Restoring, maintaining and enhancing existing forest habitats using ECS and native species.
- Maintaining and restoring brushland complexes.
- Using ECS as an important tool to plant appropriate tree species on appropriate sites (e.g., where tree planting does not adversely affect prairie values).
- Encouraging increased forest wildlife habitat on appropriate sites on private lands.
- Enhancing and restoring forested areas from adverse impacts of invasive species (e.g., terrestrial plants, insects and diseases).

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<sup>1</sup> *Oak savanna has not been included in the recommendations for forest habitat within Minnesota, as it is comprised mostly of prairie species. The MFRC and MFRP are supportive of oak savanna protection, restoration and enhancement on appropriate sites.*

<sup>2</sup> *The resolution of the pre-settlement map is coarse and numerous small patches of habitat were not mapped. As a result, acreages calculated from this coverage may not be appropriate for comparison with data derived from current satellite imagery (e.g., 1990s GAP, NASS 2008).*

<sup>3</sup> *SGCN species are defined in Minnesota's State Wildlife Action Plan as those animals whose populations are rare, declining or vulnerable in Minnesota.*

## Recommended 25-year L-SOHC Forest Priorities: Prairie Section

Note: Only a small-to-modest portion of the areas shown in these red and green polygons would be feasible to restore to forest.

### Protect and Restore Riparian Forests:

Shown north to south

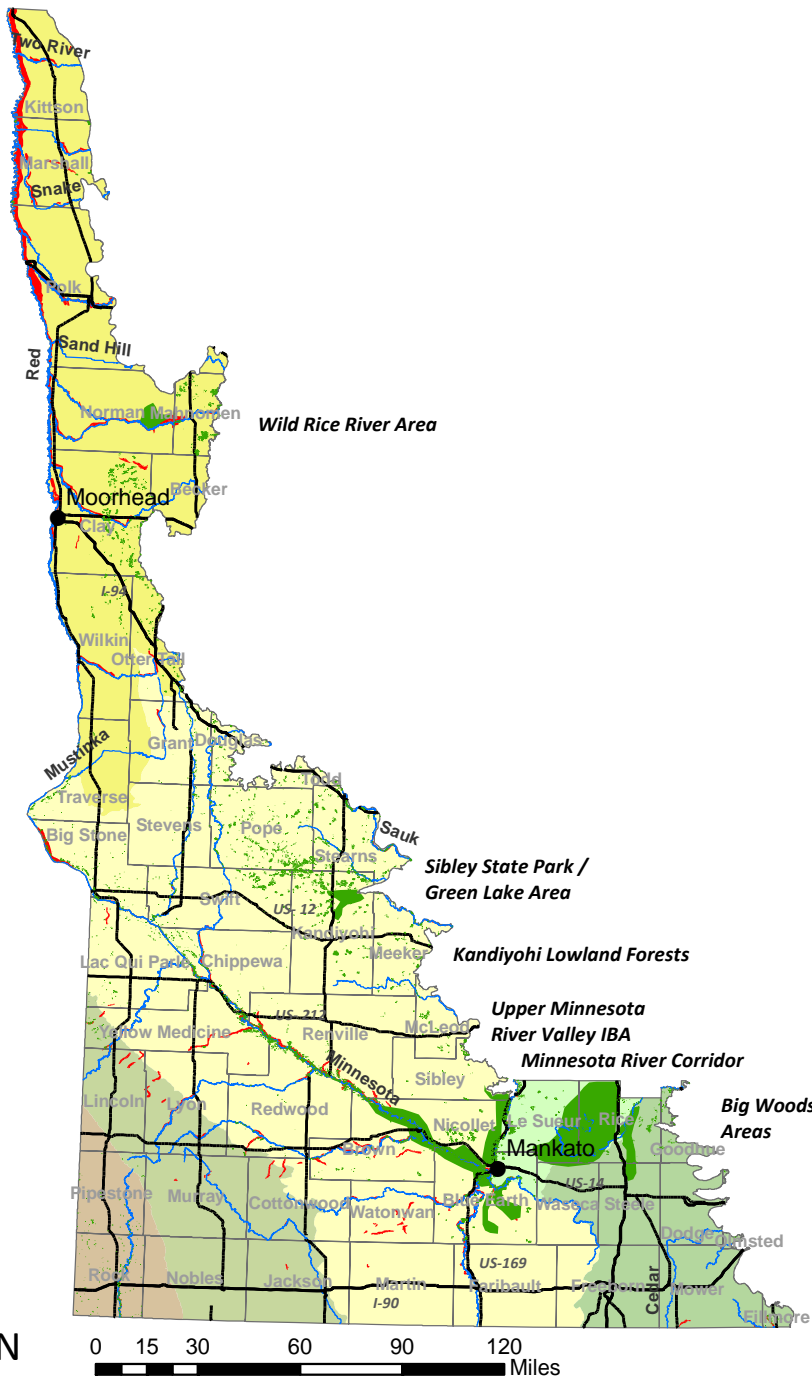
- Red River Corridor and Tributaries (Marschner – Presettlement)
- Minnesota River Corridor and Tributaries (Marschner – Presettlement)

### Restore and Enhance Forest Wildlife Habitat in Priority Areas\*:

- Wild Rice River Area
- Sibley State Park / Green Lake Area
- Unique Kandiyohi County Lowland Forests
- Forested Part of Upper Minnesota River Valley Important Bird Area
- Minnesota River Corridor
- Big Woods Restoration Opportunity Areas

Additional forested sites of High and Outstanding Biodiversity significance as identified by the Minnesota County Biological Survey (smaller polygons throughout map)

\*Identification of priority areas on this map is not intended to be all-inclusive. Projects outside identified areas should also be considered based upon statewide recommendations and sectional or regional goals.



### Legend

#### Focus Areas

- Forests and Forested Habitat Priority Areas
- Riparian Forests

#### ECS Subsection

- Big Woods
- Coteau Moraines
- Inner Coteau
- Minnesota River Prairie
- Oak Savanna
- Red River Prairie

- Major Rivers
- Major Highways
- Counties

- County Seats (population > 25000)