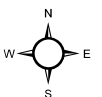
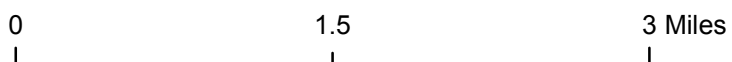
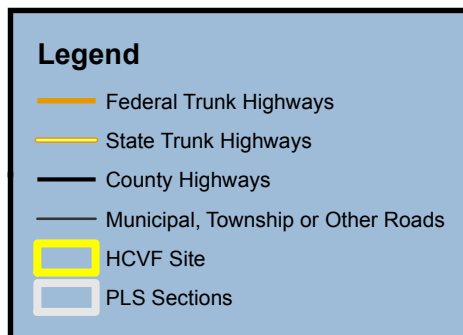
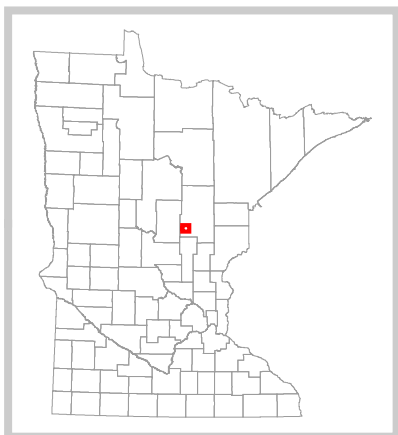
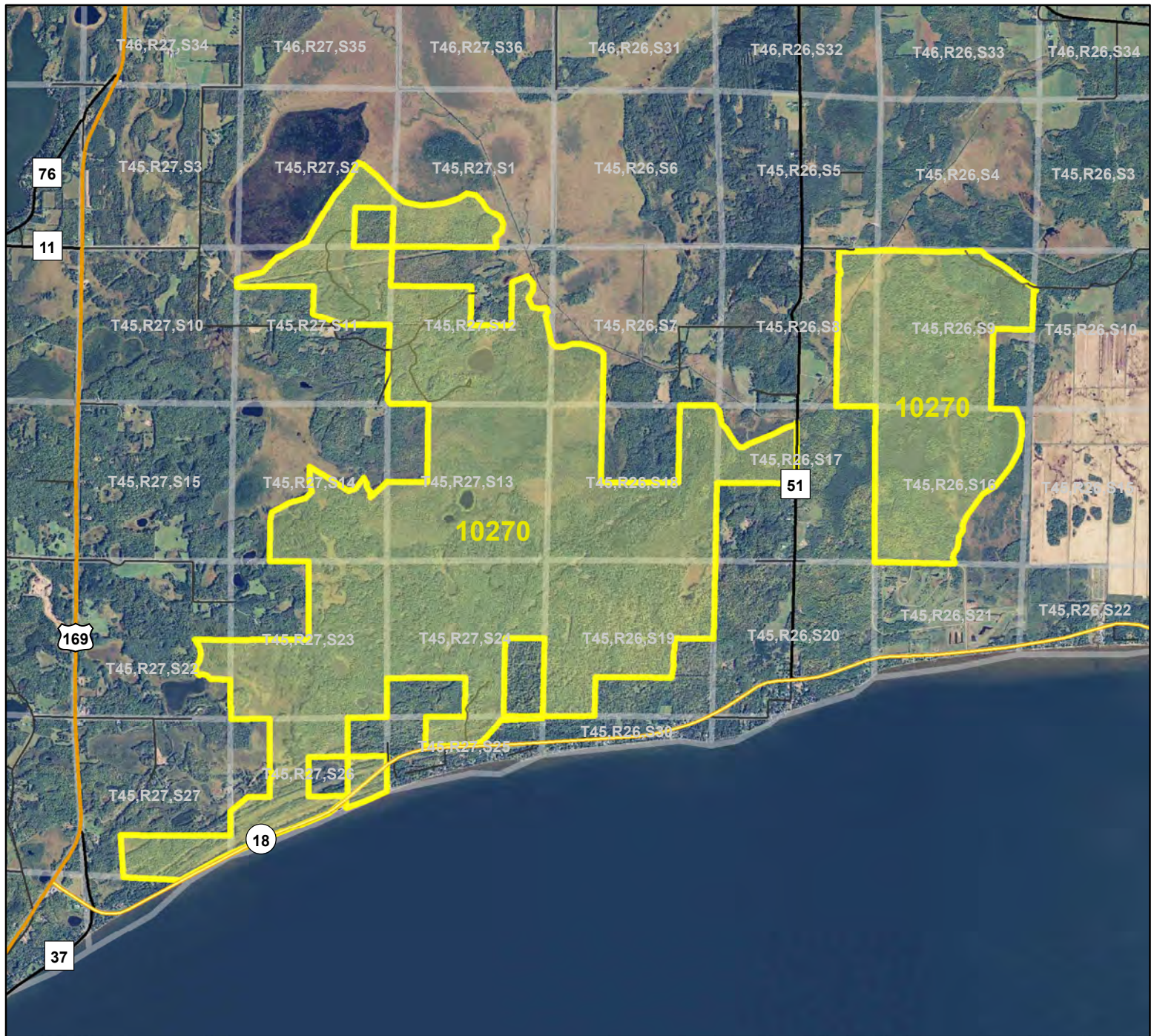


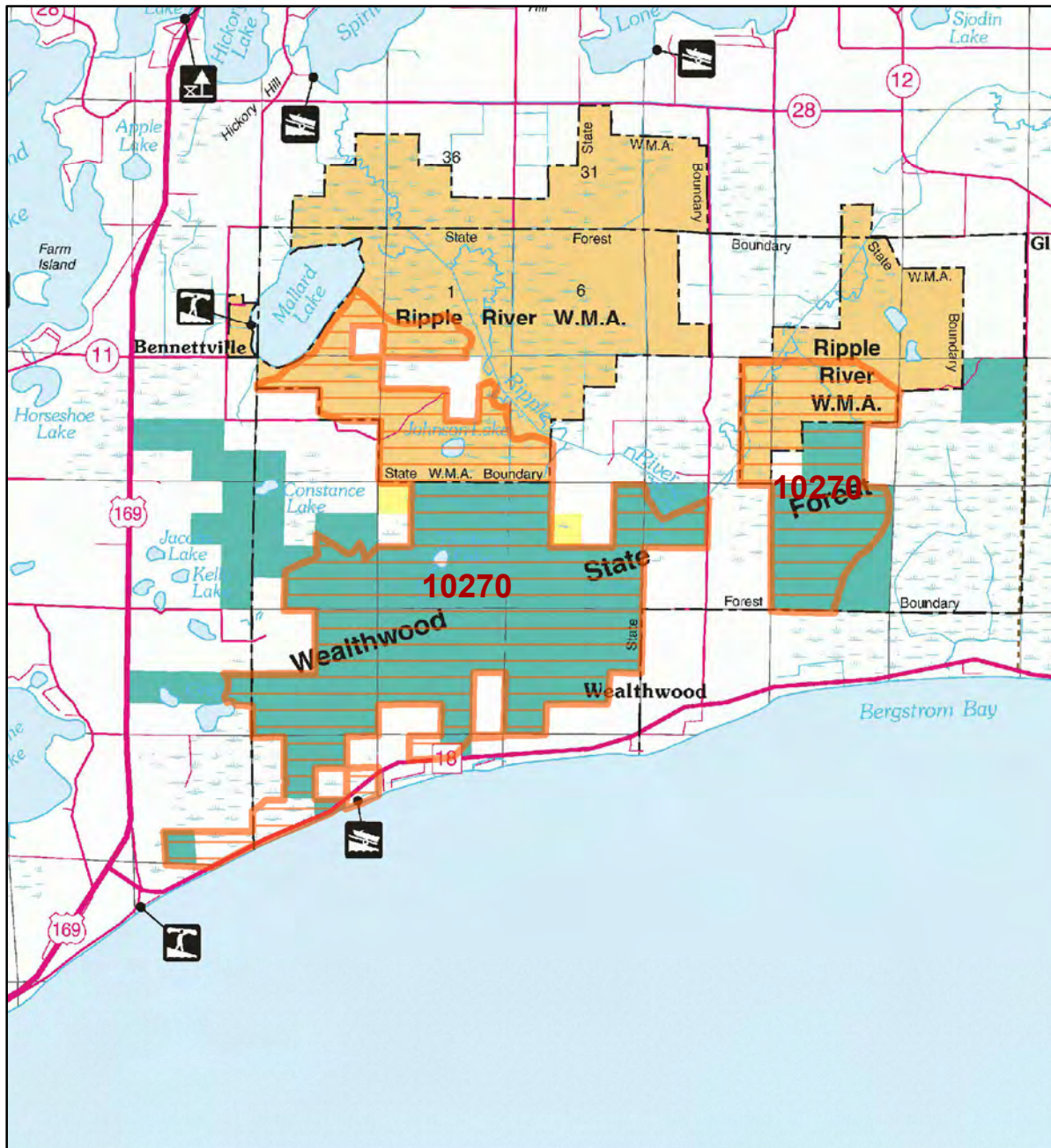
HCVF Site 10270

Wealthwood Hardwoods and Beach Ridges, Aitkin County



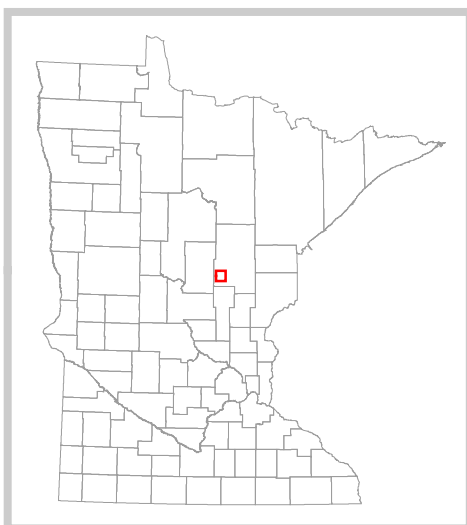
HCVF Site 10270

Wealthwood Hardwoods and Beach Ridges, Aitkin County



LEGEND

- HCVF Site
- MAP EXPLANATION**
- LAND OWNERSHIP**
 - County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
 - County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
 - State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
 - State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
 - D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.25 4.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 10270

HCVF Name: Wealthwood Hardwoods and Beach Ridges

Acres of HCVF site: 5458.94

County: Aitkin

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry, F&W

Management Unit Name(s) (if applicable): Wealthwood State Forest, Ripple River WMA

HCVF Summary

Upland forest & forested and non-forested wetlands in portions of the Wealthwood SF and the Ripple River WMA along the north-northwest shore of Lake Mille Lacs. Uplands with good quality, mature MHn/MHc forests with good landscape canopy continuity. Very good examples of rich mesic hardwood ground flora including spring ephemerals (one rare). Notable concentration of rare species for the Section. Many NH acres here managed for quality hardwoods (oak). Some concentrated areas of windthrow in the NNE part of the site. State HCVF acres on the Malmo Peatlands LTA and the Mille Lacs Moraine LTA. State HCVF acres also include a series of ice ramparts (i.e., beach ridges) and undeveloped Lake Mille Lacs shoreline as described in MBS Site 10260; this MBS site is in the process of SNA designation.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 3 Botrychium (spp.), 1 spring ephemeral plant (sp.). HCV1e (Rare species concentration): 1 raptor, 1 amphibian, SGCN birds, and plants. HCV1f (Taxonomic group concentration): SGCN birds. HCV1g (Outstanding Key Habitats Examples): Forest lowland conifer, Wetland non-forest, Shoreline, a limited amount of Forest upland conifer. HCV2-LMFa (Large habitat block): Upland with wetland forest matrix. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): WFn53b (White cedar swamp). HCV3d (Natural origin pine stand): 5 acres of red pine.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare fern and rare spring ephemeral locations - maintain existing canopy cover and ground layer conditions. Apply [yet to be developed] management guidelines that combine red-shouldered hawk, salamander, SGCN birds, rare plants. Silvicultural prescriptions in Key Habitat or rare native plant communities (native plant communities) maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance WFn53b occurrences. Apply DNR HCV General Landscape Guidance. Maintain/enhance existing natural origin pine component within the forest matrix; enhance opportunities for natural regeneration of these species. Develop plan to address HCVs in managing for quality hardwoods (oak, et al.).

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

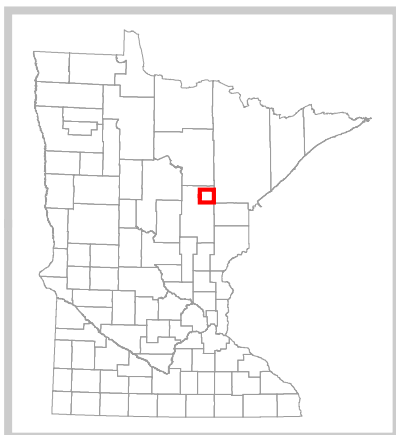
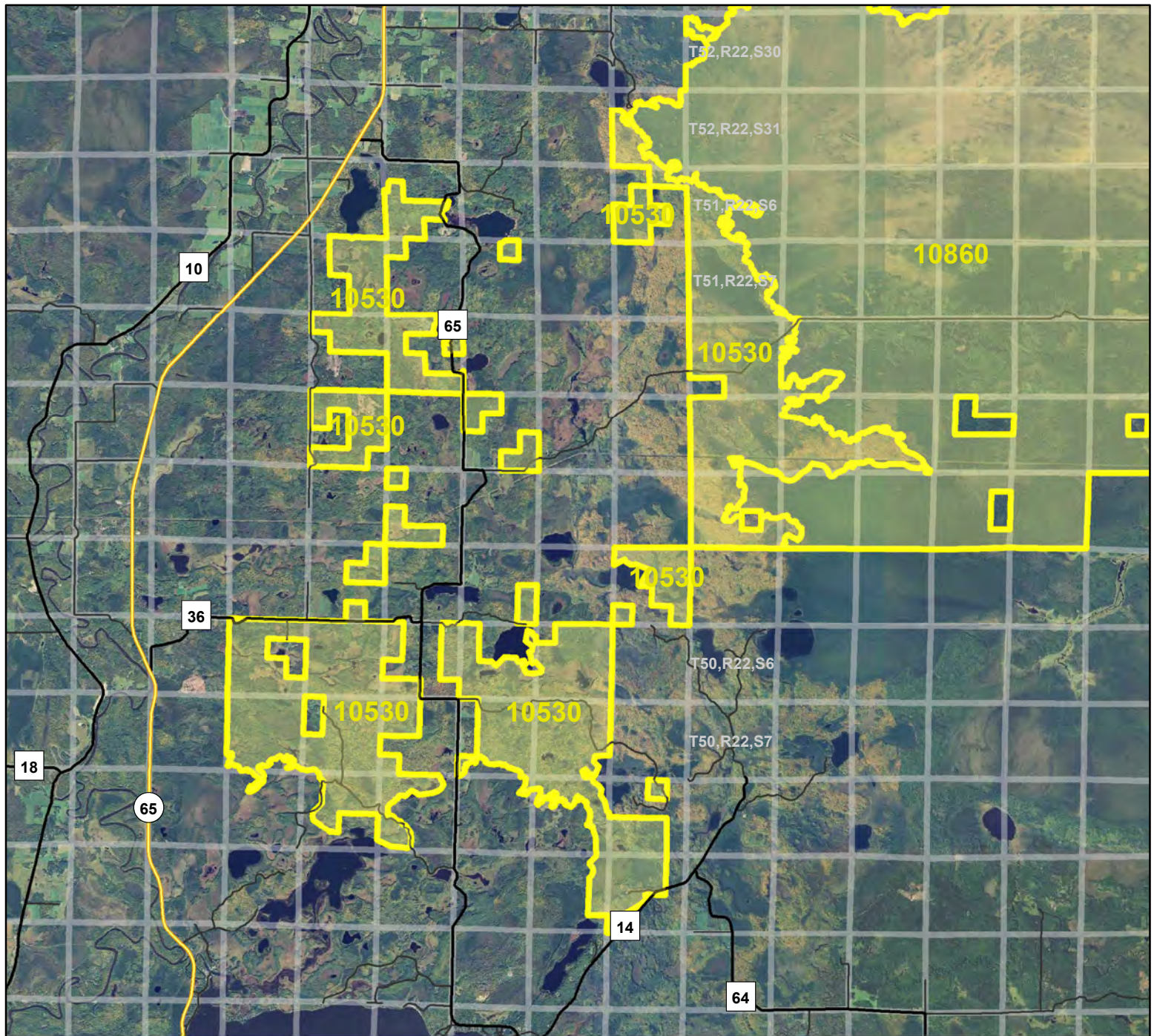
Finalize Ice Ramparts SNA. High priority area for prevention of invasive earthworm spread.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 10530

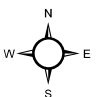
Savanna Hardwoods, Aitkin County



Legend

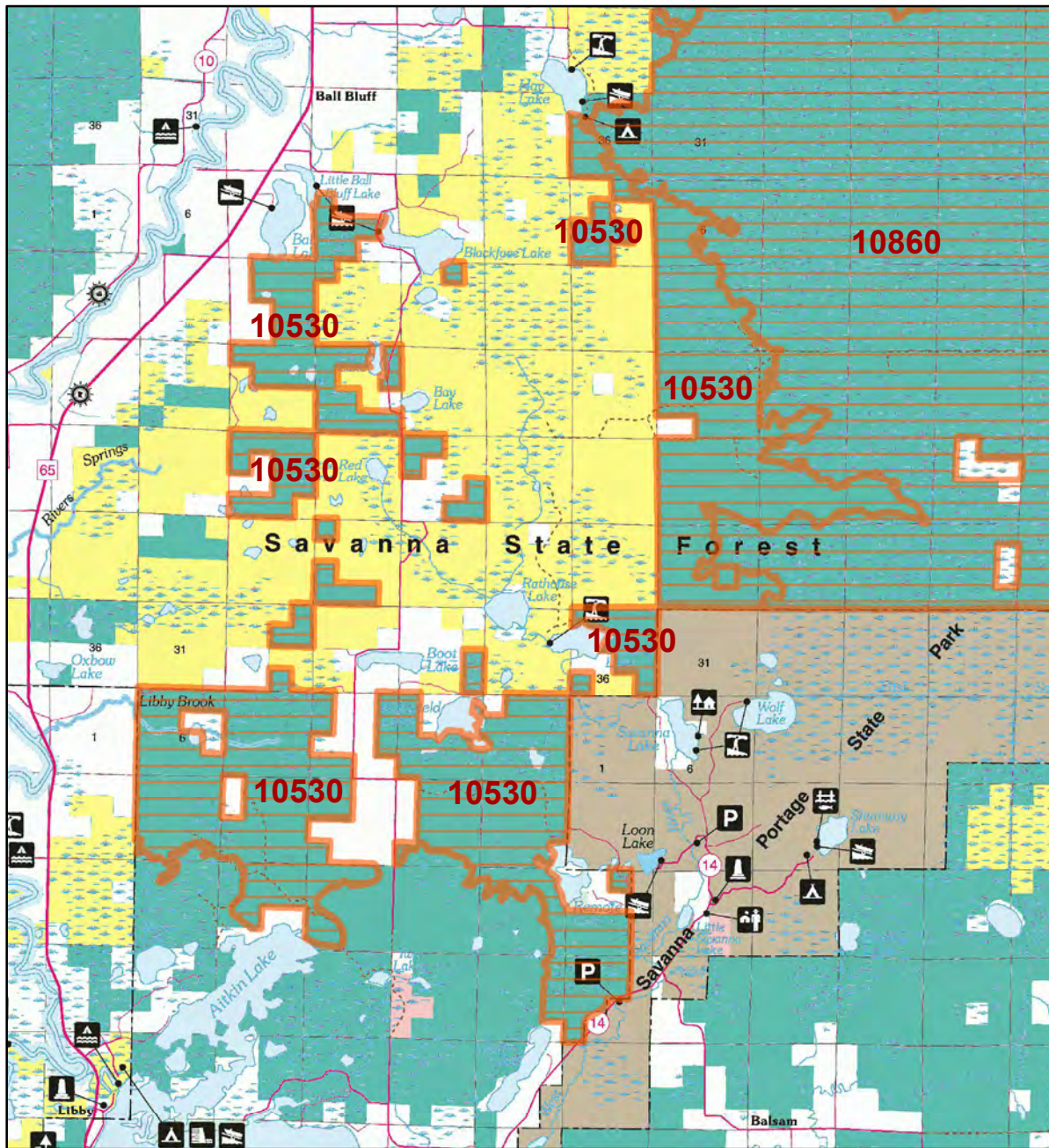
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 3 6 Miles



HCVF Site 10530

Savanna Hardwoods, Aitkin County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

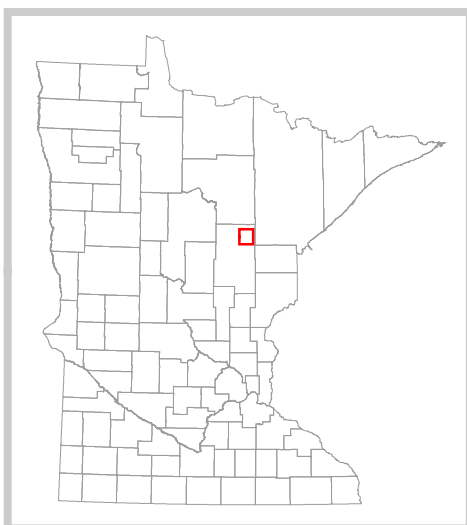
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

HCVF: Some of the features depicted in this map are identified as such for informational purposes only.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 3.25 6.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 10530

HCVF Name: Savanna Hardwoods

Acres of HCVF site: 13305.13

County: Aitkin

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Savanna State Forest

HCVF Summary

Large upland dominated site with classic end moraine topography-rolling hills and numerous small isolated wetlands (acid and non-acid peatlands); highest concentration of old forests in the county (mesic hardwoods, spruce and cedar swamps). Many rare species; portion of area designated by Aitkin County as HCVF. FDC34a. Abuts Savanna Portage SP on the SE. Four-toed salamander, red-shouldered hawk., and rare ferns.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 4 Botrychium (spp.). HCV1e (Rare species concentration): 1 rare raptor, SGCN birds, 5 Botrychium (spp.), 1 amphibian. HCV1f (Taxonomic group concentration): SGCN birds, 6 Botrychium (spp.). HCV2-LMFa (Large habitat block): upland/wetland matrix forest. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): MHN47a, others? " native plant community mapping incomplete. HCV3d (Natural origin pine stand): 15 acres red pine. HCV3e (Old-growth forest): NH and WP.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare fern locations - maintain existing canopy cover and ground layer conditions. Apply DNR HCV General Landscape Guidance. Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Field verify natural origin pine stands. Develop plan to address HCVF objectives with aspen covertime management in portions of this site.

Management direction from the following sources was considered in developing the above recommendations:

North Four SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

Aitkin County

General Comments

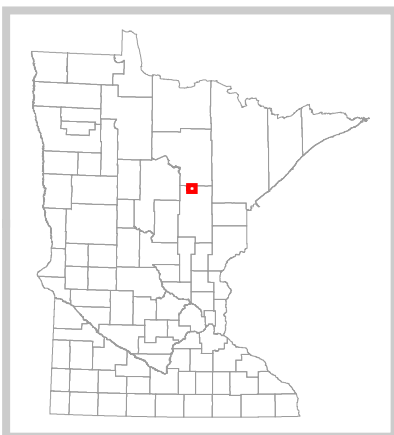
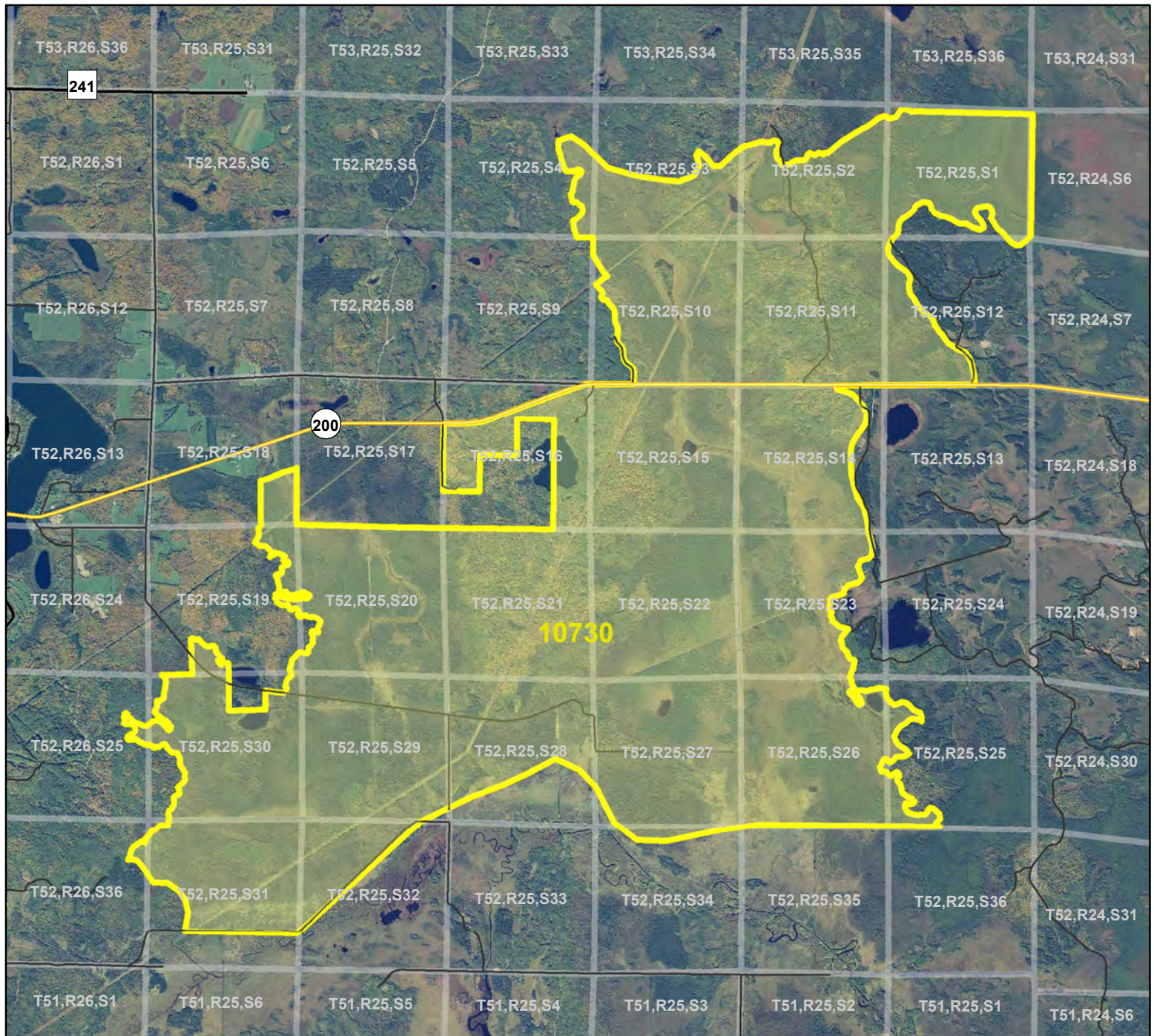
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Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

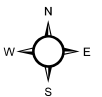
HCVF Site 10730

Hill City East Peatlands and Hardwoods, Aitkin County



Legend

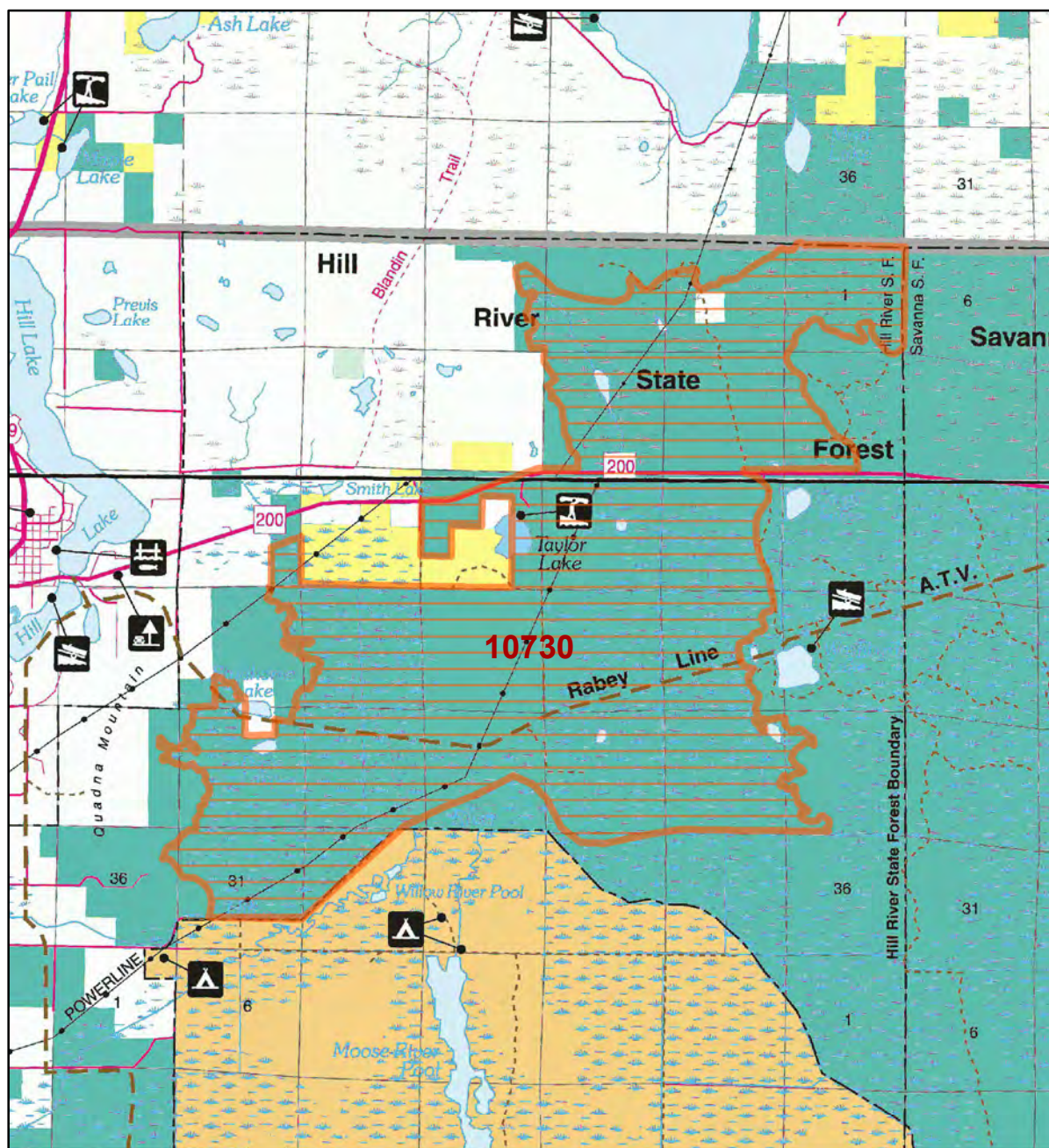
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



0 1.5 3 Miles

HCVF Site 10730

Hill City East Peatlands and Hardwoods, Aitkin County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

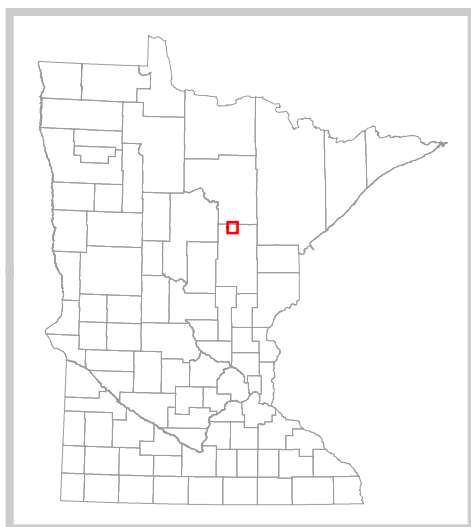
- State Trail
- State Forest Road

DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.25 4.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 10730

HCVF Name: Hill City East Peatlands and Hardwoods

Acres of HCVF site: 10212.39

County: Aitkin

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Hill River State Forest

HCVF Summary

St. Louis Moraines uplands (Pokegama Moraine LTA) adjacent to Tamarack Lowlands lowland conifer swamps (Moose-Willow Peatlands LTA). Uplands significant for rare forest species: red-shoulder hawk, rare ferns (*Botrychium* spp.), and rare salamander. Uplands also notable for mature mixed hardwood-pine forest with significant white pine component, 38 acres of which is designated old growth. HCVF Lowland conifer acreage part of a much larger peatland complex that extends to the south. Lowland conifer forest notable for orchids including three rare species and great potential for more. Large acreage of S3 native plant community WFn53b with rare species (orchids). Lowland conifers typically with section-line ditches as is usual in the larger Moose-Willow peatland. Two utility corridors bisect the site as does the Rabey Line recreational trail (former railroad). Uplands actively managed, lowlands with very little (any?) active forest management.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 plant. HCV1e (Rare species concentration): 1 raptor, 1 amphibian, 2 *Botrychium*, 3 orchids, SGCN birds. HCV1f (Taxonomic group concentration): orchids. HCV1g (Outstanding Key Habitats Examples): Forest lowland coniferous, Forest upland coniferous, Wetland non-forest. HCV2-LMFa (Large habitat block): Upland and lowland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): WFn53b, MHn47a, and MHn47/MHn35 mature forest with significant amounts of natural origin white pine. HCV3d (Natural origin pine stand): 136 acres white pine. HCV3e (Old-growth forest): 38 acres white pine, 46 acres lowland hardwoods/ash.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare fern locations - maintain existing canopy cover and ground layer conditions. Apply [yet to be developed] management guidelines that combine red-shouldered hawk, salamander, and Botrychium spp. Protect known orchid concentration areas. Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance existing natural origin pine as a component within the forest matrix; enhance opportunities for natural regeneration of these species. Apply DNR HCV General Landscape Guidance. Maintain/enhance >500 acre blocks around designated OG (OFMC) - Split Hand Lake road uplands. Maintain/enhance >500 blocks around forested areas with rare salamanders, rare ferns and red-shouldered hawk - Taylor Lake uplands.

Management direction from the following sources was considered in developing the above recommendations:

North Four SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

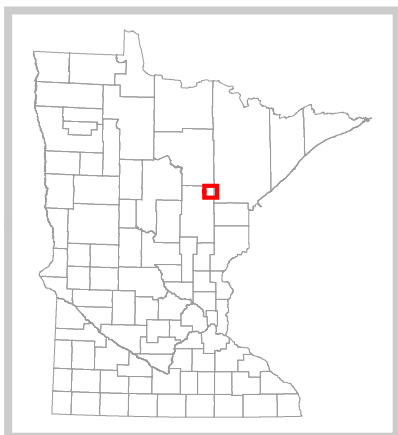
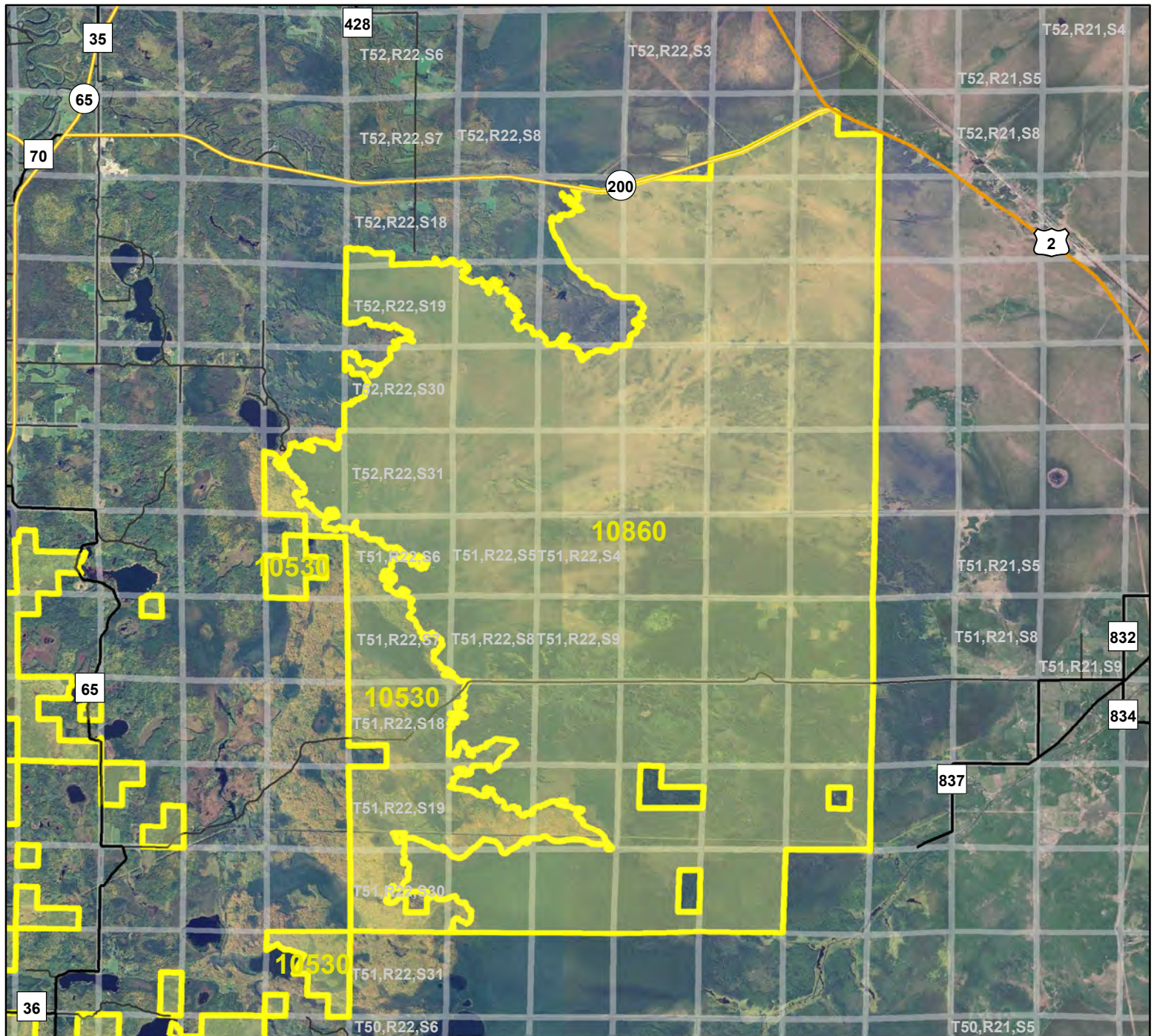
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... Report End ...

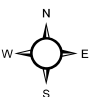
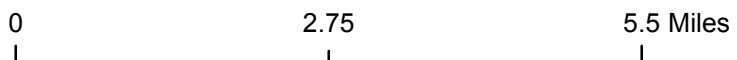
HCVF Site 10860

Floodwood Bog, Aitkin County



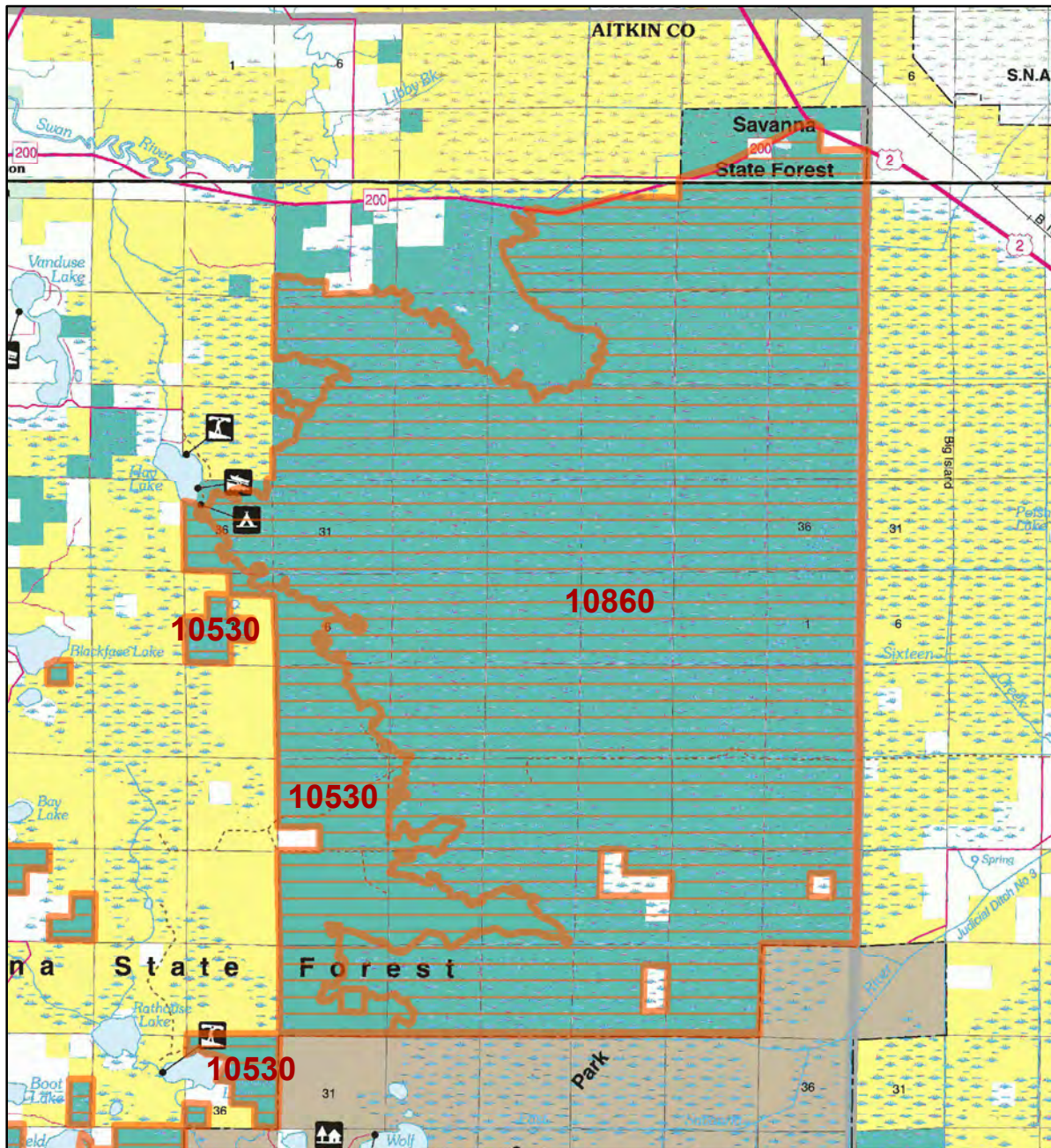
Legend

- Federal Trunk Highways
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 10860

Floodwood Bog, Aitkin County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

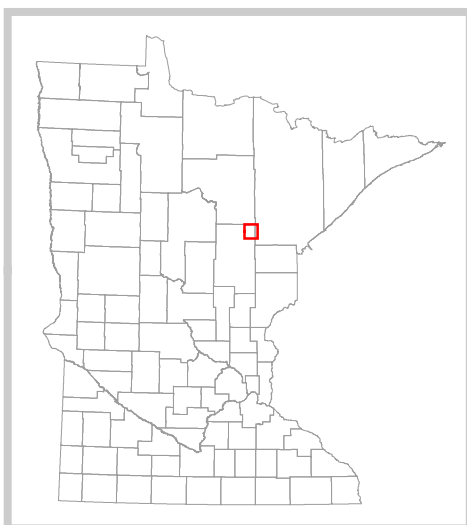
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

HCVF: Some of the features depicted in this map are identified as such for informational purposes only.



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Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 3 6 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 10860

HCVF Name: Floodwood Bog

Acres of HCVF site: 29378.48

County: Aitkin

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Savanna State Forest

HCVF Summary

HCVF site centered on a large, extensive peatland (Floodwood Bog) that extends well beyond the HCVF site into adjacent Itasca and St. Louis counties to the N and NE. East-west ditches common, north-south ditches uncommon in the peatland; ditching has had only localized affects. Northern half with largest patterned peatlands in the county. True bogs restricted to north half, other forested peatlands and wetlands (APn, FPn, WFn) in south. Significant areas of potential OG lowland conifers. High-quality landforms and native plant communities. Peatland with numerous small upland islands, many of these likely with primary forest (needs confirmation). Designated OG NH and cedar stands at western site boundary.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1e (Rare species concentration): SGCN birds. HCV1f (Taxonomic group concentration): SGCN birds. HCV1g (Outstanding Key Habitats Examples): Forest lowland conifer. HCV2-LMFa (Large habitat block): forested peatland and wet forest. HCV2-LMFBii (blocks with rare species): yes. HCV3c (Special S3 plant community): MHn47a, WFn53b. HCV3e (Old-growth forest): cedar and NH. HCV3f (Primary forest): very probable.

Management Considerations

Overall management objectives for the entire HCVF:

Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Silviculture in MHn47a and WFn53b either prolongs an existing growth stage transition or complements a transition to the next later growth stage. Apply DNR HCV General Landscape Guidance. Field verify primary forest in this site.

Management direction from the following sources was considered in developing the above recommendations:

North Four SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

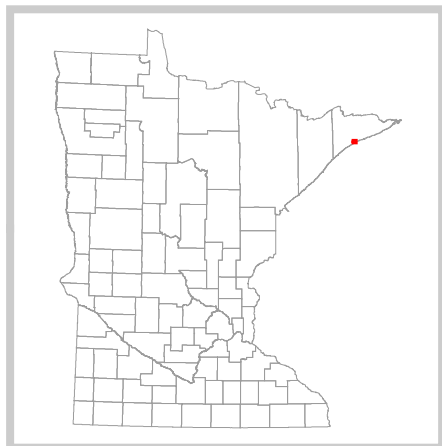
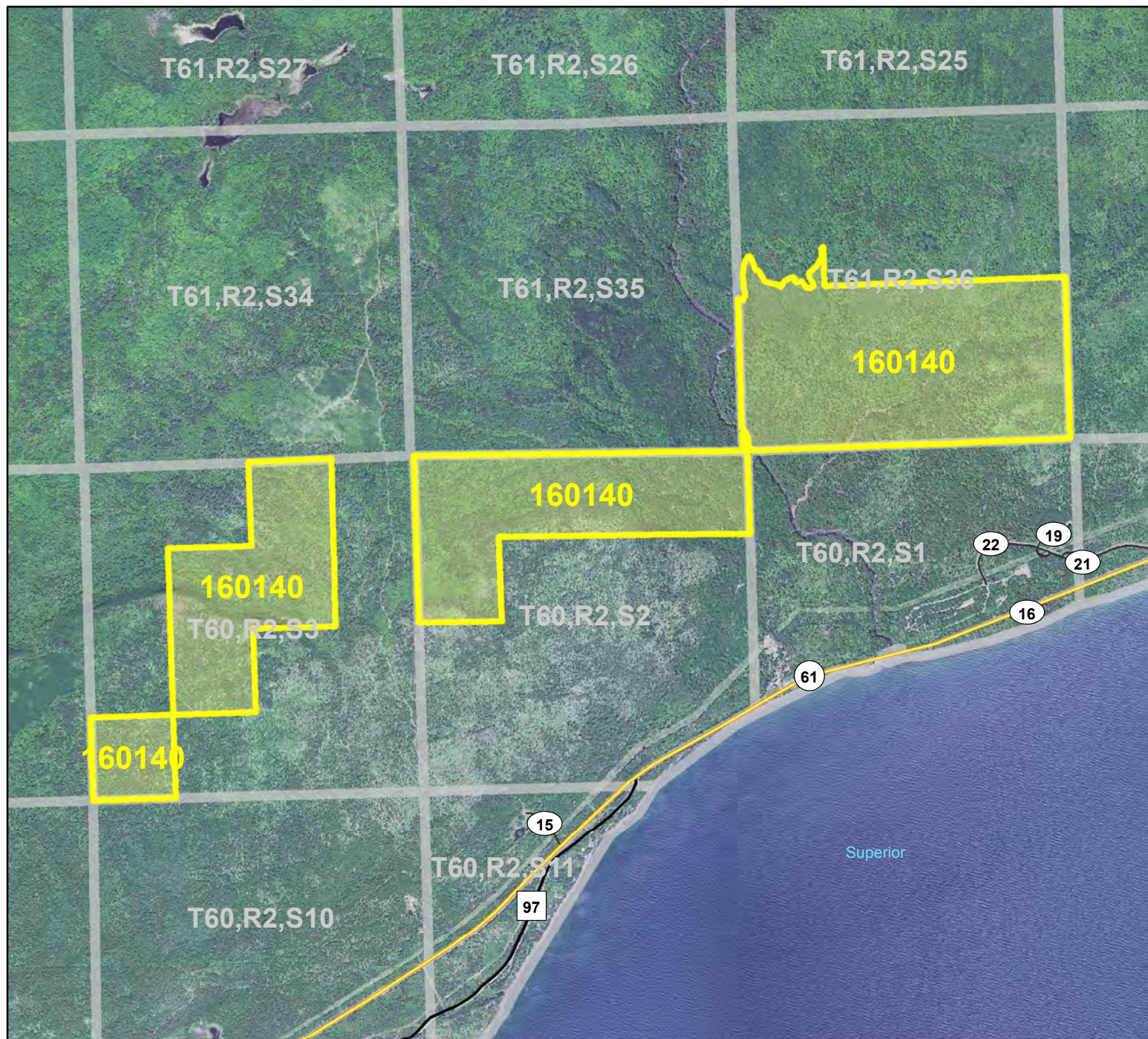
Address conflict between lowland conifer insect and disease (mistletoe and spruce bud worm) treatments and the value of these disturbances to SGCN birds.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 160140

Lookout Mt. Ridge, Cook County



Legend

- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site

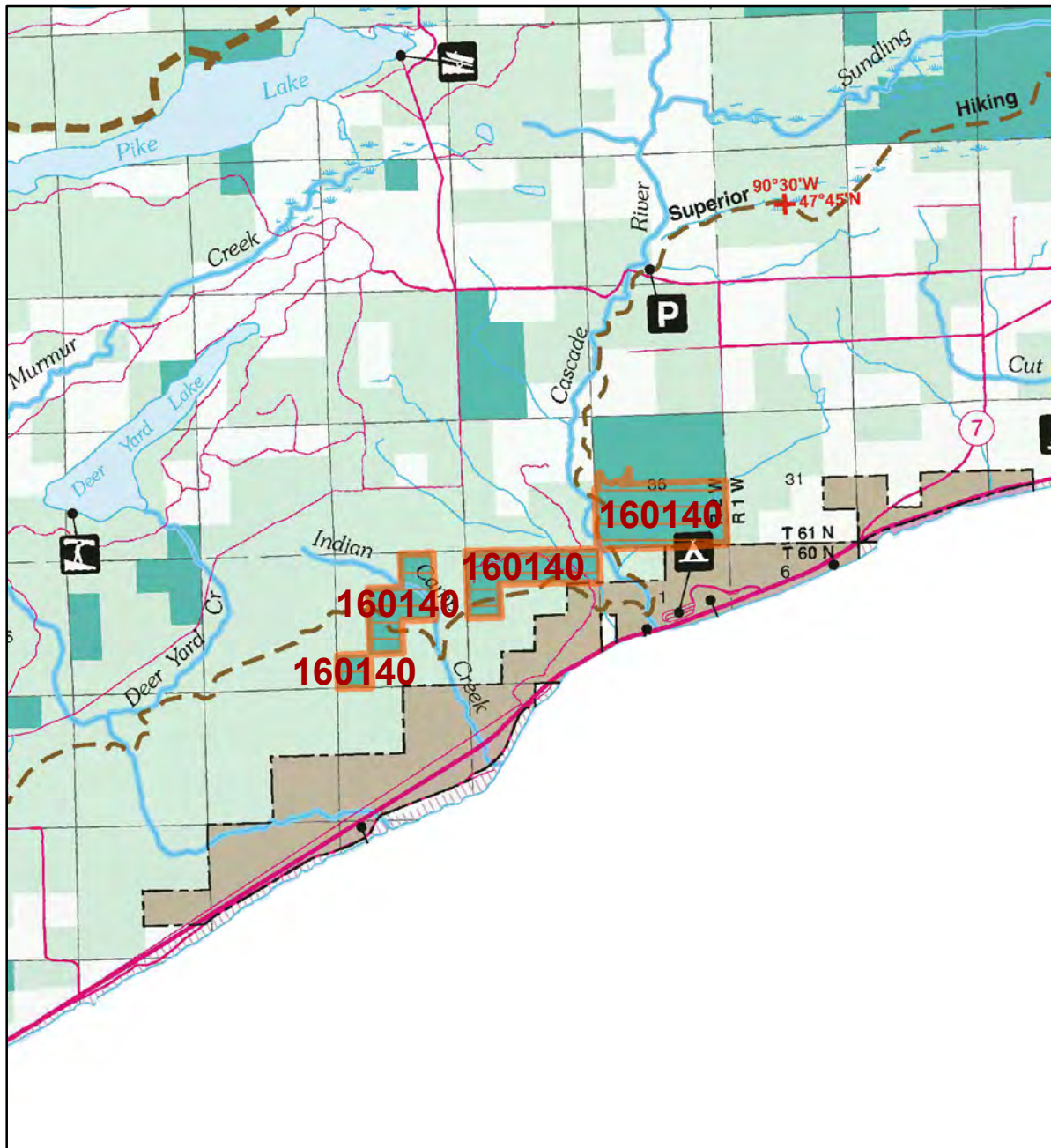
PLS Sections

0 0.5 1 Miles



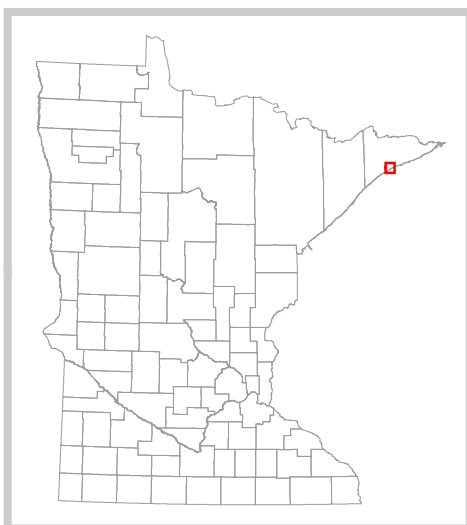
HCVF Site 160140

Lookout Mt. Ridge, Cook County



LEGEND

- HCVF Site
- MAP EXPLANATION**
- LAND OWNERSHIP**
 - County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
 - County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
 - State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
 - State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
 - D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2 4 Miles

Land ownership categories on this map are in some cases outdated.
HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 160140

HCVF Name: Lookout Mt. Ridge

Acres of HCVF site: 711.73

County: Cook

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Scattered lands

HCVF Summary

4 State HCVF parcels totaling 712 acres within a 6100 acre MBS site (160140 – Lookout Mountain Ridge) of undeveloped, minimally fragmented, primary and secondary forest. State HCVF acres here occur within a large contiguous patch of mature mesic forest; among the largest remaining contiguous occurrence of upland cedar in the subsection, much of it old growth. About 370 acres of designated OG upland white cedar. State land includes two S1-rank cliff communities: CTn42d and CTn32c. Large area managed as deer wintering habitat. Large lowland cedar forest on Deer Yard Creek. State HCVF acres directly border or are within ¼ mile of the north-central boundary of Cascade River State Park. Good potential for additional rare spp. The Superior Hiking Trail variously passes through State HCVF acres. Short stretches of the Cascade River and Indian Camp Creek occur within State HCVF acres.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1g (Outstanding Key Habitats Examples): Upland Coniferous and Outcrop, Talus, Cliff. HCV2-LMFa (Large habitat block): upland forest. HCV2-LMFbi (late-successional forest block): yes. HCV2-LMFbii (blocks with rare species): yes. HCV3b (S1 or S2 plant community): CTn32c, CTn42d, FDn43a. HCV3c (Special S3 plant community): CTn32a. HCV 3d: Natural origin pine occurs as a significant component within natural origin non-pine native plant communities. HCV3e (Old-growth forest): 83 acres cedar.

Management Considerations

Overall management objectives for the entire HCVF:

Engage with the North Shore Forest Collaborative for coordinated management across ownership to effectively address HCVs on State HCVF parcels. Apply DNR HCV General Landscape Guidance. Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance shading, run-off, and micro-habitat conditions in CTn32a, CTn32c, CTn42d native plant communities. Maintain/enhance existing natural origin pine component in the matrix MHn forest, enhance opportunities for natural regeneration of these species.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP, North Shore Forest Collaborative

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS, Cascade River State Park. HCVF site is within the North Shore Forest Collaborative.

General Comments

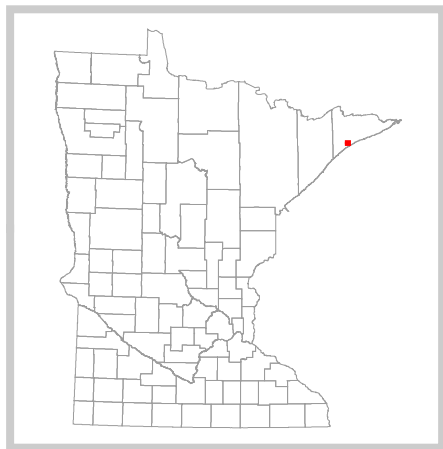
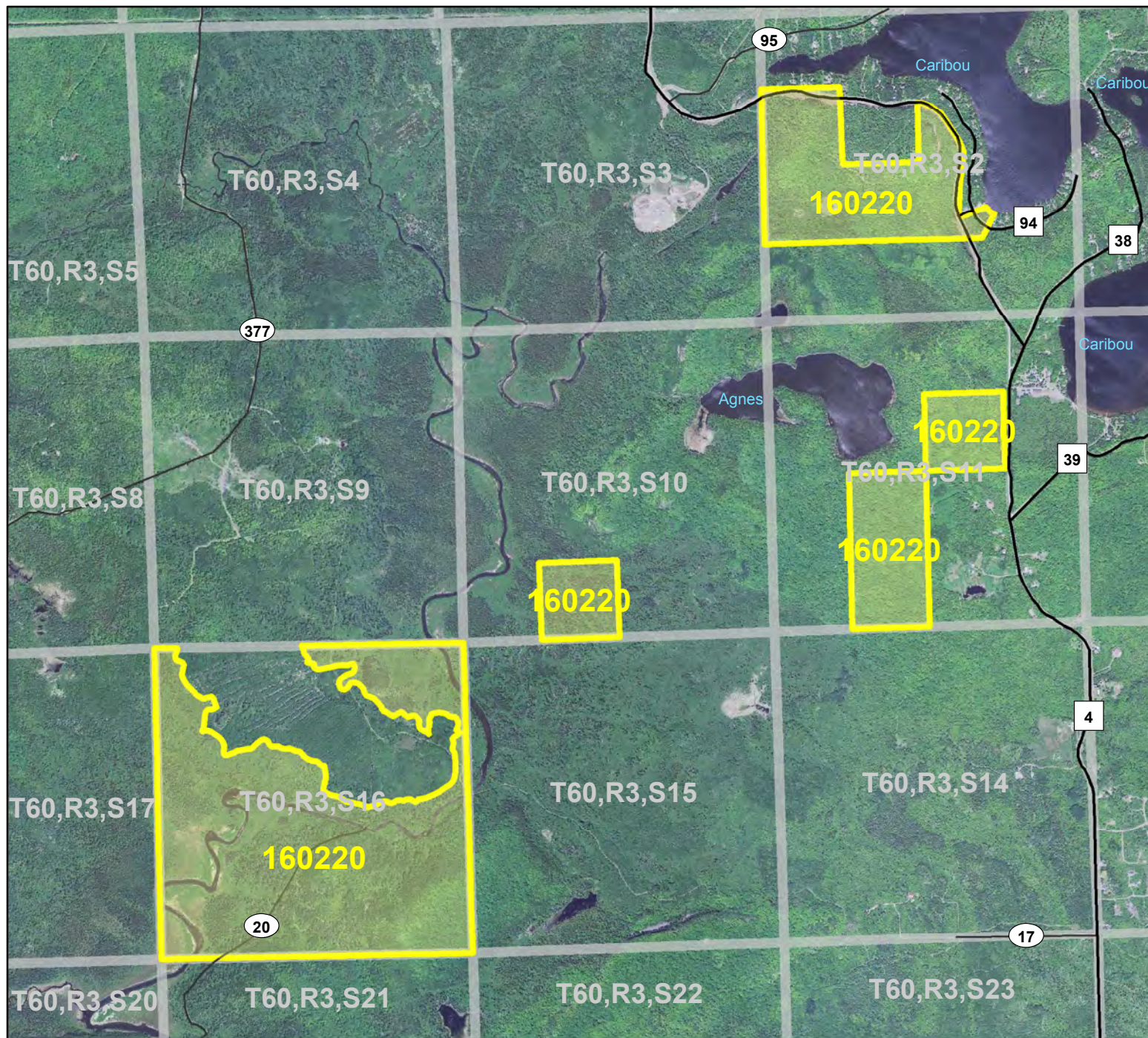
Potential HCVF topics for North Shore Collaborative engagement: Maintain/enhance >500 acre blocks around designated OG (OFMCs) or as part of SFRMP old, large patches. Maintain/enhance >500 blocks around forested areas with rare species; maintain/enhance

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

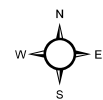
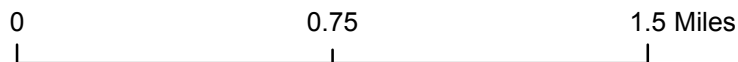
HCVF Site 160220

Poplar-Agnes, Cook County



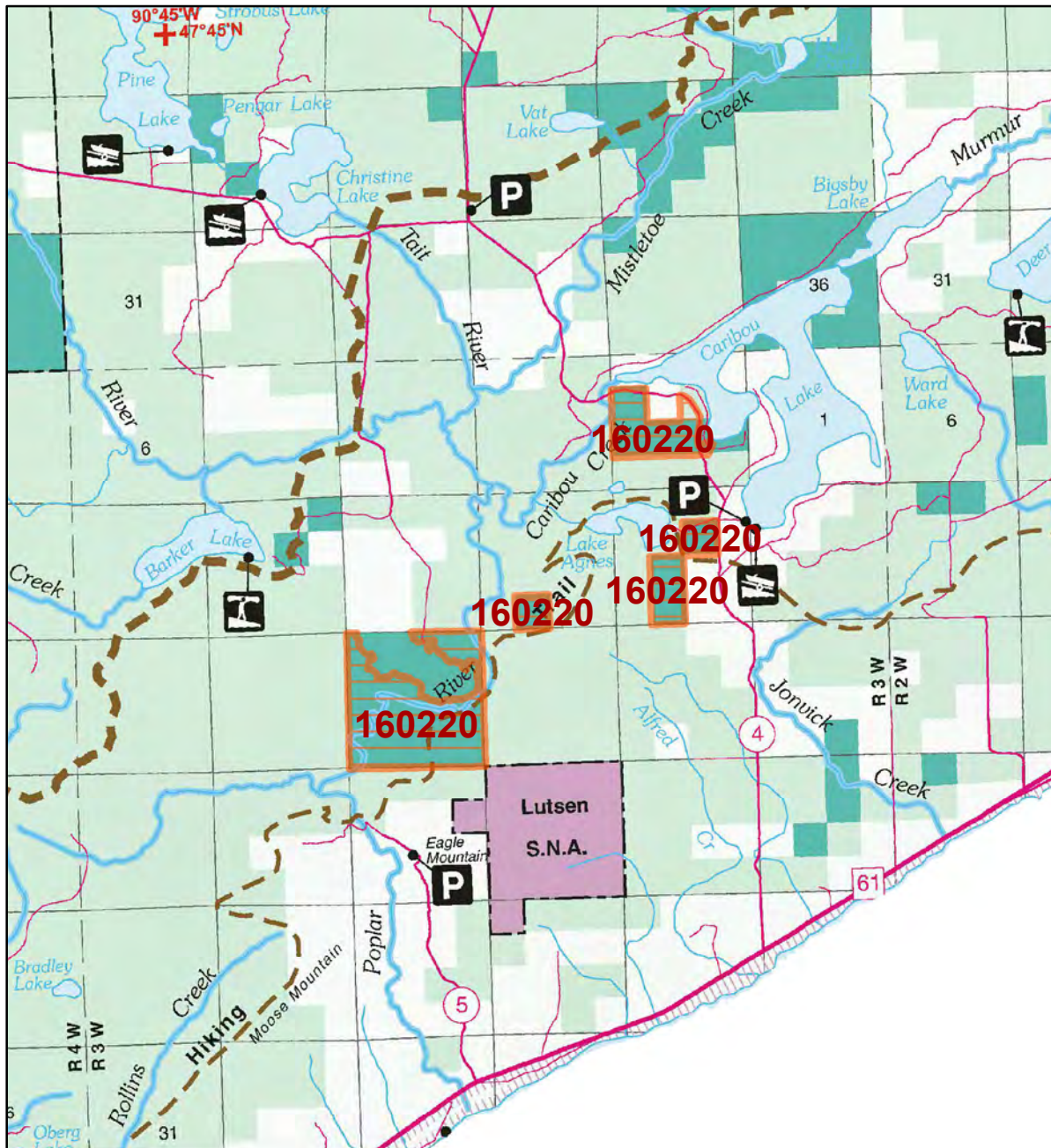
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 160220

Poplar-Agnes, Cook County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

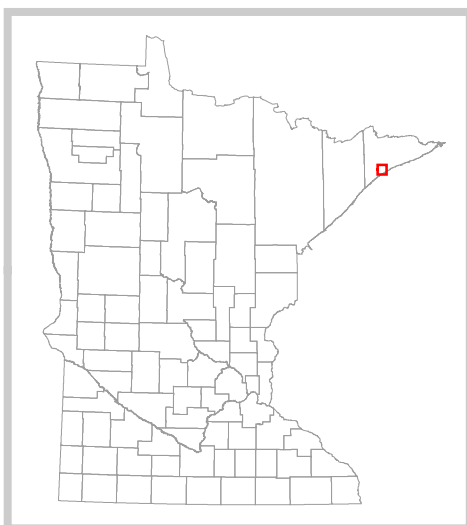
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

HCVF: Some of the features shown in this map are not shown on the official map of Minnesota.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2 4 Miles

*Land ownership categories on this map are in some cases outdated.
HCVF sites are on DNR-managed land only; DNR HCVF sites have
not been identified on other ownerships.*



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 160220

HCVF Name: Poplar-Agnes

Acres of HCVF site: 783.81

County: Cook

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Scattered lands

HCVF Summary

Within a 5,148 MBS site (160220 - Poplar Agnes) that is scenic, fairly remote, and ecologically intact, encompassing the largest remaining, undeveloped portion of the lower Poplar River watershed; the Poplar River being a principal North Shore stream in the Sawtooth Mountains above Lake Superior at Lutsen. Both the condition of the native plant communities and the landscape context of the remaining state administered lands are of ecological significance within the Poplar Agnes Site. Of the State HCVF acres, 16 acres of a 40-acre block in the Lake Agnes area has been designated as old-growth northern hardwoods and a contiguous area of 79 acres, known as the Lake Agnes Natural Area Registry Site, has also been designated as old-growth northern hardwoods. See the Lake Agnes Natural Area Registry agreement (MN DNR SNA program). A 439-acre area is adjacent to the Lutsen SNA; this area is comprised of riparian and upland communities, predominantly in older native plant community growth stages, along a cross-section of the Poplar River valley and including adjacent cliff communities. A 39-acre area of upland black spruce (FDn32) adjoins the Lake Agnes RNA and is an important component of the conifer-dominated, riparian peatland community complex of the Poplar River in this site. A 162-acre area of old forest communities, currently with a mix of aspen, birch and northern hardwoods, are among northern hardwoods communities on a bedrock-controlled northern hardwoods knob. State HCVF acres include a stretch of the Poplar River, a Key River Reach per MN's CWCS, and border a short stretch of the upper reaches of Caribou Creek, a tributary to the Poplar River. Adjacent ownership within the larger MBS site is majority USFS-SNF and a minority private. 800 acres of the USFS land is within a Research Natural Area (cRNA). Taken together, these conservation units (i.e. SNA, NAR, OG, cRNA) comprise core areas within the Site that represent high quality older growth stages of northern mesic hardwood forests, mesic and wet forest cedar communities, northern mesic mixed forests, cliff communities and peatlands found throughout the Site. State HCVF acres have no roads, trails include portions of the Superior Hiking Trail and State snowmobile trail.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 plant. HCV1g (Outstanding Key Habitats Examples): Poplar River Key River Reach. HCV2-LMFa (Large habitat block): upland forest. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): FDn43c, MHn45c. HCV3e (Old-growth forest): 93 acres NH. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Engage with the North Shore Forest Collaborative for coordinated management across owned-shouldered hawkip to effectively address HCVs on State HCVF parcels. Verify rare plant occurrence on State HCVF acres. Maintain/enhance the Poplar River and Caribou Creek as Key River Reaches by applying MFRC SLG Trout Steam guidelines to silvicultural prescriptions within the Poplar River and Caribou Creek RMZs. Silvicultural treatments in rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance natural cedar regeneration. Field verify potential primary forest occurrences. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP, North Shore Forest Collaborative

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)? _Yes_

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS, SNA program. HCVF site is within the North Shore Forest Collaborative.

General Comments

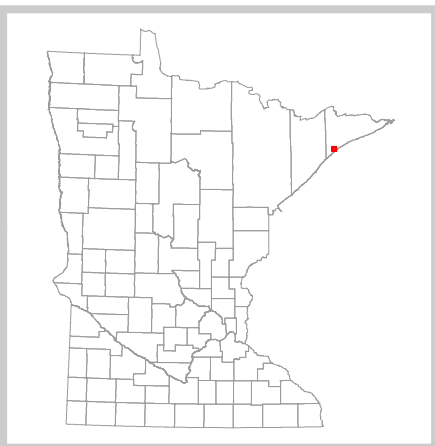
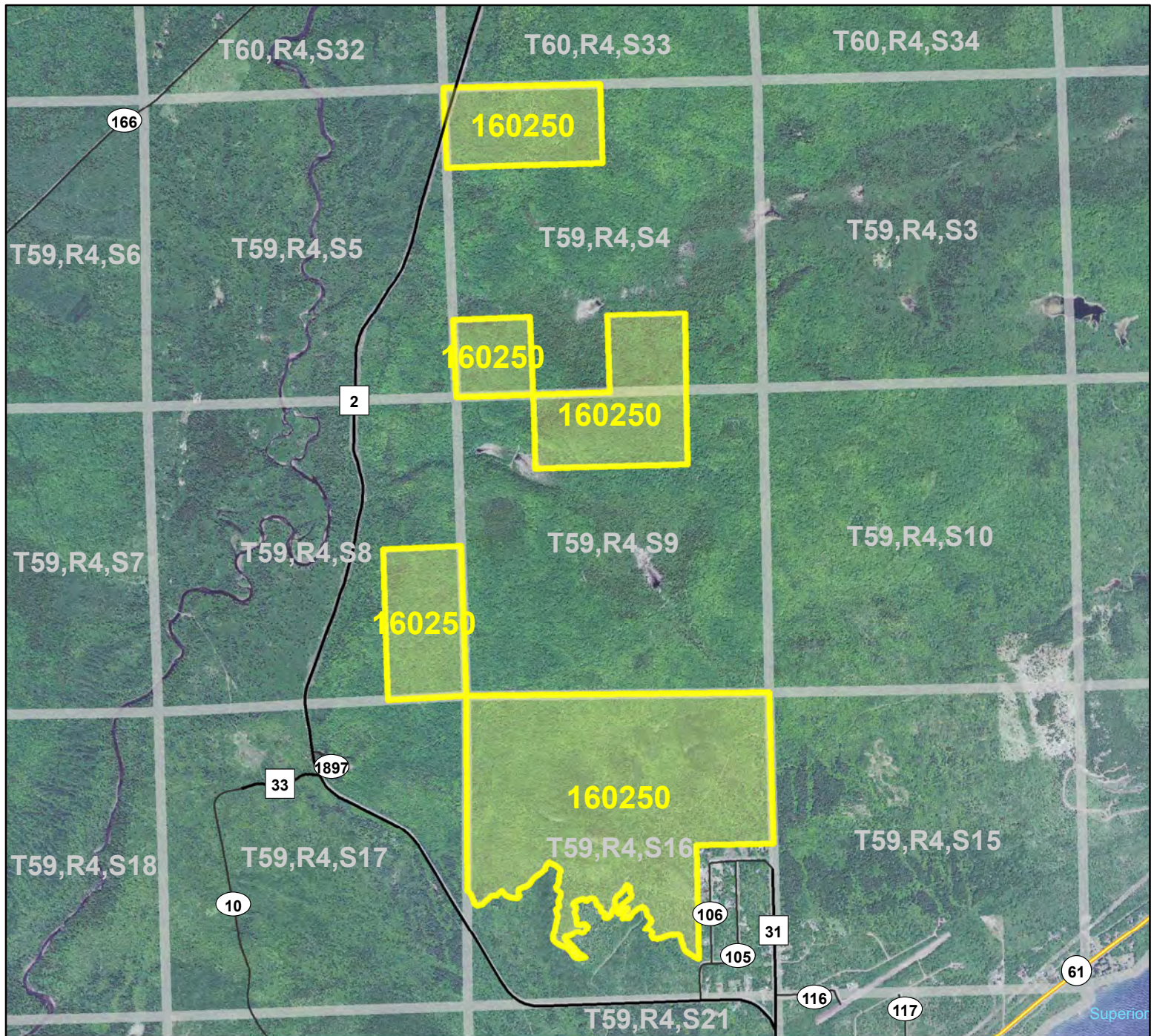
USFS SNF Forest Plan Management Emphasis: Recreational use in a scenic landscape; cRNA. North Shore Collaborative ideas: application of DNR HCVF general landscape guidance applied across ownerships.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 160250

Onion River Hardwoods, Cook County

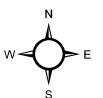


Legend

- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site

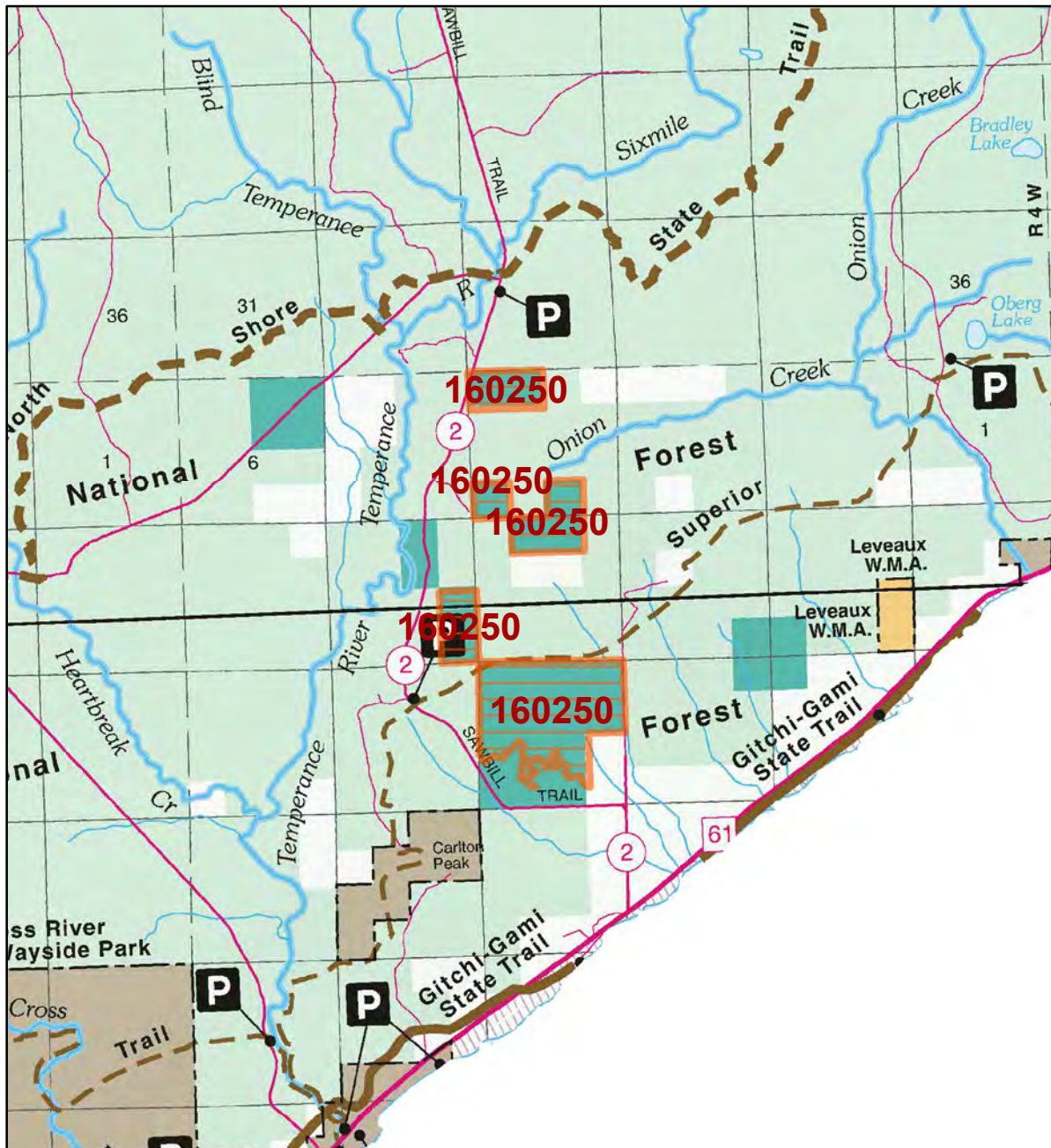
PLS Sections

0 0.75 1.5 Miles



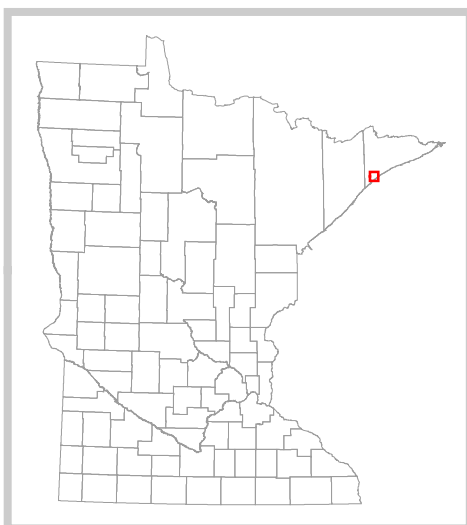
HCVF Site 160250

Onion River Hardwoods, Cook County



LEGEND

- HCVF Site**
- MAP EXPLANATION**
- LAND OWNERSHIP**
- County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
- County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
- State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
- State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
- D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2 4 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 160250

HCVF Name: Onion River Hardwoods

Acres of HCVF site: 738.00

County: Cook

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Scattered lands

HCVF Summary

Within a 12,126 MBS site (160250 - Onion River Hardwoods) with outstanding examples of high- quality, old-growth sugar maple forests and North Shore river systems within a landscape of rugged terrain in the scoured, igneous bedrock-controlled, northern hardwoods-dominated uplands of the Tettegouche Till Plain. The State HCVF acres here anchor the SW end of two large MBS sites of outstanding biodiversity significance: the Onion River Hardwoods site and site 160220, Poplar Agnes Hardwoods that also has State HCVF acres. State HCVF acres include 160 acres of designated NH and upland cedar old growth and outstanding examples of MHn45b (S2) and MHn45c (S3).

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1e (Rare species concentration: SGCN birds. HCV2-LMFa (Large habitat block): upland forest matrix. HCV3a (G1 or G2 plant community): MHn45b. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): potential exists. HCV3b (S1 or S2 plant community): MHn45b. HCV3c (Special S3 plant community): FDn43c, MHn45c. HCV3e (Old-growth forest): 160 acres NH and cedar. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Engage with the North Shore Forest Collaborative for coordinated management across ownerships to effectively address HCVs on State HCVF parcels. For MHN45b occurrences follow direction per DNR G1 & G2 Imperiled Communities Memo, June 30, 2010. Silvicultural treatments in S3 native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Field verify potential primary forest occurrences. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan; North Shore Forest Collaborative; DNR Ecological Evaluation; DNR SNA management plan.

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS; North Shore Forest Collaborative.

General Comments

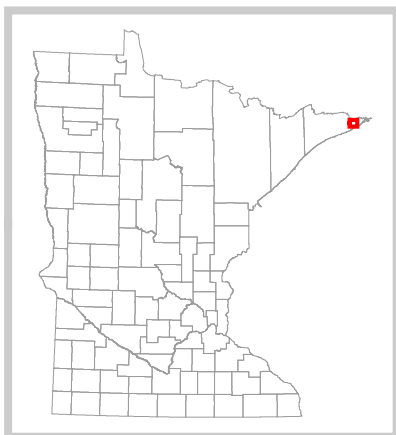
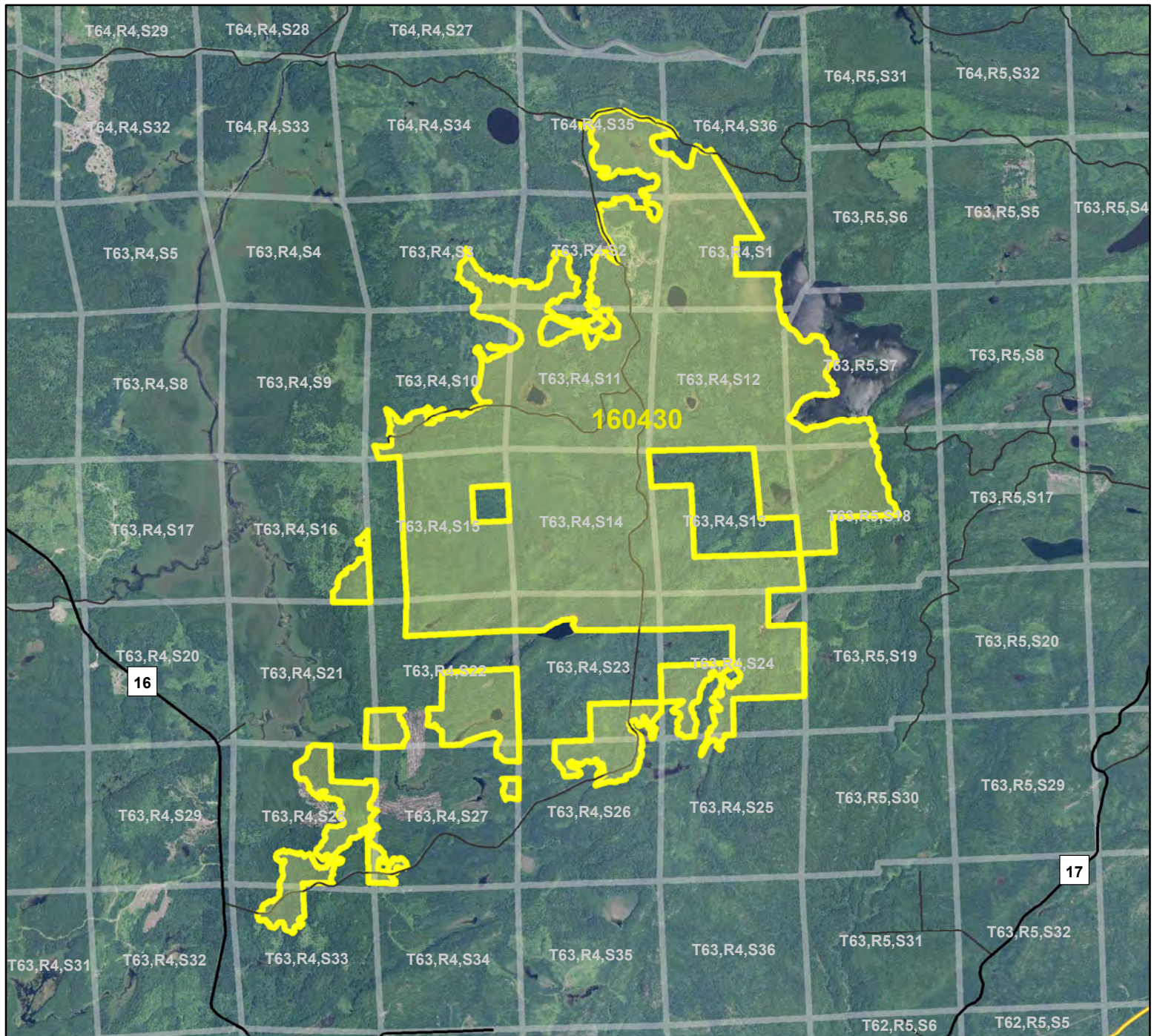
USFS SNF Forest Plan Management Emphasis: Recreational use in a scenic landscape. North Shore Collaborative ideas: application of DNR HCVF general landscape guidance applied across ownerships. The site's value as a regionally significant bird concentrat

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 160430

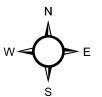
Swamp Lake - Andy Lake Hardwoods, Cook County



Legend

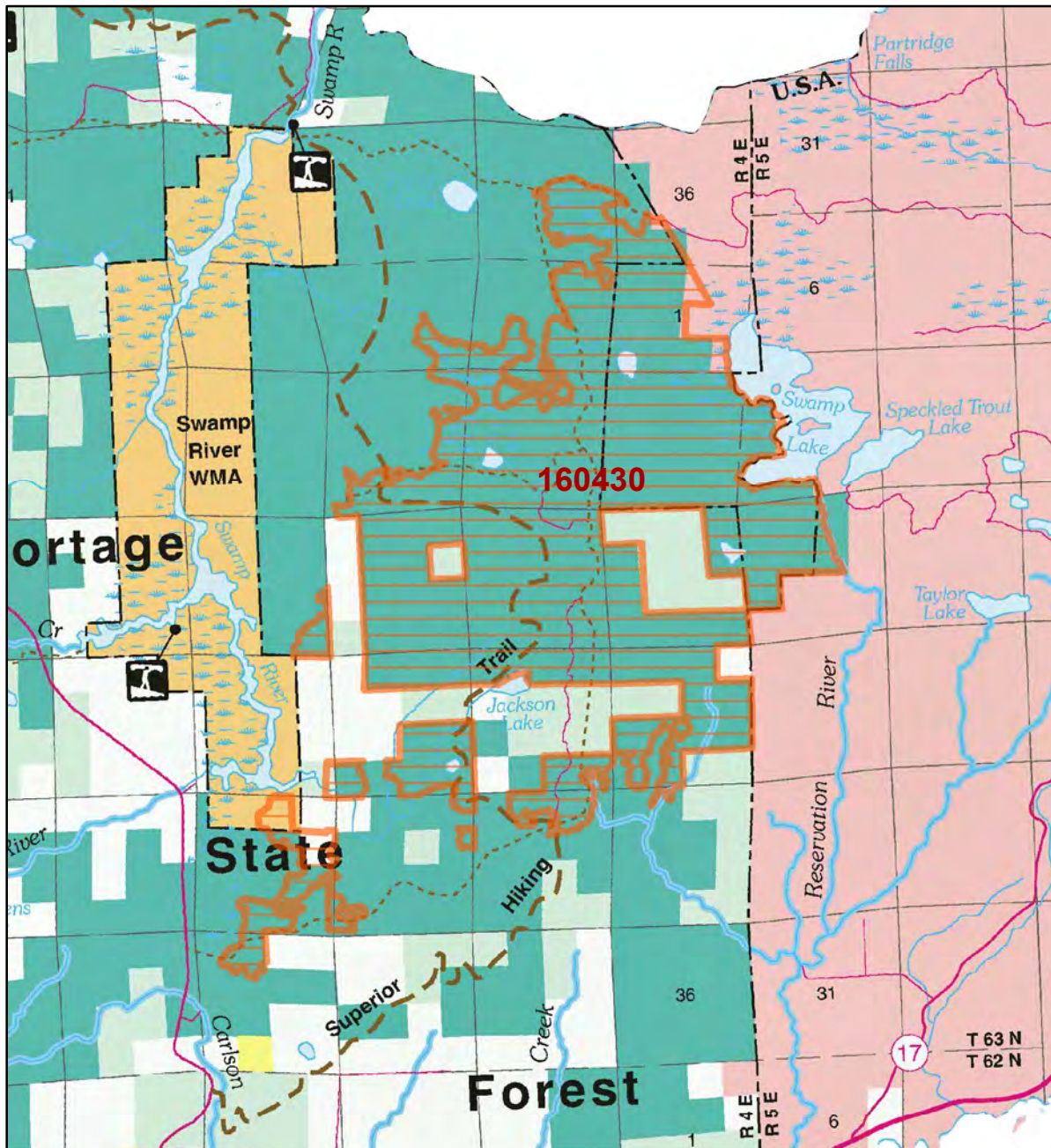
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 1.5 3 Miles



HCVF Site 160430

Swamp Lake - Andy Lake Hardwoods, Cook County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

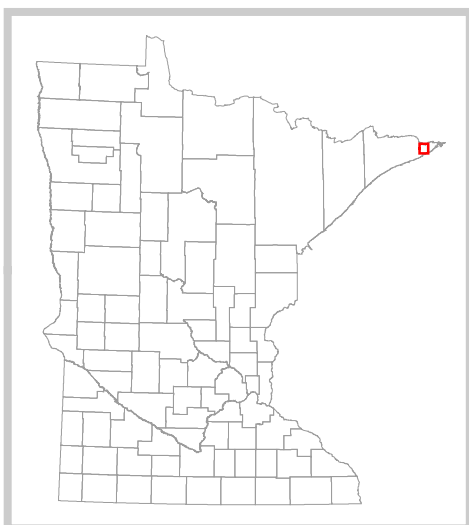
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

Source: Some of the features depicted in this map are derived from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



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Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

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0 2 4 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 160430

HCVF Name: Swamp Lake - Andy Lake Hardwoods

Acres of HCVF site: 5390.02

County: Cook

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Grand Portage State Forest

HCVF Summary

Large, remote, HCVF site within two MBS Sites totaling 7,200 acres. Site comprised of undeveloped, minimally fragmented, primary and secondary forest on steep, scoured bedrock terrain of the Swamp River and Tettegouche Till Plains, 4-7 miles from Lake Superior. Site encompasses a functioning landscape with the full range of ecological conditions, and native plant community complexes typical of the Land type Associations (LTA), largely undisturbed by human activities. Large contiguous patches of high-quality, mature, and old growth mesic hardwood forests of sugar maple, yellow birch, cedar, and paper birch, with abundant high order streams, and wet hollows with black ash, cedar, white pine, and white spruce. High-quality, mesic, old growth forest situated on the crests and southern aspects. Mature mesic mixed forest, including old-growth upland cedar, and remnant white and red pine forest dominate the northern aspects, rocky ridge crests and knobs, and lower slopes. Rich swamp forests of old-growth northern white cedar, and black spruce embedded in the hardwood patches in shallow drains and basins, and are part of a 300+ acre wetland complex surrounding Andy Lake. A 700+ acre open and forested wetland complex stretches from the west shore of Swamp Lake to the Jackson Lake Rd. Documented by bird survey as important habitat for black-throated blue warblers, SGCNs, and other forest birds; red-shouldered hawk (documented 2003, extended MN range by 170 miles). Potential for rare plant species records with additional survey work in spring and mid-summer. Potential for spotted salamanders with additional survey work in seasonal wetlands. Includes small, shallow, undeveloped Jackson Lake, four small lakes/ponds, and 2+ miles of undeveloped Swamp Lake west shoreline. Mix of federal, state, and private ownership; among the largest blocks of State land in the ESC Section. Road access limited to seasonal forest roads (Jackson Lake and Andy Lake Rds.). HCVF site within a complex of three adjoining MBS Sites of Outstanding Biodiversity Significance which together total nearly 12,000 acres. Some recent small aspen regen harvest, and two conifer plantations. Segment of SHT. Memorial and plane crash site. Development proposed for private land south of Jackson Lake.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 fern. HCV1g (Outstanding Key Habitats Examples): Forest - Lowland Coniferous, Forest - Upland Coniferous. HCV2-LMFa (Large habitat block): upland with wetland forest complex. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3a (G1 or G2 plant community): MHn45b. HCV3b (S1 or S2 plant community): MHn45b. HCV3c (Special S3 plant community): FDn43c, FPn62a, MHn45c. HCV3d (Natural origin pine stand): 14 acres red pine; pine also occurs as a significant component within natural origin non-pine stands. HCV3e (Old-growth forest): 730 acres combined NH and cedar. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant locations - maintain existing canopy cover and ground layer conditions. Maintain/enhance >500 acre blocks around designated OG (OFMCs) or as part of SFRMP old, large patches or around forested areas with rare species. For MHn45b occurrences follow direction per DNR G1 & G2 Imperiled Communities Memo, June 30, 2010. Silvicultural treatments in Key Habitat & S3 native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Field verify potential primary forest occurrences. Maintain/enhance existing natural origin pine as a component within the forest matrix, enhance natural origin pine regeneration. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL and Border Lakes SFRMP.

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS; Grand Portage Band; small amount of private; majority is DNR.

General Comments

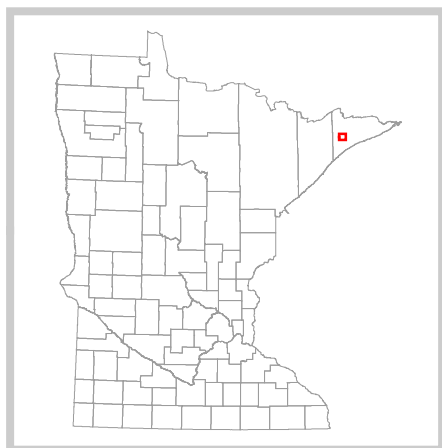
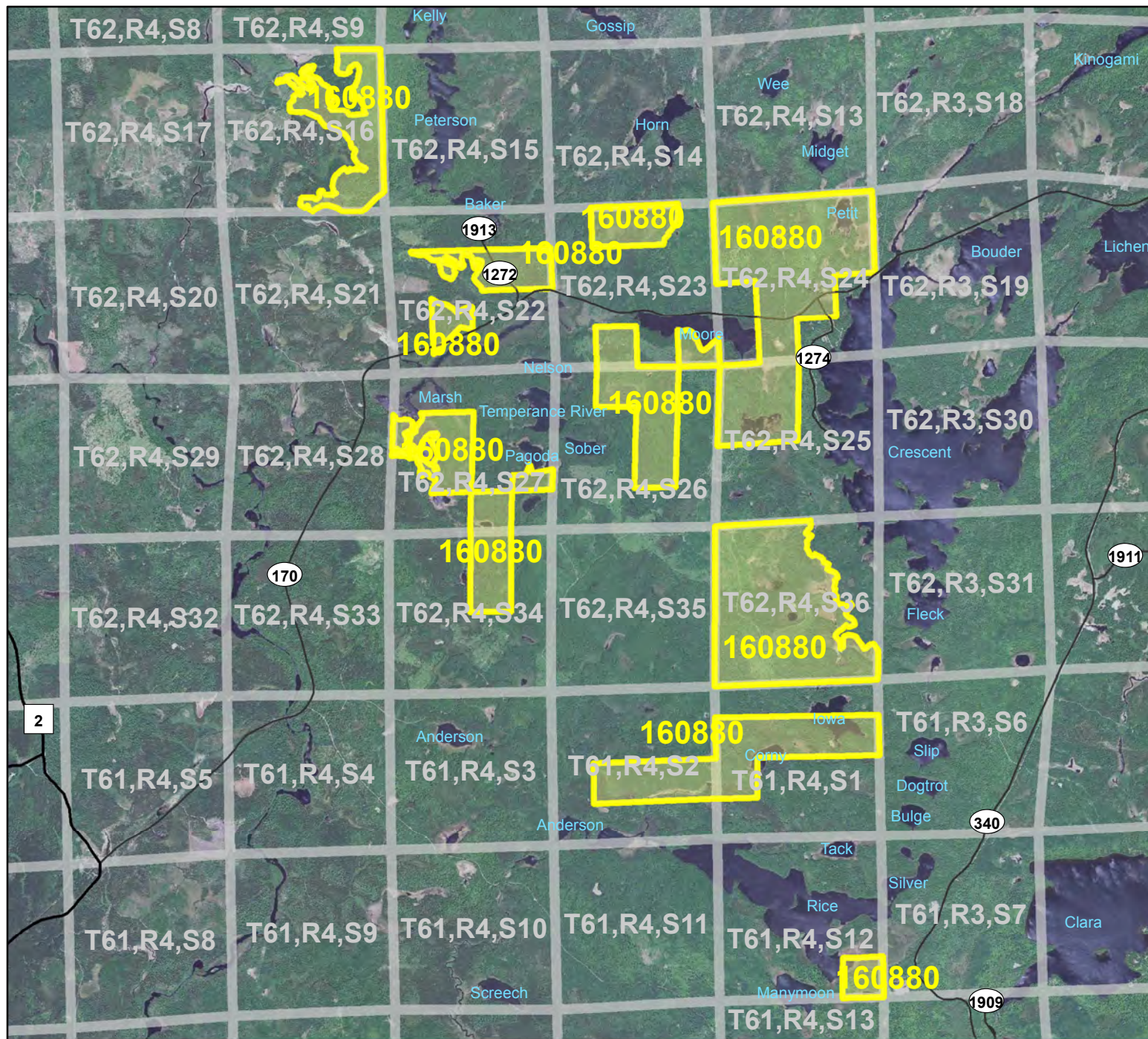
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Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 160880

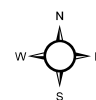
Temperance Pines, Cook County



Legend

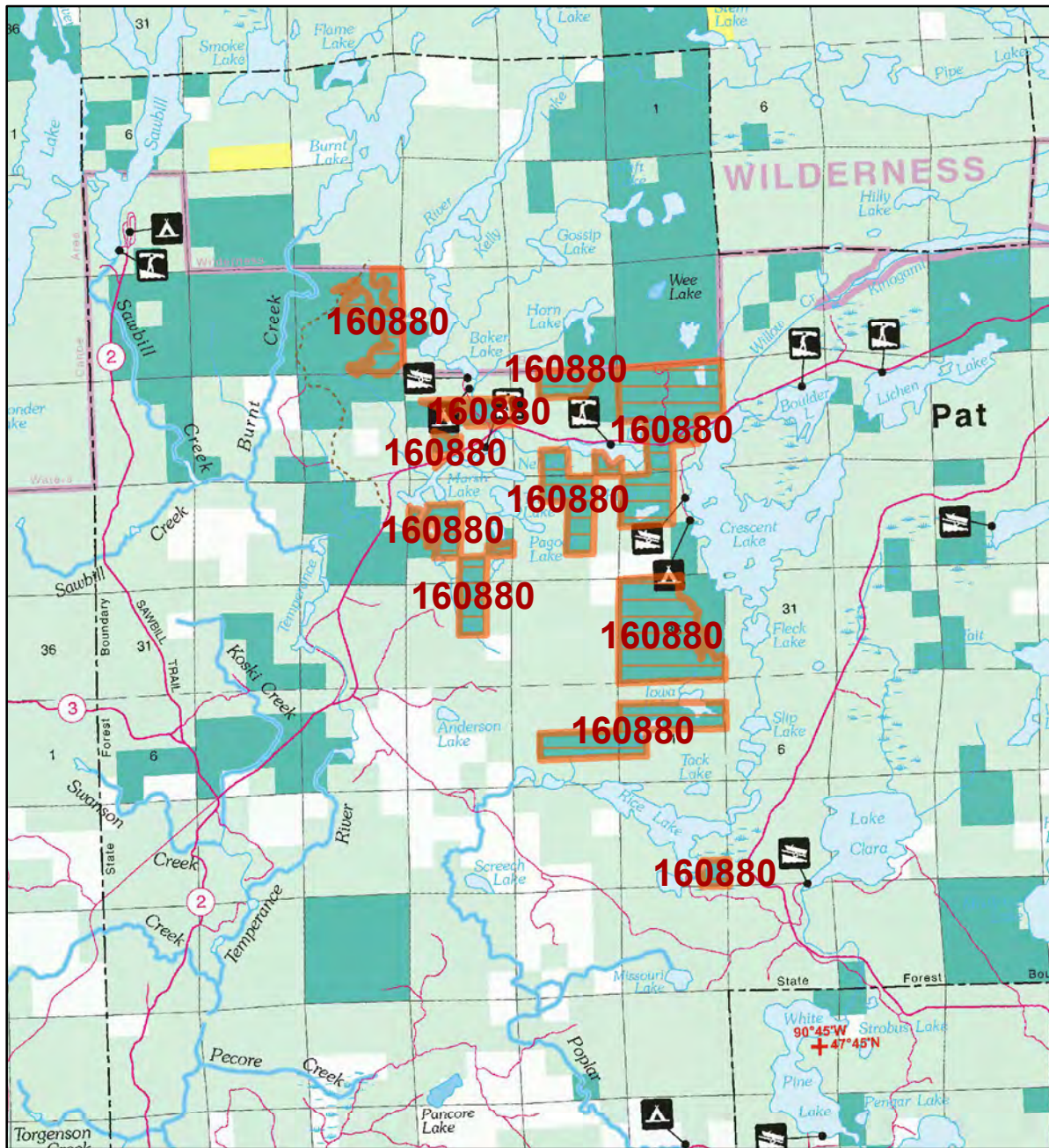
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 1.25 2.5 Miles



HCVF Site 160880

Temperance Pines, Cook County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- State Scientific & Natural Area Land
- National Waterfowl Production Area
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

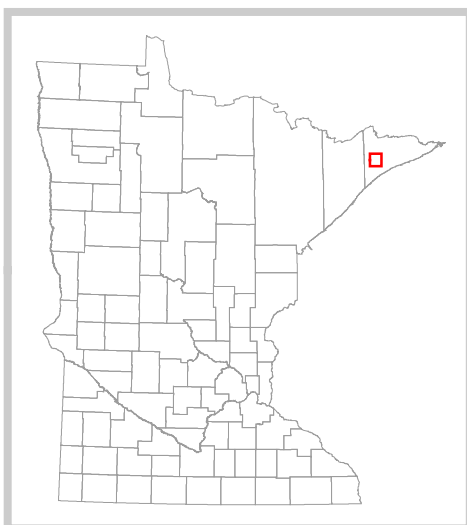
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

Source: Some of the features depicted in this map are derived from the Minnesota Department of Natural Resources (DNR) database.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.75 5.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 160880

HCVF Name: Temperance Pines

Acres of HCVF site: 2303.54

County: Cook

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Pat Bayle State Forest

HCVF Summary

HCVF site within two MBS sites totaling 12,413 acres (16098, High Biodiversity Sign.; 16088, High Biodiversity Sign.). The MBS sites and State HCVF acres encompass what remains of one of the two large red and white pineries in the Laurentian Uplands subsection (the other in Isabella area in Lake County). Some State HCVF parcels border the BWCAW and highly ranked MBS sites within the BWCAW. FDn43 is the dominant upland forest class. Significant amounts of FDn43a (S2) including 643 acres of DNR designated OG, 58 acres of DNR nominated OG, and ~500 acres of adjacent federal lands evaluated as old-growth pine forest. Most of MBS site is USFS. State lands include some lakeshore, river, and interconnecting, typically forested, wetlands.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1g (Outstanding Key Habitats Examples): Upland Conifer. HCV2-LMFa (Large habitat block): yes. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3b (S1 or S2 plant community): FDn43a. HCV3c (Special S3 plant community): yes. HCV3d (Natural origin pine stand): yes. HCV3e (Old-growth forest): 520 acres combined NH, white pine, red pine. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance existing natural origin pine as a component within the forest matrix, enhance natural origin pine regeneration. Silvicultural prescriptions in Key Habitat native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Silviculture in FDn43a occurrences prolongs the existing growth stage or assists a transition to the next older growth stage. Field verify primary forest occurrences. Apply DNR HCV General Landscape Guidance. Designated pine old growth is high priority for school trust compensation.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; USFS SNF Forest Plan; MFRC NE Landscape Plan

Are the HCVs within this HC VF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HC VF was flagged by the Regional HC VF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS

General Comments

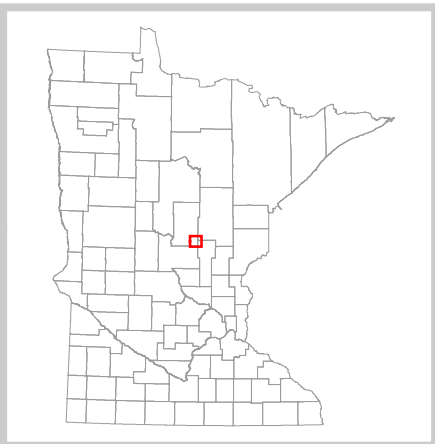
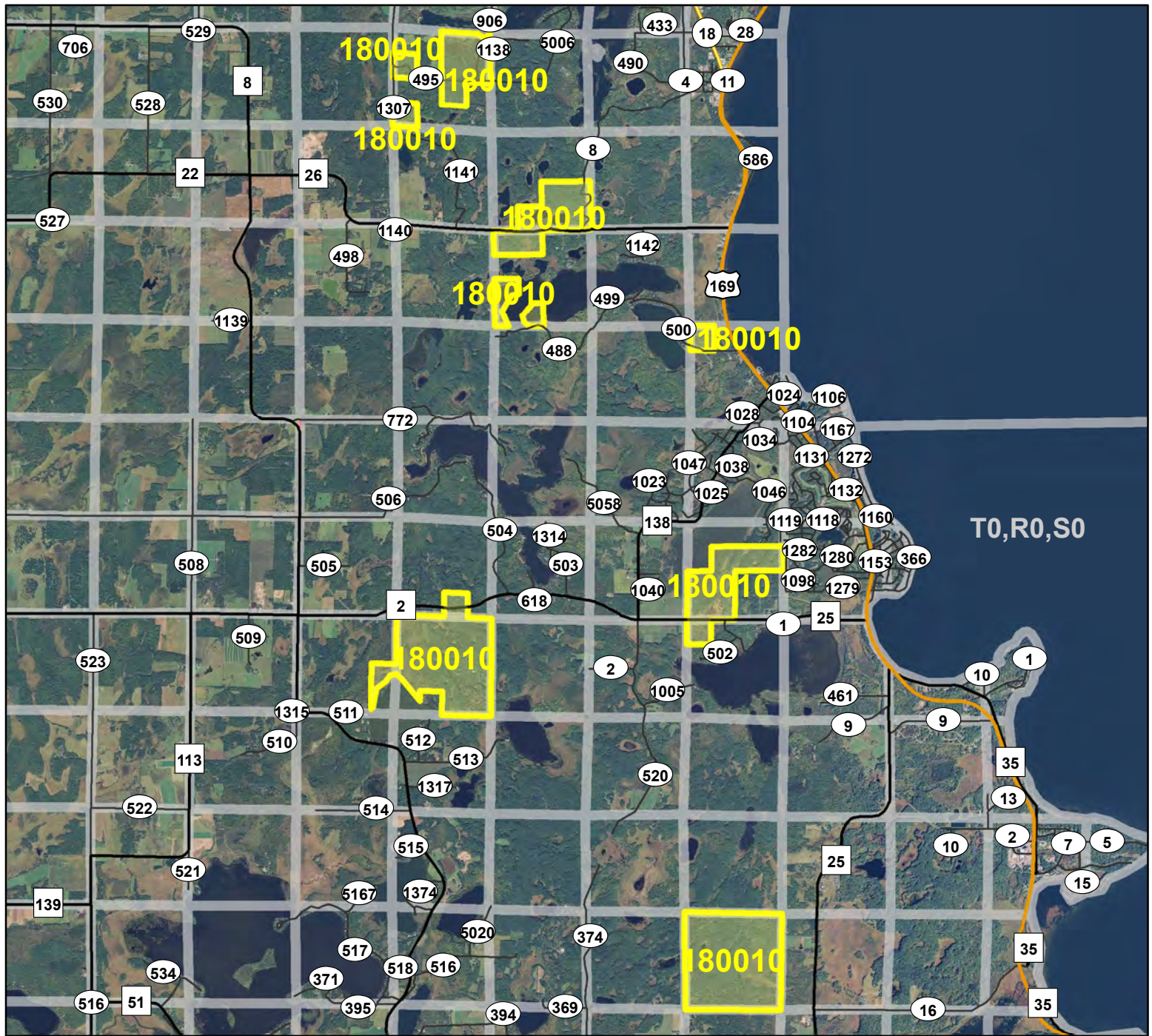
No information entered.

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... Report End ...

HCVF Site 180010

Mille Lacs Moraine Hardwoods, Crow Wing County



Legend

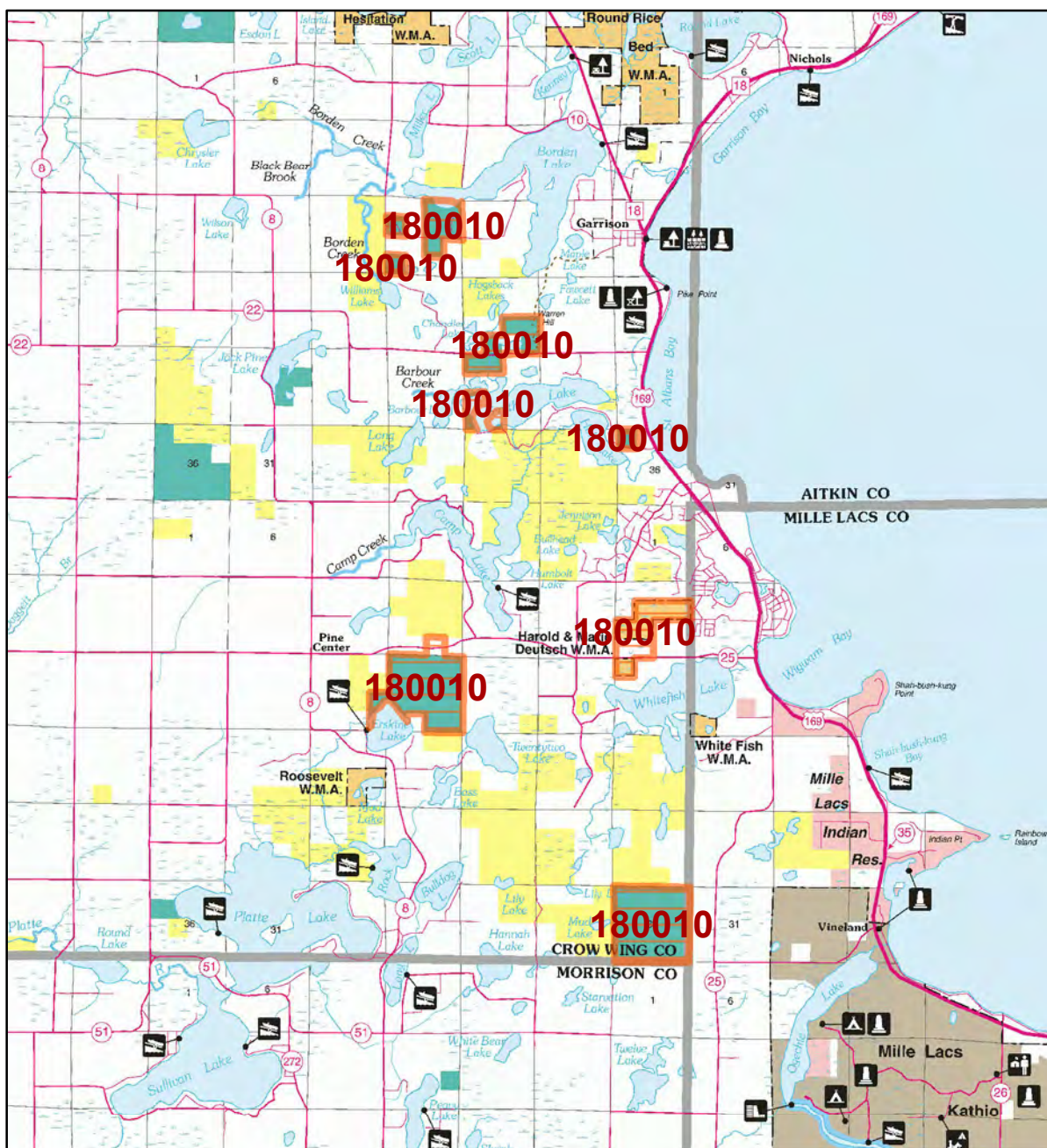
- Federal Trunk Highways
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- Ramps
- HCVF Site
- PLS Sections

0 2.25 4.5 Miles



HCVF Site 180010

Mille Lacs Moraine Hardwoods, Crow Wing County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

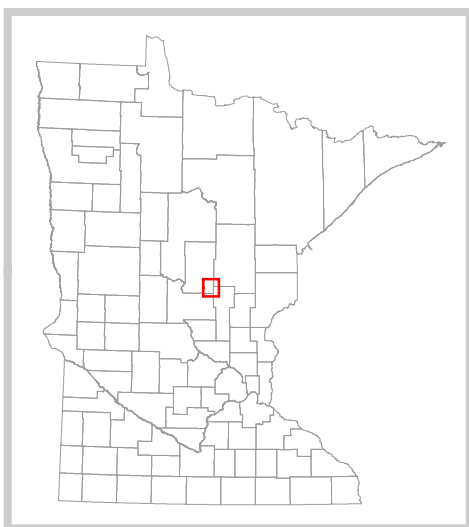
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

Source: Some of the features shown in this map are derived from the Minnesota Department of Natural Resources (DNR) database.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 3.75 7.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 180010

HCVF Name: Mille Lacs Moraine Hardwoods

Acres of HCVF site: 2234.71

County: Crow Wing

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Scattered lands

HCVF Summary

HCVF site within a much larger MBS Site of Outstanding Biodiversity Significance. State HCVF acres occur as isolated parcels. State HCVF lands and the MBS site represent a portion of the Mille Lacs Moraine LTA with classic rolling and pitted end-moraine topography with many lakes and isolated digressional wetlands. The biodiversity significance of this site is based on documented rare species (especially the high concentration of red-shouldered hawks), good quality native plant communities, size, landscape context, and significant amounts of undeveloped lakeshore. Good potential for four-toed salamander. Relatively minimal fragmentation for this part of MN. Floristic transition zone with plant species typical of both N & C Minnesota. Upland forests are typically 60-80 years old with various degrees of active forest management but generally lacking large patches of young forest and generally with good canopy continuity. Some of the larger roadless areas in Crow Wing County occur in this site. White and red pine are scattered throughout this site but are rarely a significant or abundant canopy component. Ownership within the larger MBS site: state, county, tribal and private. Maintaining or enhancing most documented HCVs here will require cooperation of other owners; some adjacent Crow Wing County lands within the same MBS site also HCVF. Recent SNA acquisition within the site acquired from private and TNC. 2nd most important area for red-shoulded hawks in the state. NW most cerulean warbler population.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 Botrychium. HCV1e (Rare species concentration): 1 rare raptor, SGCN birds. HCV1f (Taxonomic group concentration): 1 rare raptor, SGCN birds. HCV1g (Outstanding Key Habitats Examples): Shoreline, Forest Upland Deciduous mixed hardwood-pine, Forest upland conifer (limited). HCV2-LMFa (Large habitat block): yes. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): APn91b, FPn72a, MHn47a, WFn55b, WFn53. HCV3d (Natural origin pine stand): 16 acres red pine.

Management Considerations

Overall management objectives for the entire HCVF:

Collaborate with Crow Wing County and private land owners to effectively address most of the HCVs here; emphasize collaboration in areas that connect HCVF parcels and where Crow Wing County HCVF is contiguous with State HCVF. Field verify condition of rare plant occurrences. Apply red-shouldered hawk forest management guidelines. Collaborate with adjacent landowners to maintain/enhance >500 acre blocks of later successional forest with old growth features or rare species. Maintain/enhance conifer component within mesic hardwood matrix forest, enhance natural conifer regeneration within these native plant communities. Silvicultural prescriptions in S3 native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP; Crow Wing County Forest Plan & HCVF site management; MFRC North Central Landscape Plan

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

Crow Wing County; Mille Lacs Band of Ojibwe

General Comments

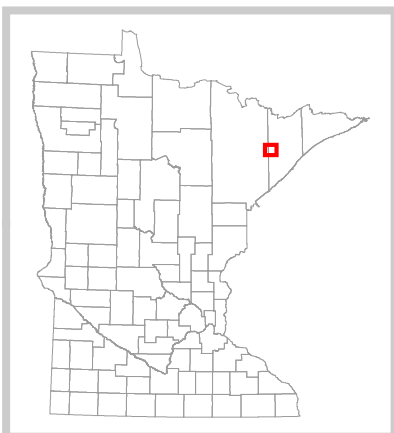
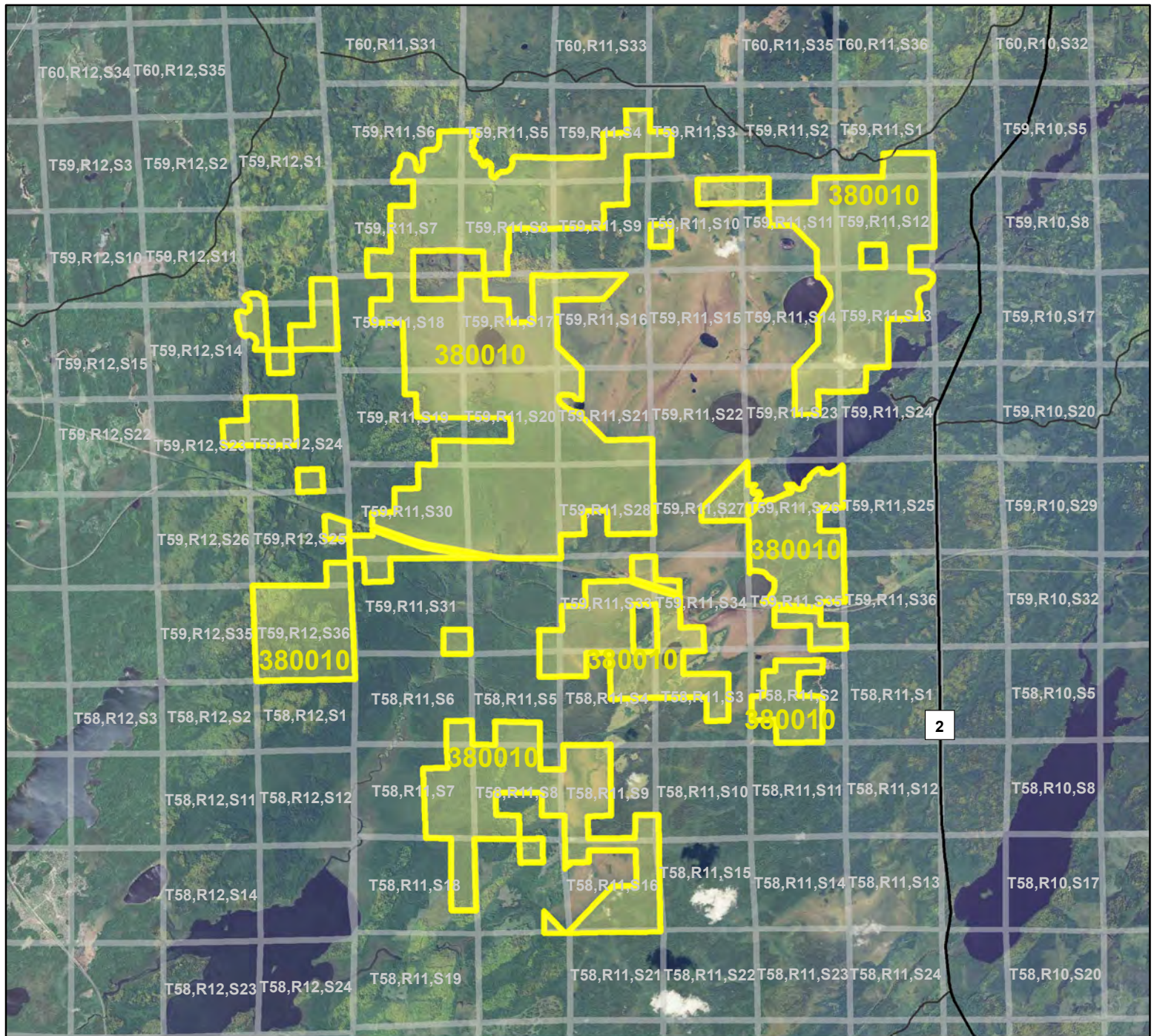
Develop plan to address HCVF aspen management that contributes to HCV objectives.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

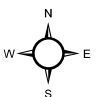
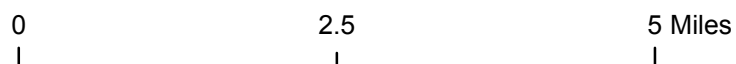
HCVF Site 380010

Headwaters, Lake County



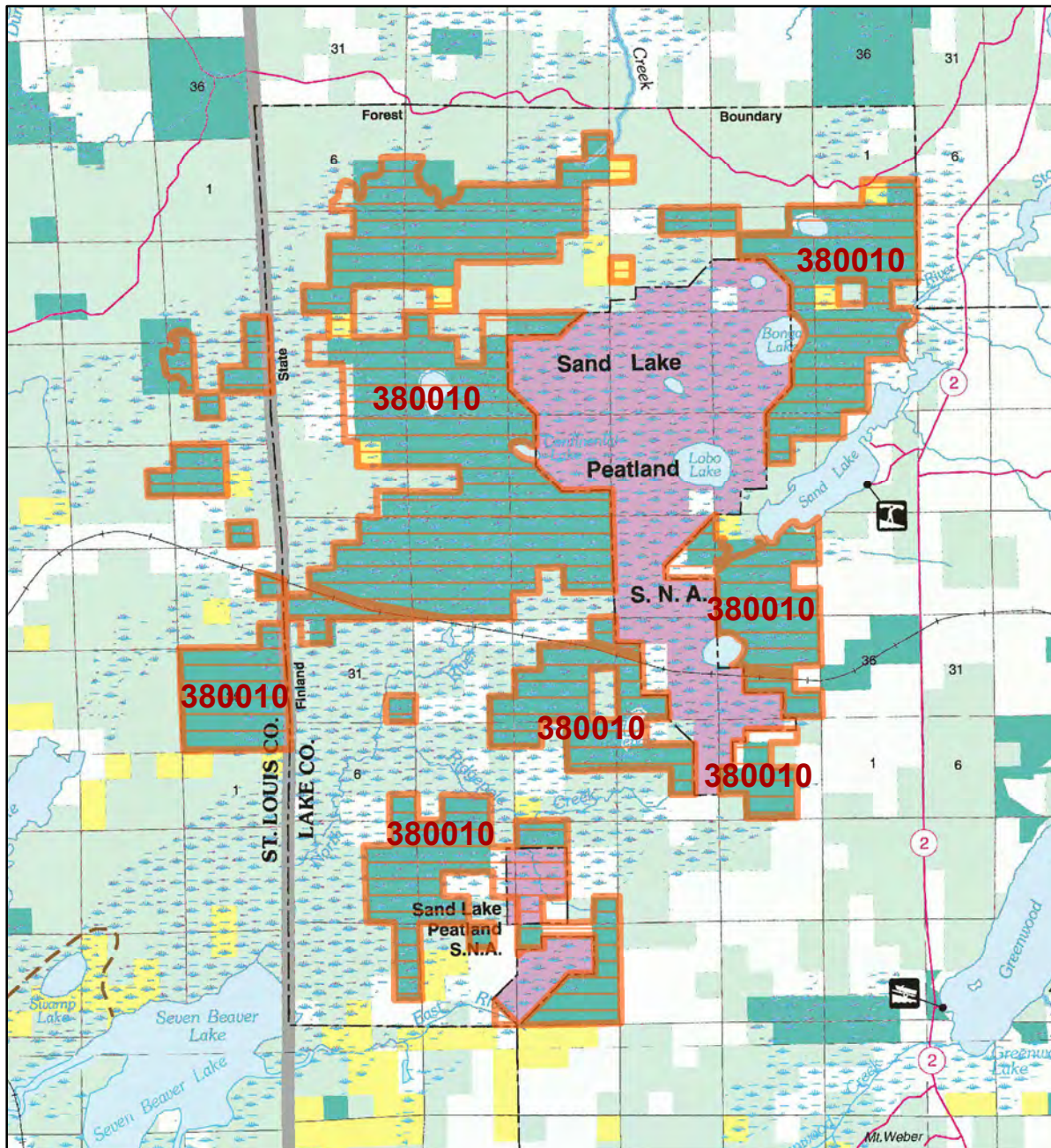
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



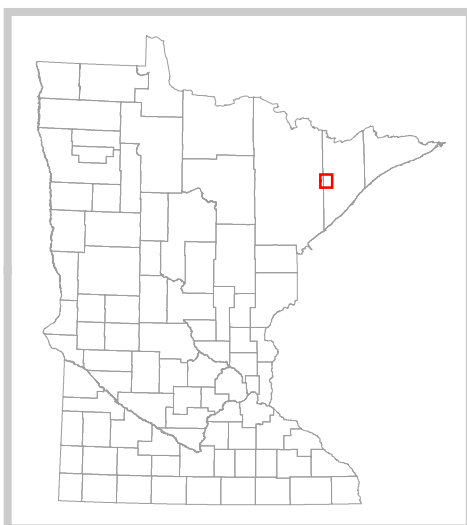
HCVF Site 380010

Headwaters, Lake County



LEGEND

- HCVF Site
- MAP EXPLANATION**
- LAND OWNERSHIP**
 - County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
 - County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
 - State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
 - State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
 - D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.75 5.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 380010

HCVF Name: Headwaters

Acres of HCVF site: 12528.27

County: Lake

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Finland State Forest

HCVF Summary

State HCVF lands centered a large peatland complex and contiguous large upland forest landscape on the Lake " St. Louis County line. The State SNA, Sand Lake Peatland SNA, is adjacent as is the USFS Big Lake " Seven Beavers RNA. All State HCVF acres are within the Sand Lake " Seven Beavers forest management cooperative. Although the site is notable for its peatland, it is also notable for its landscape-level large patch of mature upland forest (multiple ownerships) to the west of the peatland. Many areas within the site are mapped as Forested Peatland/Upland Transition Complex (FPT_CX), a transitional upland forest native plant community (not easily classified using DNR v2.0) on low relief and landform characteristics unique in the LU subsection and section. Opportunity for collaboration high with much of state HCVF lands in SL7B collaborative area. Probable roadless areas (FSC definition): on State HCVF acres raised bog >500 acres straddling the St. Louis " Lake County line; on the Lake County side between Culkin and Continental Lakes; the area between the railroad and NNE to the SNA boundary in parts of T59N R11W sections 20, 28, 29, 30; and within the Sand Lake Peatland SNA.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1e (Rare species concentration): SGCN birds, peatland plants. HCV1g (Outstanding Key Habitats Examples): Forest lowland conifer and forest upland conifer. HCV2-LMFa (Large habitat block): peatland and upland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3b (S1 or S2 plant community): FDn43a, OPn91b. HCV3c (Special S3 plant community): APn91b, APn91c2, FPn62a, and FPT_CX - a native plant community complex that includes FDn43a and FPn62a. HCV3d (Natural origin pine stand): 127 acres combined of white pine, red pine, jack pine. HCV3e (Old-growth forest): 135 acres combined white pine, red pine, white spruce. HCV3f (Primary forest): yes. HCV3g (Roadless area): very probable.

Management Considerations

Overall management objectives for the entire HCVF:

Prioritize large blocks of lowland conifer here for DNR old-growth evaluation when methods are developed. State HCVF silviculture here designed in collaboration with the Sand Lake Seven Beavers Collaborative. Lowland conifer silviculture maintains/enhances Key Habitat components. Address conflict between lowland conifer insect and disease (mistletoe and spruce budworm) treatments and the value of these disturbances to SGCN birds. Apply DNR HCV General Landscape Guidance. Recognize FPT_CX in applicable silvicultural decisions. Silviculture in rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM objective code CON1. Field verify primary forest. Field or otherwise verify potential roadless areas. Field verify natural origin pine.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan; Sand Lake - Seven Beavers Collaborative; DNR Headwaters Ecological Evaluation; St. Louis River Plan; State Wildlife Action Plan; DNR SNA management plan;

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS, Lake County, St. Louis County. Sand Lake - Seven Beavers Collaborative

General Comments

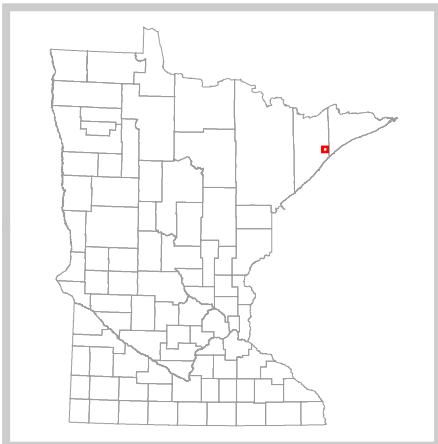
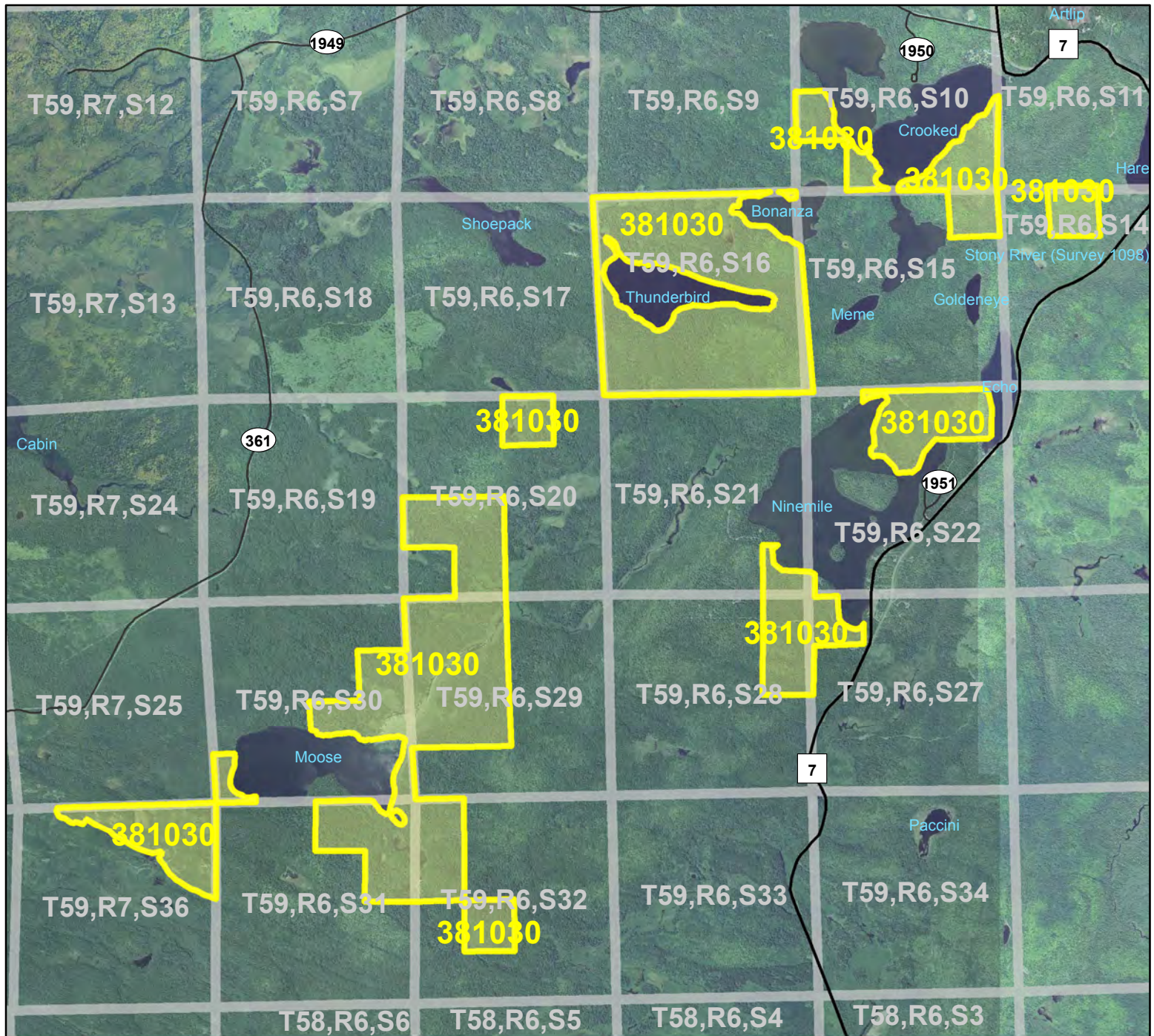
EWR recommends expanding the SNA.

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... Report End ...

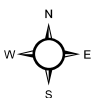
HCVF Site 381030

Ninemile-Moose-Crooked Lakes & Ridges, Lake County



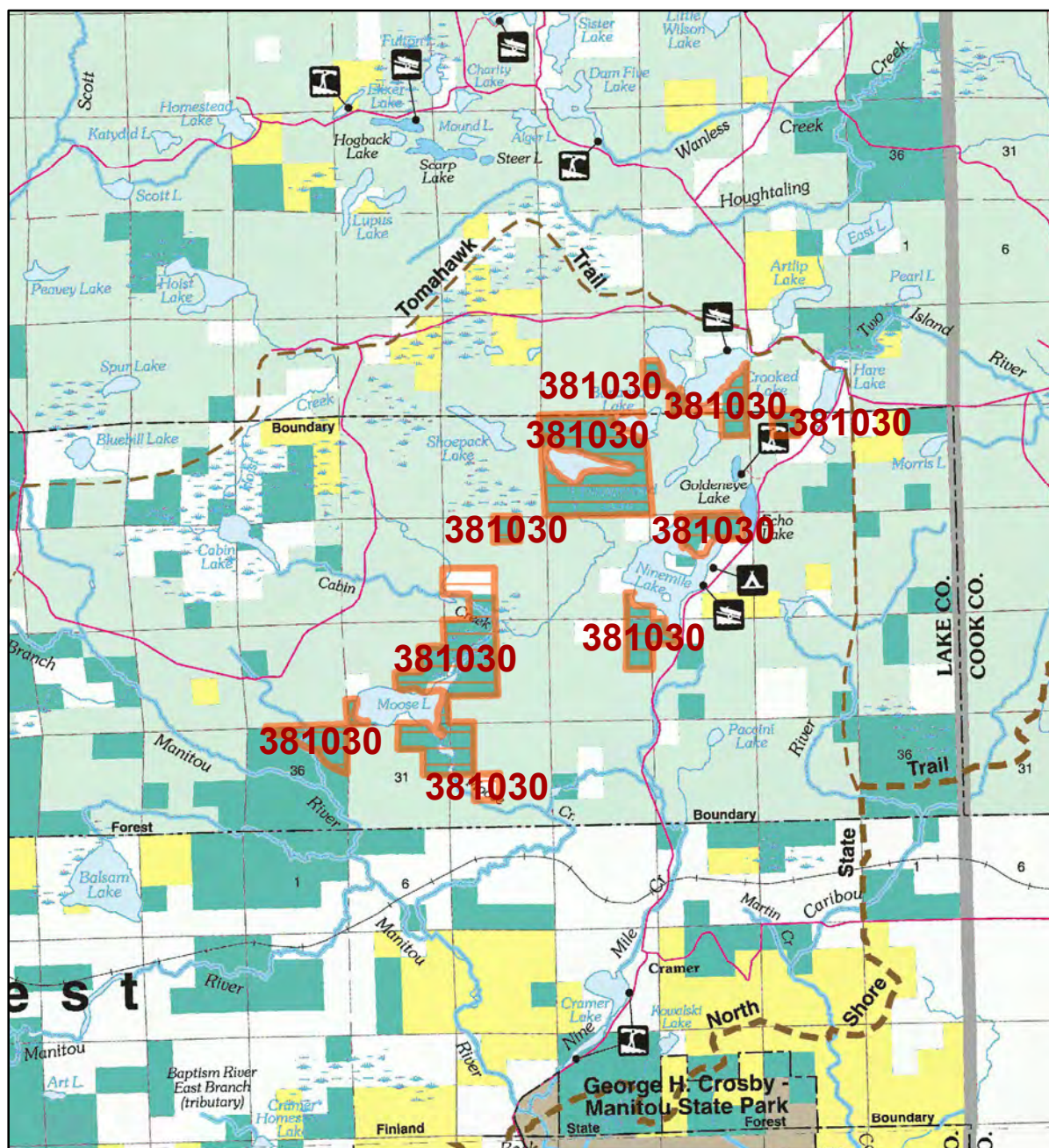
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

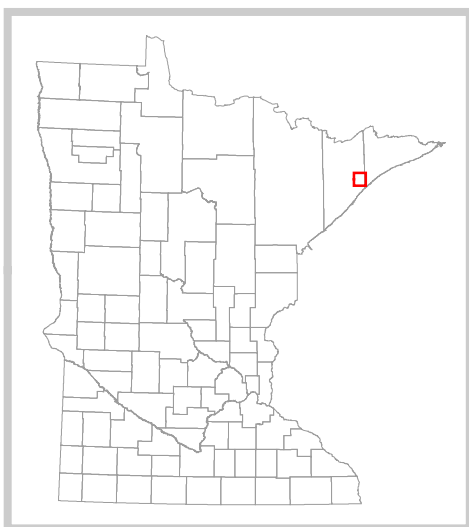


HCVF Site 381030

Ninemile-Moose-Crooked Lakes & Ridges, Lake County



- LEGEND**
- HCVF Site**
- MAP EXPLANATION**
- LAND OWNERSHIP**
- County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
- County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
- State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
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 - State Canoe and Boating Route
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 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.75 5.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 381030

HCVF Name: Ninemile-Moose-Crooked Lakes & Ridges

Acres of HCVF site: 1829.71

County: Lake

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Finland State Forest

HCVF Summary

Within a 8,156 acre MBS Site (38103, Outstanding Biodiversity Significance). Large, mostly remote, and undeveloped area with numerous wilderness lakes, high-quality wetland and upland forests, and little recent disturbance. The uplands are dominated by a series of gabbro, diorite, diabase, and rhyolite ridges. Undeveloped lakes are a significant feature of the site not directly represented by HCV categories. Combined, rare species, native plant community condition, and landscape condition make this among the most significant functioning natural landscapes outside of the BWCAW. The USFS Cabin Creek cRNA is contiguous and connects some of the State HCVF parcels. 203 acres of designated old-growth northern hardwoods and cedar occur on DNR lands.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1g (Outstanding Key Habitats Examples): Forest-Lowland Coniferous, Forest-Upland Coniferous, and Outcrop, talus, cliff. HCV2-LMFa (Large habitat block): upland forest with wetland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3a (G1 or G2 plant community): MHn45b. HCV3b (S1 or S2 plant community): MHn45b. HCV3e (Old-growth forest): 203 acres NH and cedar. HCV3f (Primary forest): yes. HCV3g (Roadless area): potential exists.

Management Considerations

Overall management objectives for the entire HCVF:

Silvicultural prescriptions in Key Habitat native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance shading, run-off, and micro-habitat conditions in cliff, outcrop and tallus native plant communities. Maintain/enhance >500 acre blocks with later successional forest with old growth features or rare species. For MHn45b occurrences follow direction per DNR G1 & G2 Imperiled Communities Memo, June 30, 2010. Field verify potential primary forest occurrences. Field verify or research potential roadless areas. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan;

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS; Lake County; Manitou Forest Collaborative

General Comments

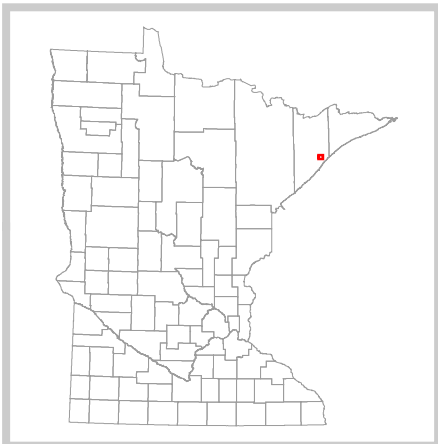
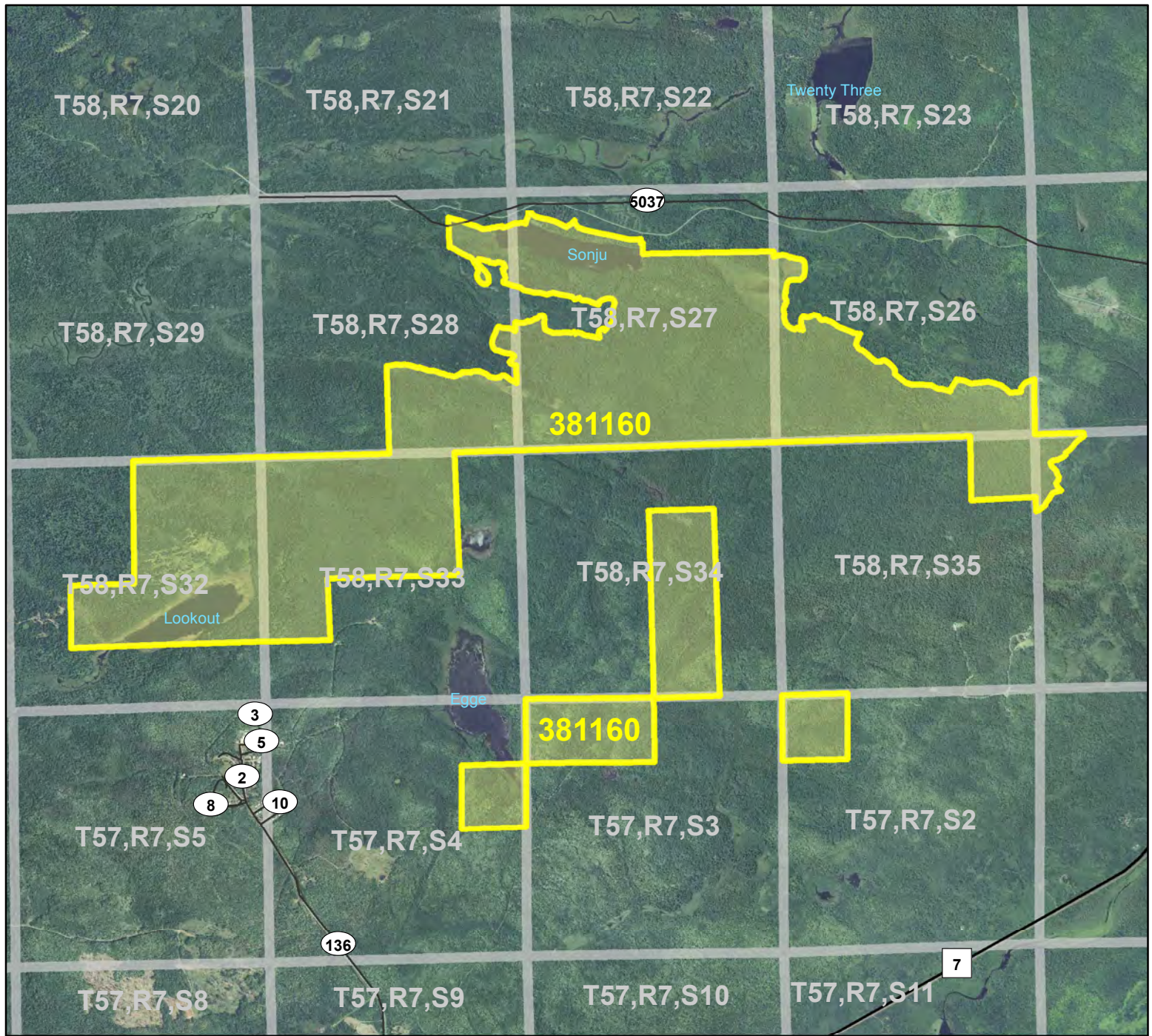
Fully vet SNA nomination here. Specific stands adjacent to USFS cRNA deferred from harvest and recommended by DNR EWR for SNA establishment.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

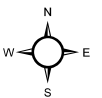
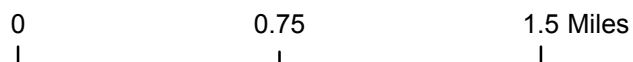
HCVF Site 381160

Lookout-Egge Hardwood Ridges, Lake County



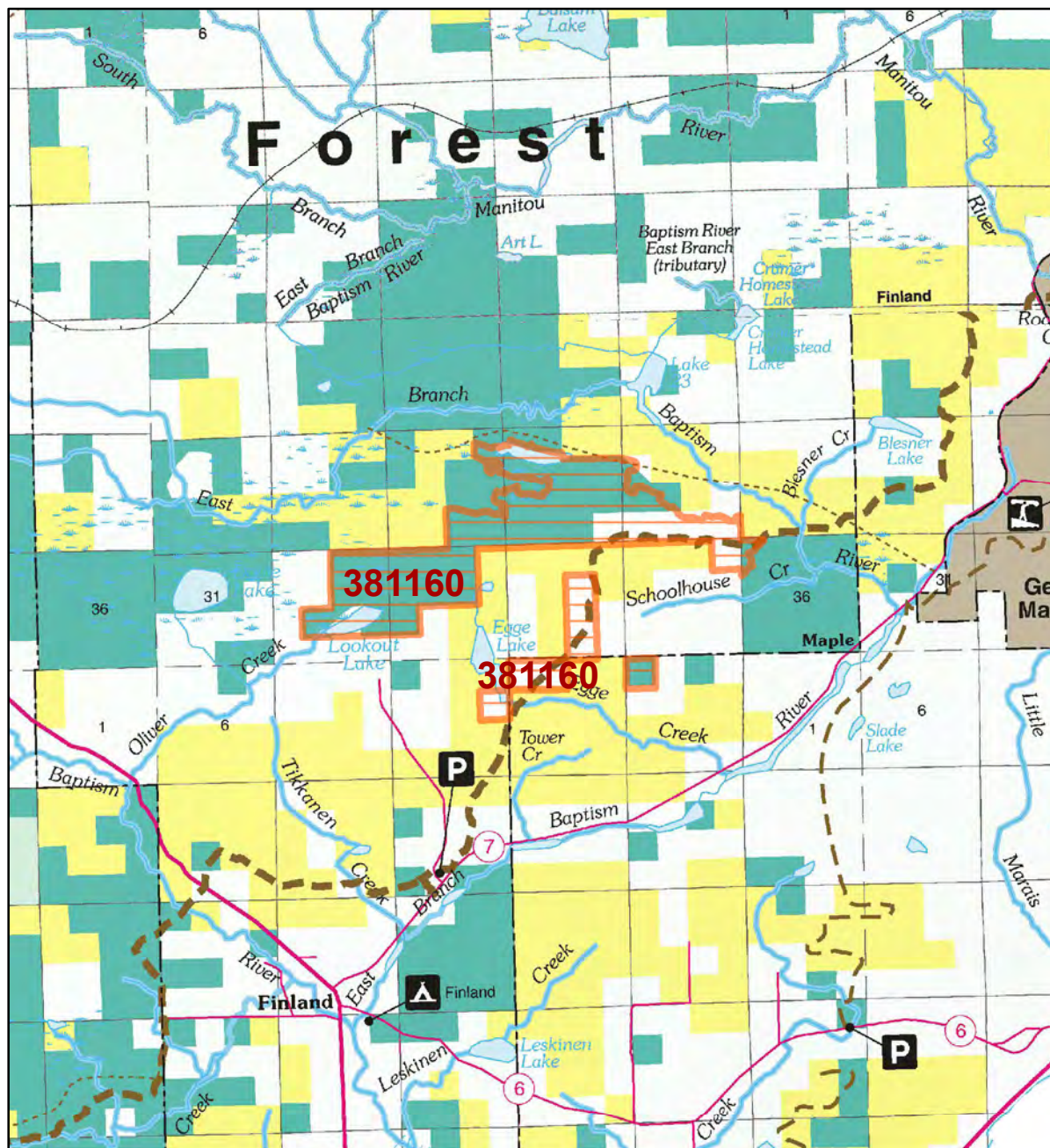
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 381160

Lookout-Egge Hardwood Ridges, Lake County



- LEGEND**
- HCVF Site**
- MAP EXPLANATION**
- LAND OWNERSHIP**
- County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
- County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
- State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
- State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
- D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road

The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.5 5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 381160

HCVF Name: Lookout-Egge Hardwood Ridges

Acres of HCVF site: 1682.65

County: Lake

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Finland State Forest

HCVF Summary

Site within a 3,525 MBS Site of High Biodiversity Significance (381160). Topography ranges from rolling to rugged. Located north and east of the old Finland Radar Station and south of the Sonju Lake Forest Road. All state land is either OG, Ecological Important Lowland Conifers, or Old Forest Management Complex.. DNR Parks and Trails lands here with OG. OG on State lands extends onto adjacent Lake County and large private ownership. (see MBS site description). This forested landscape is underlain by varied geologic strata including the Sonju Lake Intrusion, which is considered to have high potential for precious metals. Two remote, undeveloped lakes (Lookout- 37 acres, Egge- 48 acres) occur between the ridges in the WSW portion of the site with State HCVF acres almost entirely surrounding Lookout Lake and surrounding much of the southern portion of Egge Lake. Undeveloped Sonju Lake (38 acres) is located on the northern edge of the site with HCVF acres surrounding the lake. Upland HCVF forest acres are predominately MHn45c with lesser amounts of FDn43b and c. Conifer wetland forest (FPn and WFn, predominately cedar) dominates the lowland HCVF acres. Alder swamps occur in several places, and poor fens (graminoid and low shrub) occur around the lakes. Access into much of the site is limited although a few primitive roads and trails do exist.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1g (Outstanding Key Habitats Examples): Forest Upland Coniferous and Forest Lowland Coniferous.
HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes.
HCV3e (Old-growth forest): 315 acres combined NH and cedar. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Silvicultural prescriptions in Key Habitat native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance >500 acre blocks with later successional forest with old-growth features or rare species. Field verify potential primary forest occurrences. Apply DNR HCVF General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan;

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?
Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS; Lake County; Manitou Forest Collaborative

General Comments

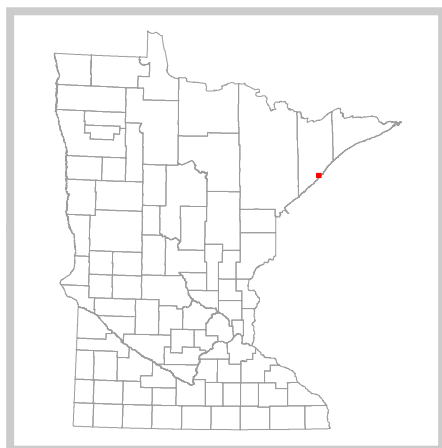
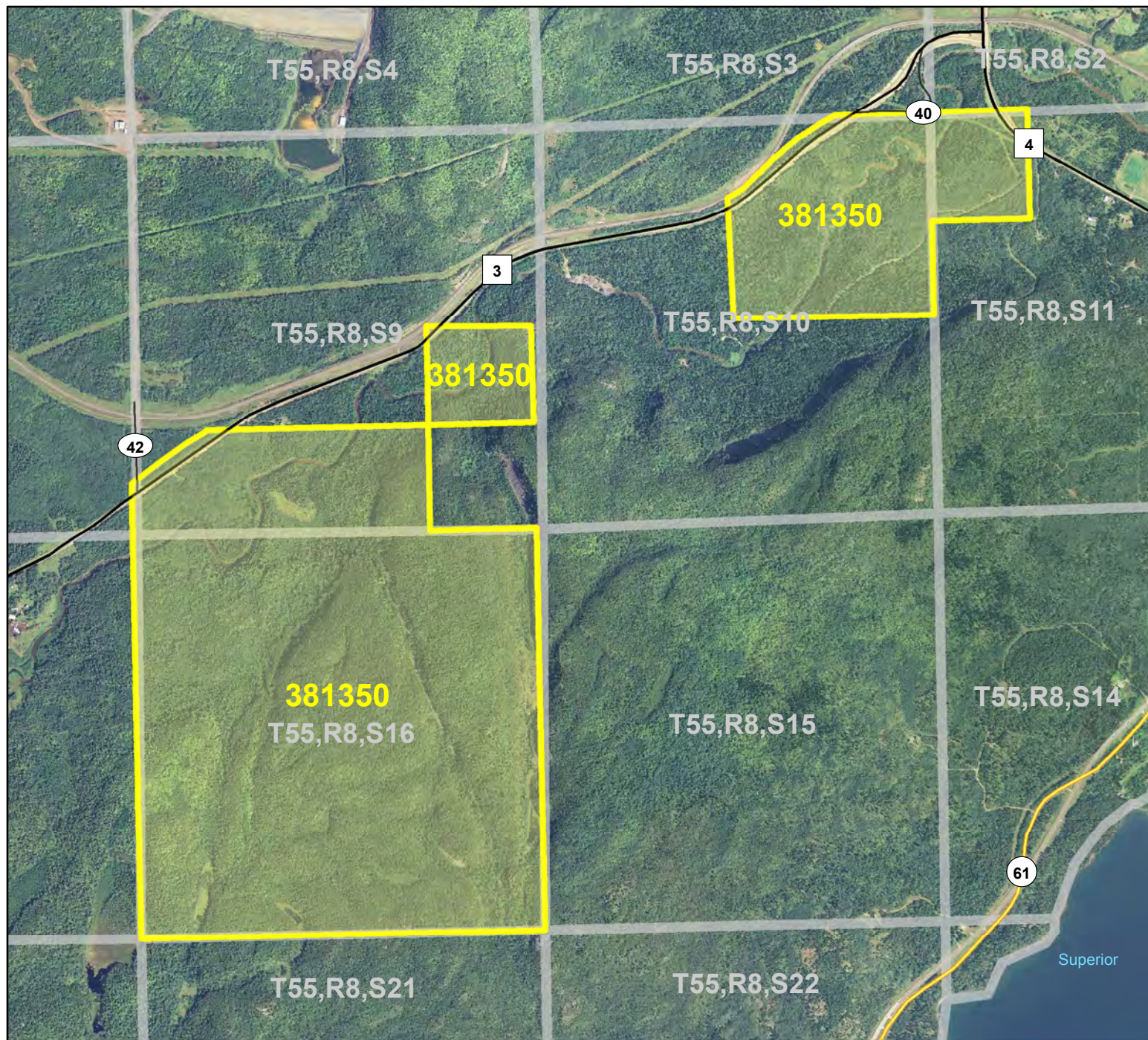
No information entered.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 381350

Lower Beaver - Fault Line Ridges, Lake County



Legend

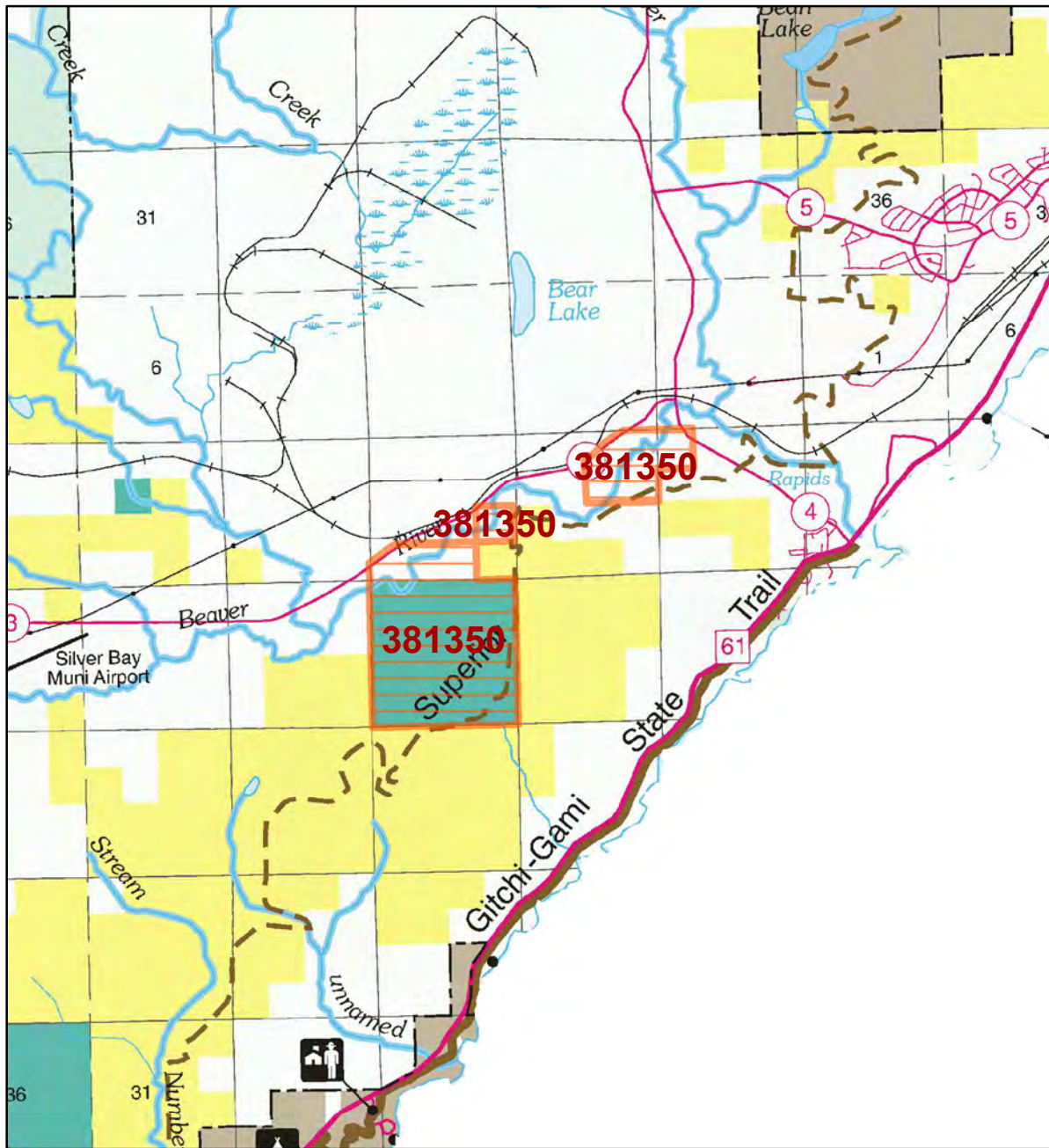
- State Trunk Highways
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 0.5 1 Miles



HCVF Site 381350

Lower Beaver - Fault Line Ridges, Lake County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

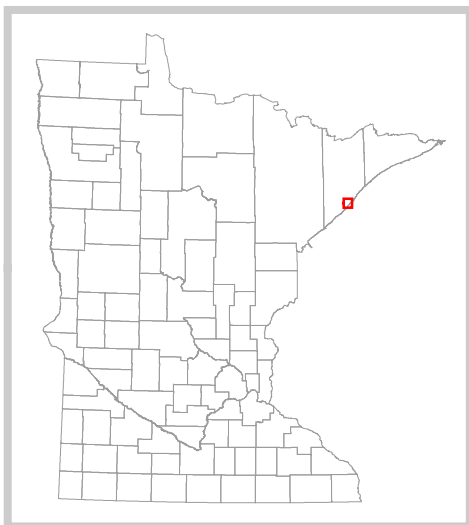
- State Trail
- State Forest Road

DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2 4 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 381350

HCVF Name: Lower Beaver - Fault Line Ridges

Acres of HCVF site: 988.72

County: Lake

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Scattered lands

HCVF Summary

Within a 5,700 acre MBS Site of Outstanding Biodiversity Significance (38135), a large, scenic, little-developed site with numerous and extensive cliffs, talus slopes, and rock outcrops, notable rare plants, remote, rugged terrain, and some of the North Shore Highlands'™ most extensive white pine forests. State HCVF lands here lie within the SW extent of the Sawtooth Mountains. The bedrock is predominantly diabase but with significant anorthosite and granite exposures. Several large faults have produced striking and extensive linear canyons two of which occur on State HCVF acres lying on either side of a high ridge with designated white spruce OG. HCVF upland forest acres are almost all FDn43b with lesser amounts of types a and c, FDn32a, and MHn45a. Significant acreage of FDn43b with a mature white pine, white cedar or white spruce component. State HCVF acres contribute to the second largest area of intact white pine-red pine forest in the North Shore Highlands (after privately- owned Encampment Forest). Small patches of FDn32a and FDn43a are mapped but also occur as inclusions with the matrix FDn43b; FDn32a is uncommon in the North Shore Highlands and occurs here atop some of the west- and south-facing cliffs.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 fern. HCV1g (Outstanding Key Habitats Examples): Forest Upland Coniferous, Forest Lowland Coniferous, Shoreline/Outcrop/Tallus/Cliff. HCV2-LMFa (Large habitat block): yes. HCV3b (S1 or S2 plant community): FDn43a. HCV3c (Special S3 plant community): CTn12. HCV3d (Natural origin pine stand): Natural origin pine. HCV3e (Old-growth forest): Designated old growth. HCV3f (Primary forest): yes. HCV3g (Roadless area): potential exists.

Management Considerations

Overall management objectives for the entire HCVF:

Silvicultural prescriptions in Key Habitat and rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Maintain/enhance shading, run-off, and micro-habitat conditions in cliff, outcrop and talus native plant communities. Apply DNR HCV General Landscape Guidance. Field verify potential primary forest occurrences. Maintain/enhance natural origin pine as a component with the forest matrix; enhance natural pine regeneration. Field verify or research potential roadless conditions.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

Lake County

General Comments

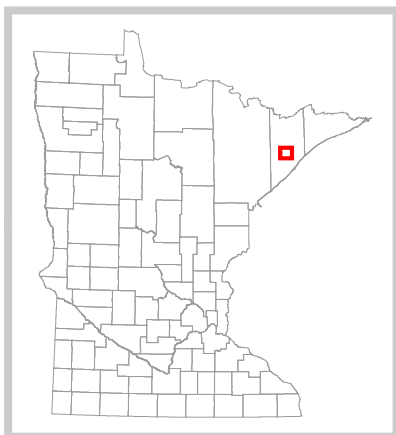
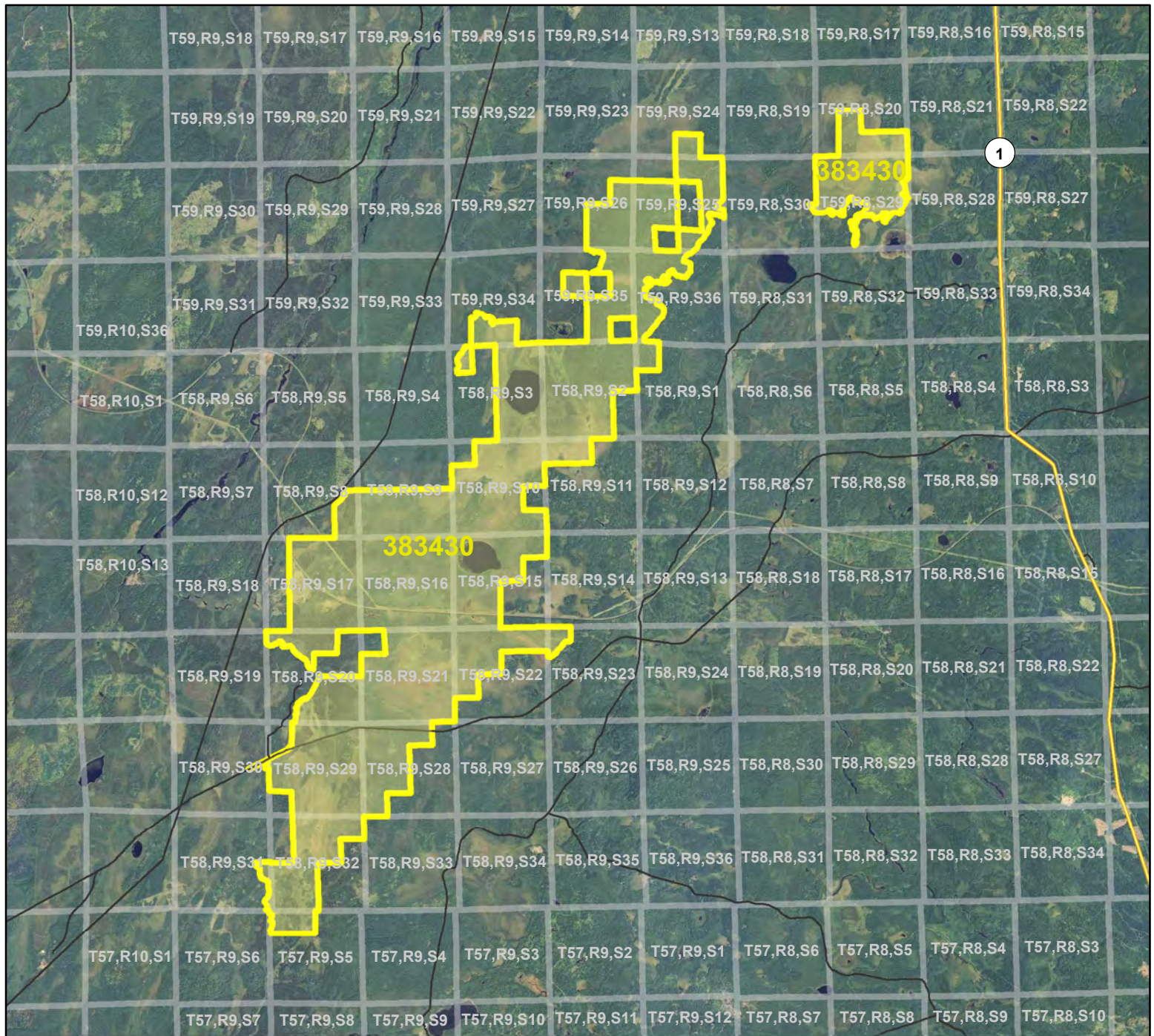
No information entered.

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... Report End ...

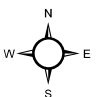
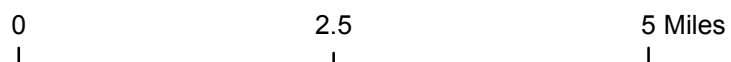
HCVF Site 383430

Spur End Fen - Osier Creek Lowland Conifers, Lake County



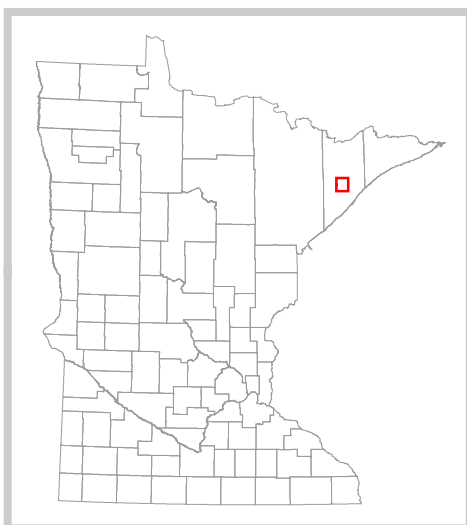
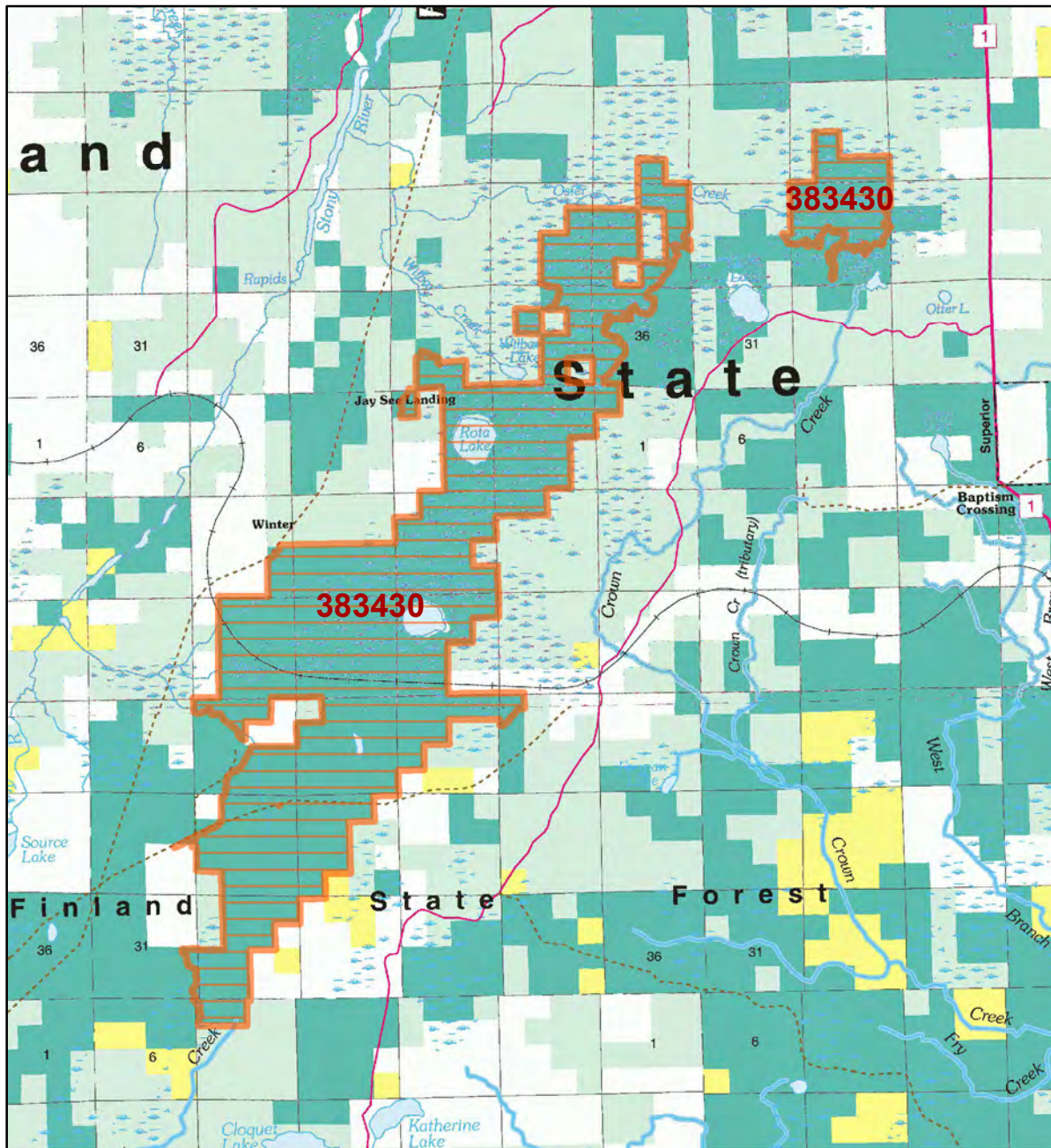
Legend

- State Trunk Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 383430

Spur End Fen - Osier Creek Lowland Conifers, Lake County



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.75 5.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 383430

HCVF Name: Spur End Fen - Osier Creek Lowland Conifers

Acres of HCVF site: 7841.24

County: Lake

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Finland State Forest

HCVF Summary

Large landscape peatland complex with large blocks of State HCVF lands. High-quality examples of native plant communities of the FPn, APn and OPn systems. Lowland forests typically black spruce or white cedar. Both poor fens and bogs occur. Several large patches of rare watertrack peatlands with many rare species, including 66 acres of OPn91b2 on state land. Open peatlands generally w/o distinctive repeated patterns of flarks and strings. Small upland islands with MHn45b (S2) with about 380 acres on state HCVF land, some having large old yellow birch and about 15 acres of designated OG. Although old winter trails are evident and a RR ROW crosses the site, peatland communities show little overall disturbance. Highest number of rare species of any H or O site in ECS Section.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species: 1 sedge. HCV1e (Rare species concentration): peatland plants. HCV1g (Outstanding Key Habitats Examples): Forest Lowland Coniferous, Forest Upland. HCV2-LMFa (Large habitat block): forested peatland with upland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3a (G1 or G2 plant community): MHn45b. HCV3b (S1 or S2 plant community): MHn45b and OPn91b2. HCV3c (Special S3 plant community): OPn91b2. HCV3e (Old-growth forest): 15 acres white spruce.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant populations. Silvicultural prescriptions in Key Habitat and rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. For MHn45b occurrences follow direction per DNR G1 & G2 Imperiled Communities Memo, June 30, 2010. Maintain/enhance >500 acre blocks of later successional forest with old-growth features or rare species. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP; MFRC NE Landscape Plan;

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

USFS; Lake County.

General Comments

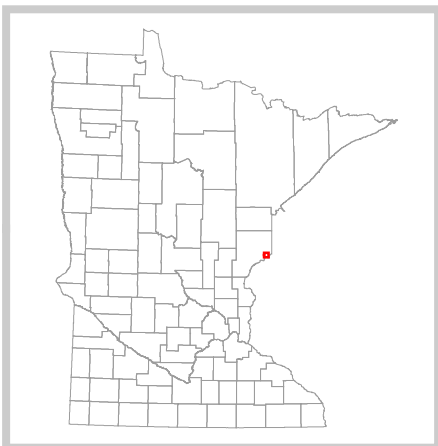
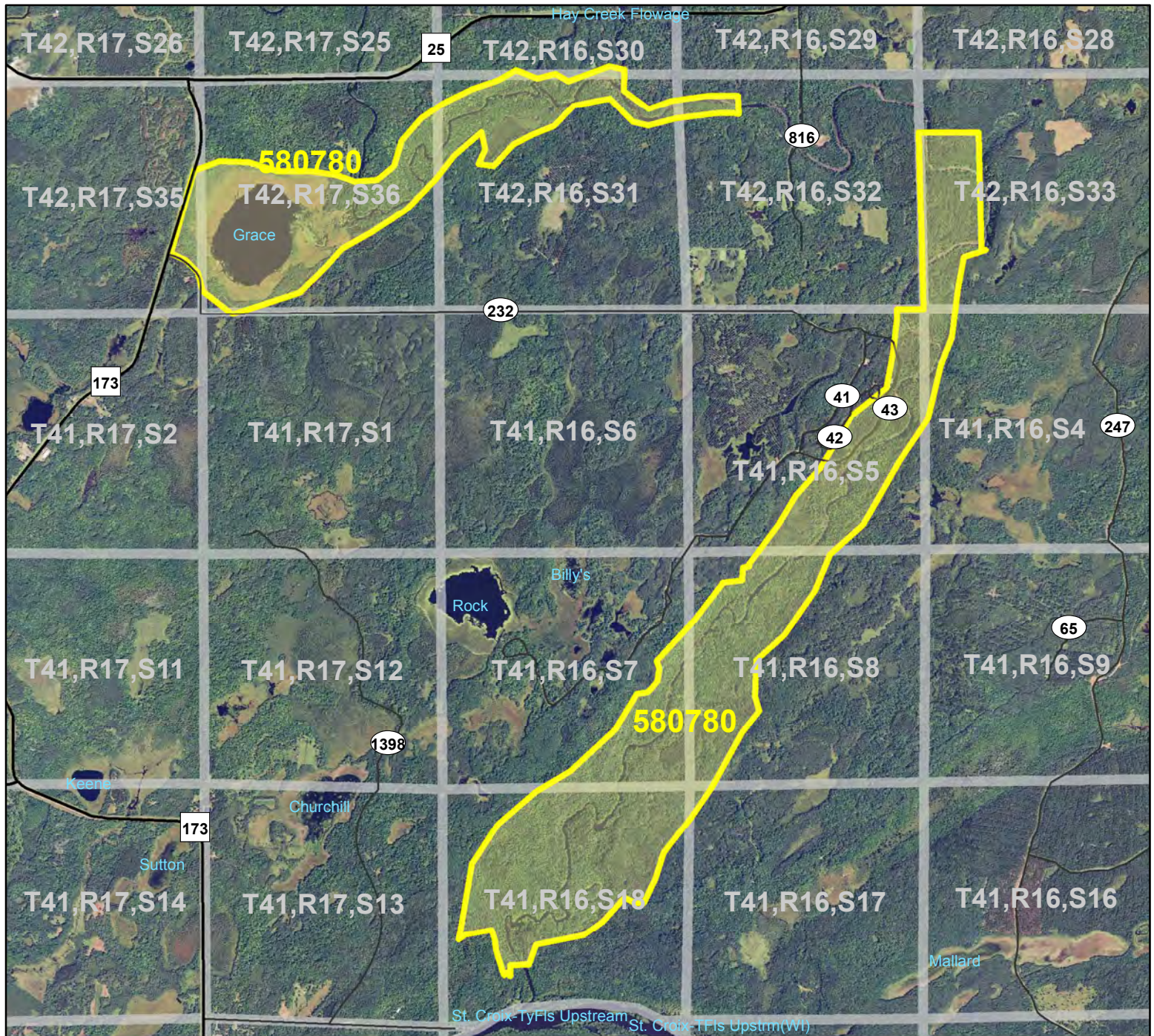
Silvicultural prescriptions recognize FTP_CX occurrences.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

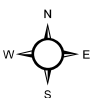
HCVF Site 580780

Tamarack River, Pine County



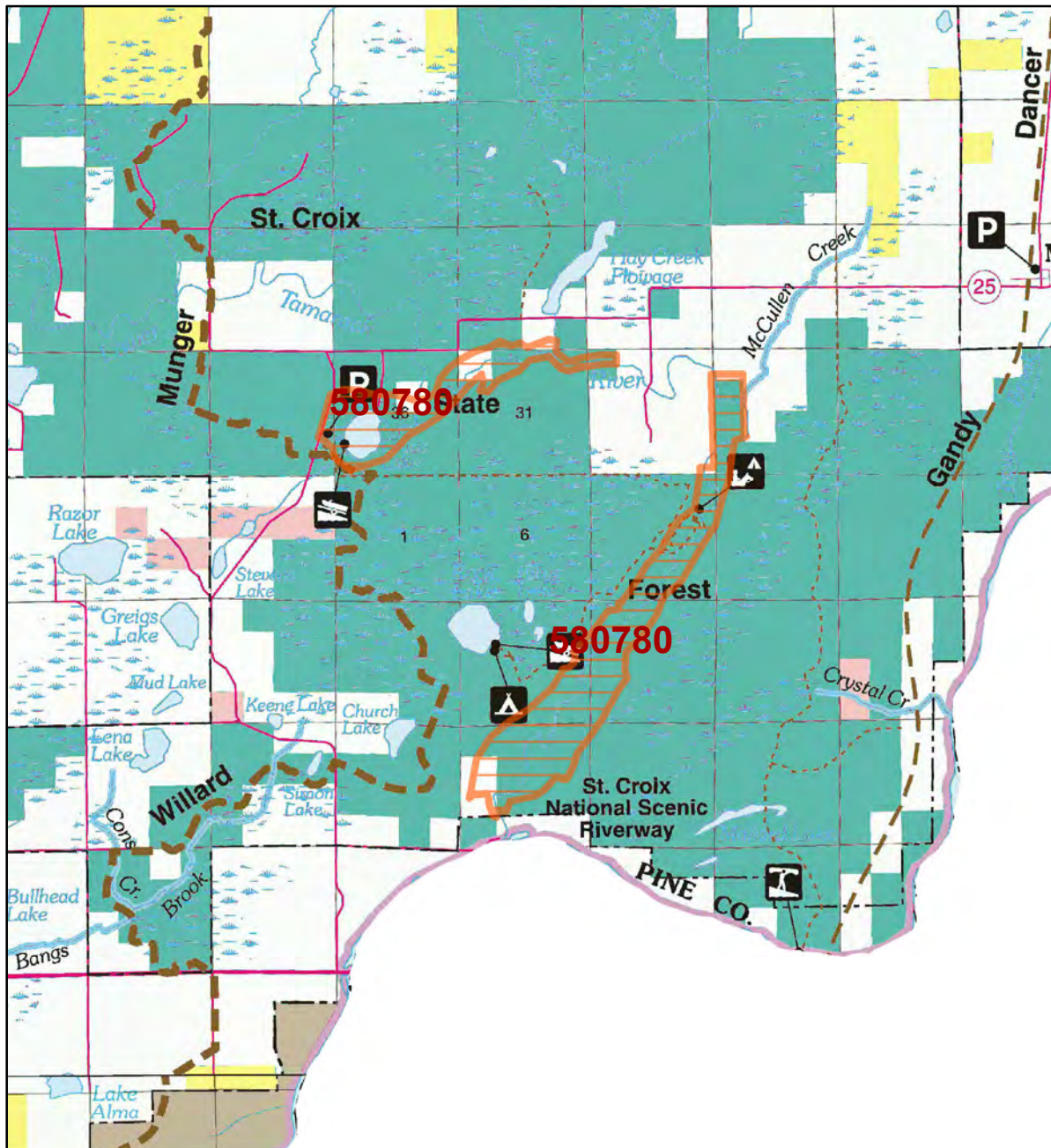
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



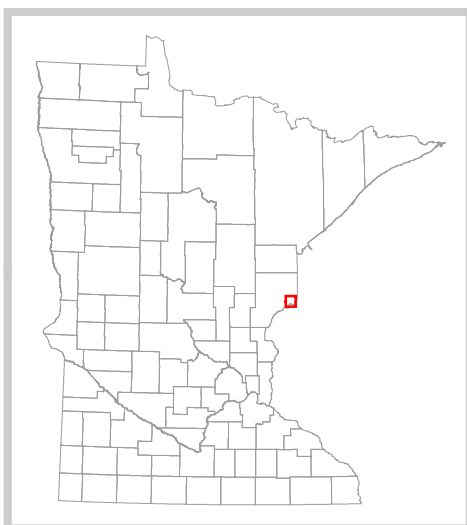
HCVF Site 580780

Tamarack River, Pine County



LEGEND

- HCVF Site
- MAP EXPLANATION**
- LAND OWNERSHIP**
 - County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
 - County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
 - State Trail
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 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
 - D.N.R. Office
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 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
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 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.25 4.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 580780

HCVF Name: Tamarack River

Acres of HCVF site: 1329.63

County: Pine

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): St. Croix State Forest

HCVF Summary

State HCVF site in the St. Croix SF centered along the Lower Tamarack River just upstream from its mouth at the St. Croix River continuing upstream past its confluence with Hay Creek to Graces Lake. The site and adjacent landscape experienced severe blowdown July 1, 2011. About 100 acres of mature (some old growth) natural origin pine are present in 10 stands along a 4 mile stretch of the L. Tamarack River. The jack pine native plant communities have not been classified based on a site visit but are most likely the same as most jack pine in St. Croix SP, i.e., FDc25a (S2). This site is one of two MBS sites in the Section with a Cerulean warbler record and represents the NE-most record of Cerulean Warbler in MN. The rare plant species in the site American Water-pennywort (*Hydrocotyle americana*) and whorled loosestrife (*Lysimachia quadifolia*) both have very limited range in east central MN and in the WSU section.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 plant. HCV1e (Rare species concentration): birds, mussels, plants. HCV1f (Taxonomic group concentration): SGCN birds, mussels. HCV1g (Outstanding Key Habitats Examples): Shoreline, Forest Upland Conifer, Forest Lowland Conifer (limited), River Key Reach. HCV2-LMFa (Large habitat block): riparian forest in combination with adjacent State Forest lands. HCV2-LMFbii (blocks with rare species): yes. HCV3b (S1 or S2 plant community): probable FDc25a. HCV3c (Special S3 plant community): probable WFn53, MHc47. HCV3d (Natural origin pine stand): 100 acres combined of WP, RP and JP. HCV3e (Old-growth forest): 14 acres RP.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant locations - maintain existing canopy cover and ground layer conditions. Maintain/enhance rare bird locations and habitat. Apply red-shouldered hawk considerations; other SGCN birds likely covered by other HCV management guidance. Apply MFRC SLG trout stream guidelines to maintain/enhance the Tamarack River as mussel habitat. Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Much of this site will not be salvaged as part of the clean up of the 2011 blowdown event and thus will contribute to maintaining landscape conditions. Field verify presence of possible FDC25a and other native plant communities in site. Map site to native plant community based on field verification with attention to MHc47 and WFn53. Natural origin pine stands need field verification, all/most have been affected by 2011 blowdown. Designated OG is now mostly blowdown after 2011 event; field visit to determine continued designation or not. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

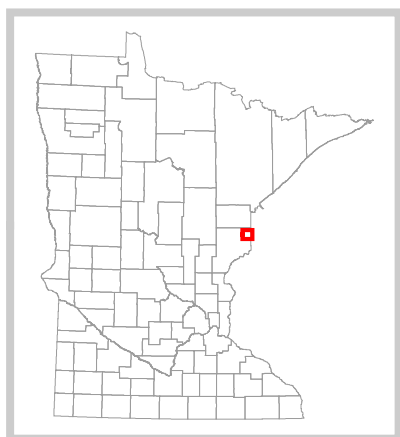
Key Habitat concerns will be evaluated after other HCV objectives are established, review with Nongame to determine agreement or not with Key Habitat maintenance/enhancement.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 581400

Ludwig - Belden, Pine County



Legend

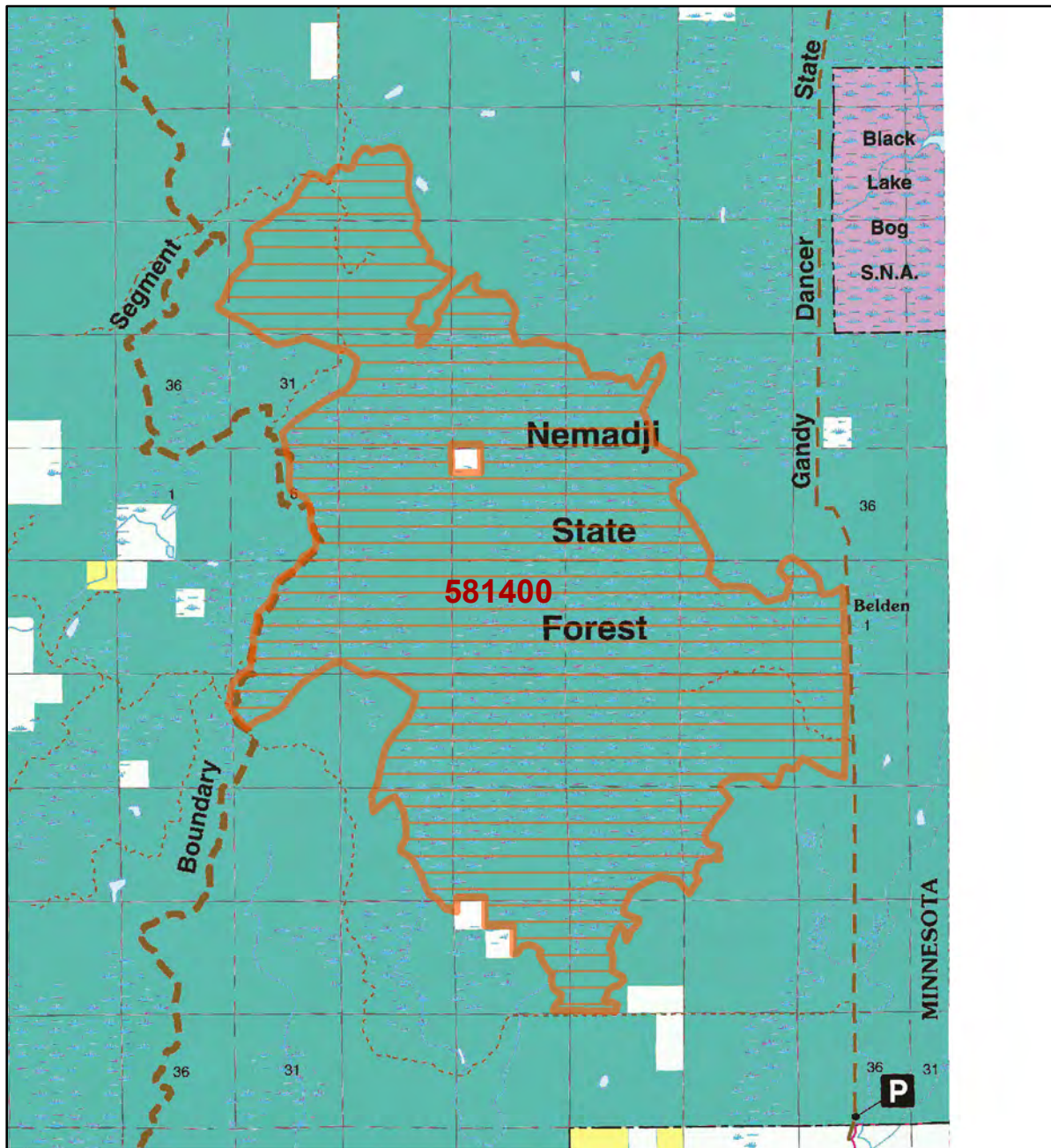
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 2 4 Miles



HCVF Site 581400

Ludwig - Belden, Pine County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- State Scientific & Natural Area Land
- National Waterfowl Production Area
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

HCVF: Some of the features depicted in this map are not shown on the base map.

The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

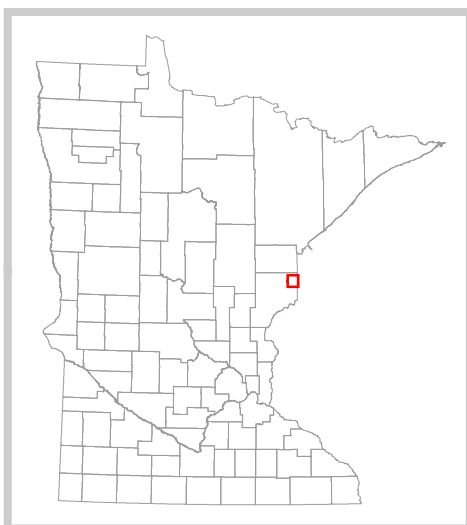
Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.5 5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 581400

HCVF Name: Ludwig - Belden

Acres of HCVF site: 13231.21

County: Pine

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Nemadji State Forest

HCVF Summary

Large intact landscape of WSU ground moraine, some end moraine, topography with MHn upland islands in a very large forested peatland/swamp (Belden Swamp). This HCVF site lies within the largest remaining natural landscape in the WSU. State HCVF acres center on the expensive Belden Swamp and upland areas with designated old growth and concentrations of rare species. Most of the site is ground moraine although a finger of end-moraine occurs in the NW portion of the site in the Ludwig area. An esker fingers through the forested peatland in the far southern extent of the site. Belden Swamp is dominated black spruce bog (APn80) in the north and tamarack swamp in the south and black ash swamp and shrub swamp along the periphery. Belden Swamp is notable on a Statewide scale for a peatland of its size having no ditches or utility corridors bisecting it. Mineral soil uplands are dominated by northern hardwood forest (MHn35) with the esker covered by FDn43. Notable concentrations of rare salamanders, rare ferns, old-growth MHn, and a forest/peatland landscape >4,000 acres (HCV 3) that is almost entirely State owned.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 2 Botrychium (spp.), 1 tree. HCV1e (Rare species concentration): 2 amphibians, 4 Botrychium., SGCN birds. HCV1f (Taxonomic group concentration): 2 amphibians, 4 Botrychium, SGCN birds. HCV2-LMFa (Large habitat block): Upland and lowland forest complex. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): probable MHc47 and MHn47 types. HCV3e (Old-growth forest): NH. HCV3f (Primary forest): probable lowland conifer and small upland islands. HCV3g (Roadless area): best potential in Section.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant locations - maintain existing canopy cover and ground layer conditions. Maintain/enhance existing hemlock as a component within the forest matrix; enhance natural hemlock regeneration. Apply DNR salamander guidelines. Verify locations of S3 native plant communities within site. If present: Silvicultural prescriptions in rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM objective code CON1. Field verify potential primary forest occurrences. Field verify or research potential roadless conditions. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

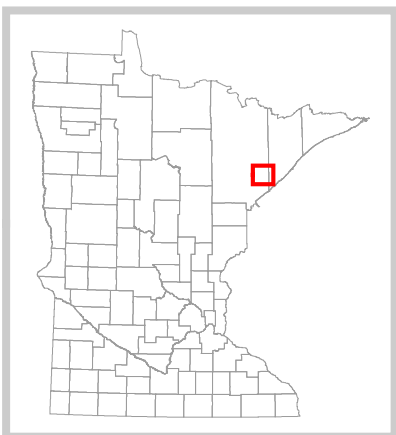
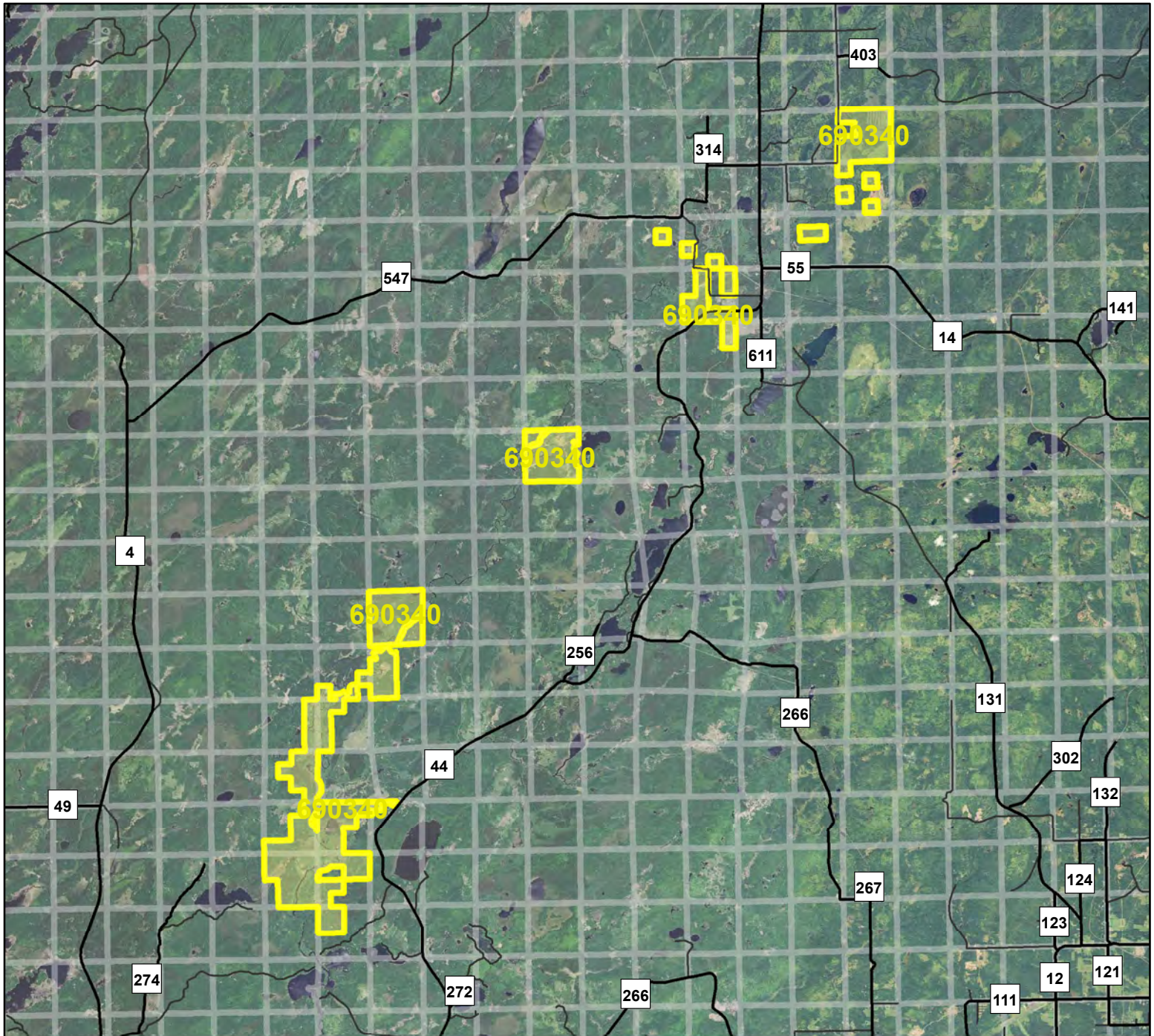
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... Report End ...

HCVF Site 690340

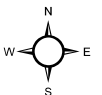
Cloquet River Pequawaywan, St. Louis County



Legend

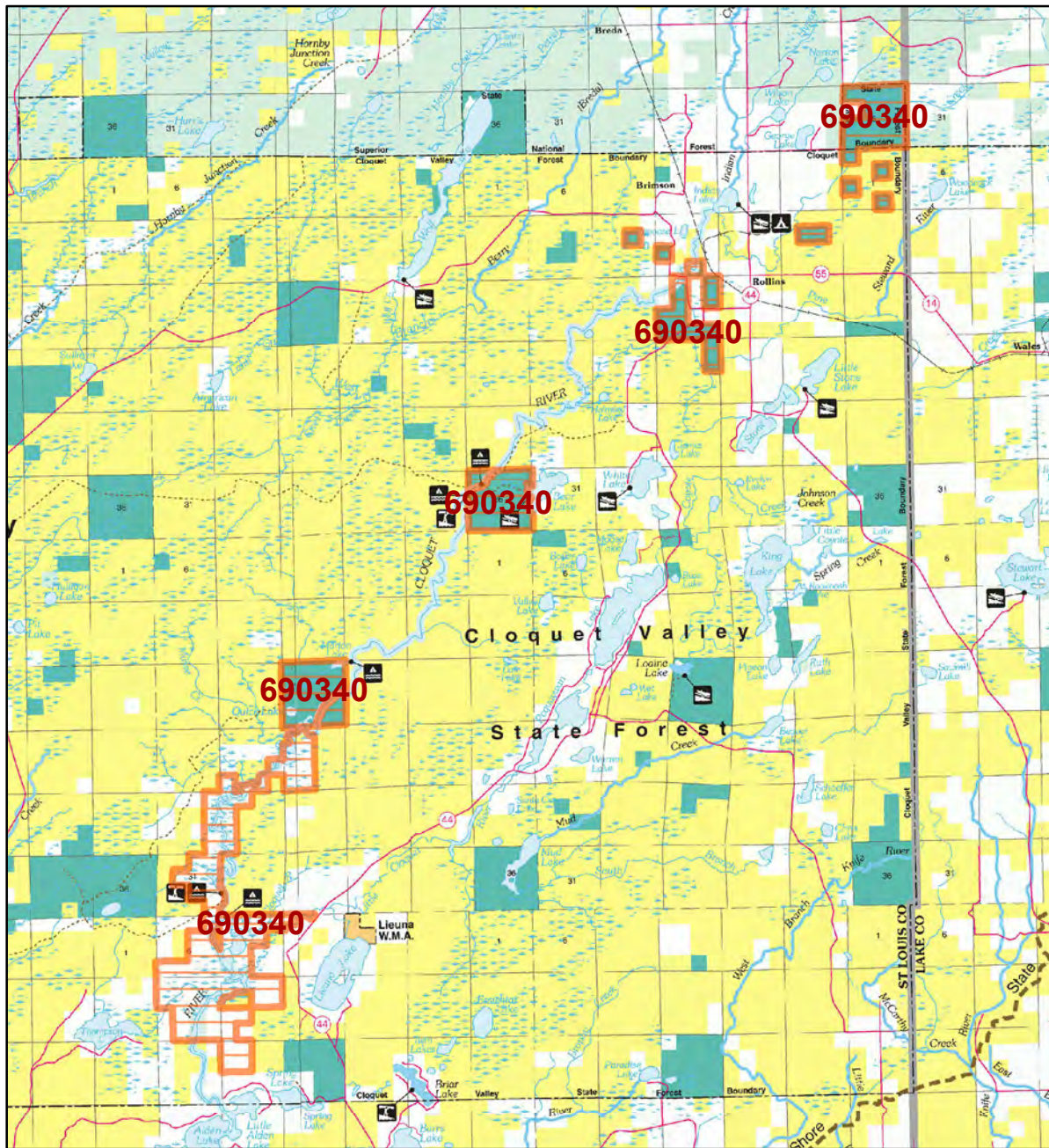
- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections

0 4.5 9 Miles



HCVF Site 690340

Cloquet River Pequaywan, St. Louis County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

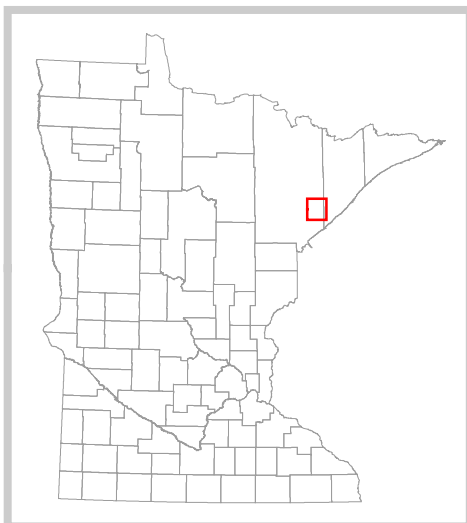
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

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- Travel Information Center
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- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

NOTE: Some of the features shown in this map are not shown on the ground. The map is a representation of the information available at the time of publication.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 4.5 9 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 690340

HCVF Name: Cloquet River Pequaywan

Acres of HCVF site: 5683.81

County: St. Louis

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Cloquet Valley State Forest

HCVF Summary

Within three MBS Sites of High and Outstanding Biodiversity Significance totaling 27,367 acres. Predominantly upland fire-dependent forest along the Cloquet River and some tributaries. Two prominent HCVs for this site include highly-significant wood turtle populations and the presence of rare native plant communities (FDn32d, FDn12b, and FDn33). Also included within the State HCVF acres is an FFn57a (S3) Representative Sample Area (RSA) occurring in the southern HCVF parcels and FDn32d RSA acres in the northernmost parcel. Much/most of the rare pine types on the site have been logged or converted to plantations, but some high-quality examples remain and still constitute the most significant cluster of these types in the subsection. Unlogged FDn32d occurs at several locations on state land including 41 acres in two jack pine stands (86 JP56, 96 JP56) in T56, R12, Sec 36. All State HCVF parcels are on the Cloquet Sand Plain LTA with upland soils varying from glacial till (sand/gravel with clay) to deep sand. Lowland conifer forests within the site are mostly mature (80-120 years) to old growth (>120 year) white cedar and some tamarack. Cooperation with St. Louis County Land Department is paramount as they are the major landowner within the MBS sites here; cooperation is active, ongoing, and long-standing, in part, due to coordinated past efforts on the St. Louis and Cloquet River Plans and an MOU regarding protection of wood turtles and forest management within the portion of the Cloquet River covered by State HCVF acres.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 reptile, 1 shrub. HCV1g (Outstanding Key Habitats Examples): Forest Upland Coniferous, Forest Lowland Coniferous, Key River Reach. HCV2-LMFa (Large habitat block): upland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3b (S1 or S2 plant community): FDn43a and FDn32d. HCV3c (Special S3 plant community): FFn57a, FDn32d, FDn33a2, FDn43c, FPn62a, APn91b. HCV3d (Natural origin pine stand): 137 acres combined jack pine and red pine. HCV3e (Old-growth forest): 87 acres combined red pine, lowland hardwood, cedar.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance forest and river features important for wood turtles; develop DNR Wood Turtle guidelines that meet HCVF standards; apply recommendations in the St. Louis River Plan unless they conflict with HCVF standards. Maintain/enhance rare plant locations - maintain existing canopy cover and ground layer conditions. Maintain/enhance existing natural origin pine as a component within the forest matrix; enhance natural pine regeneration. Defer management within FFn57a community until RSA field review and designation complete. Field verify natural origin pine and S1-3 native plant community locations where not already verified. Field verify potential primary forest occurrences. Evaluate lowland conifer stands for lowland conifer old growth designation when developed. Silvicultural prescriptions in rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Prioritize development of funding sources to support use of prescribed burning to achieve silvicultural goals in FD native plant communities. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

NTL SFRMP, Cloquet River Plan

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

St. Louis County

General Comments

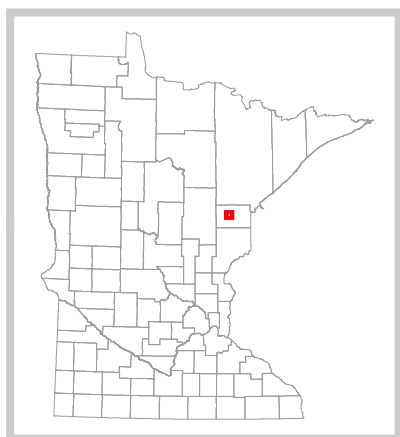
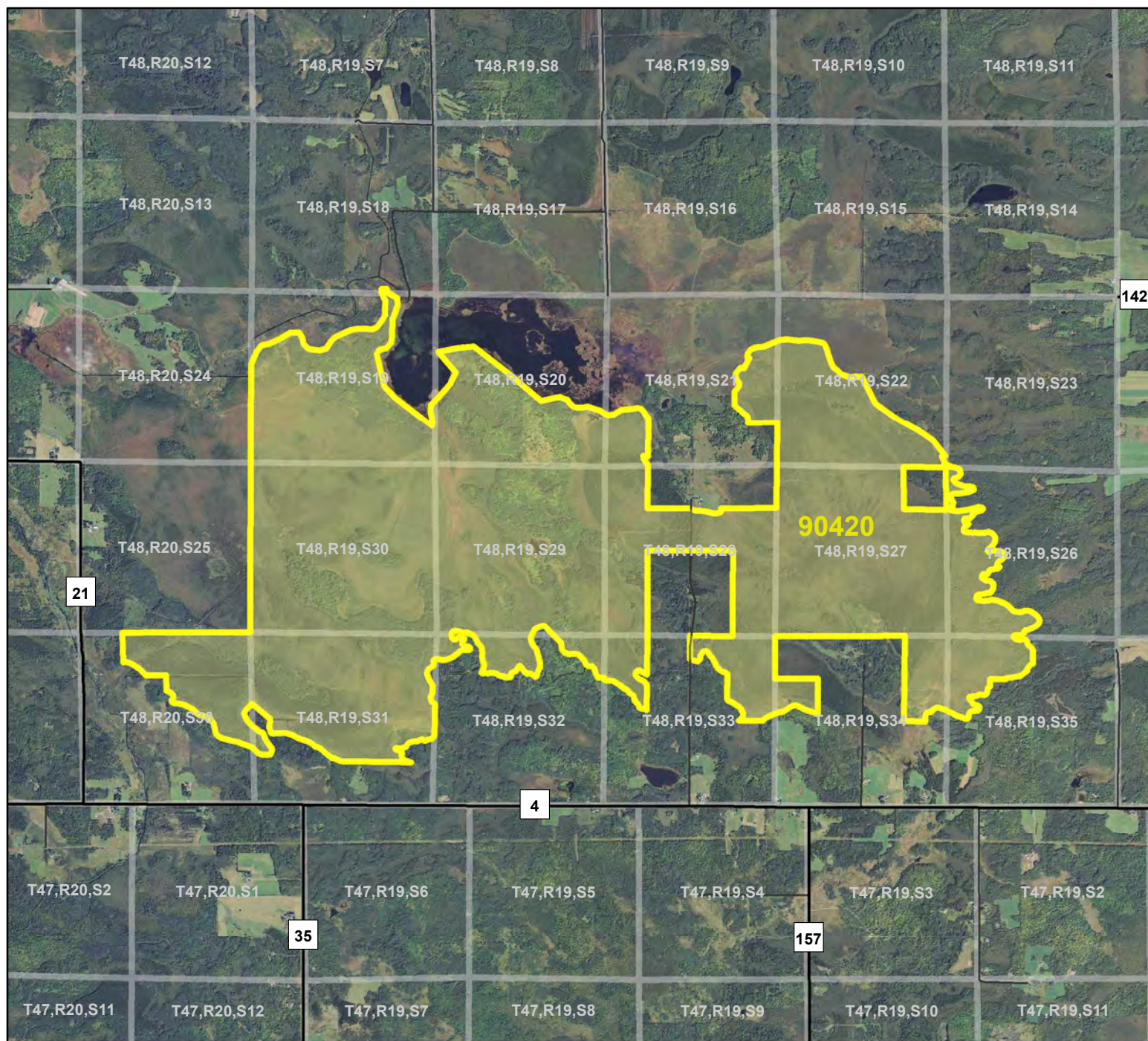
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Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

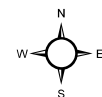
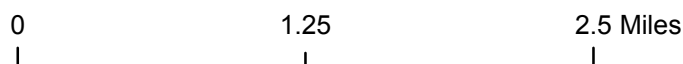
HCVF Site 90420

Kettle Lake Peatlands, Carlton County



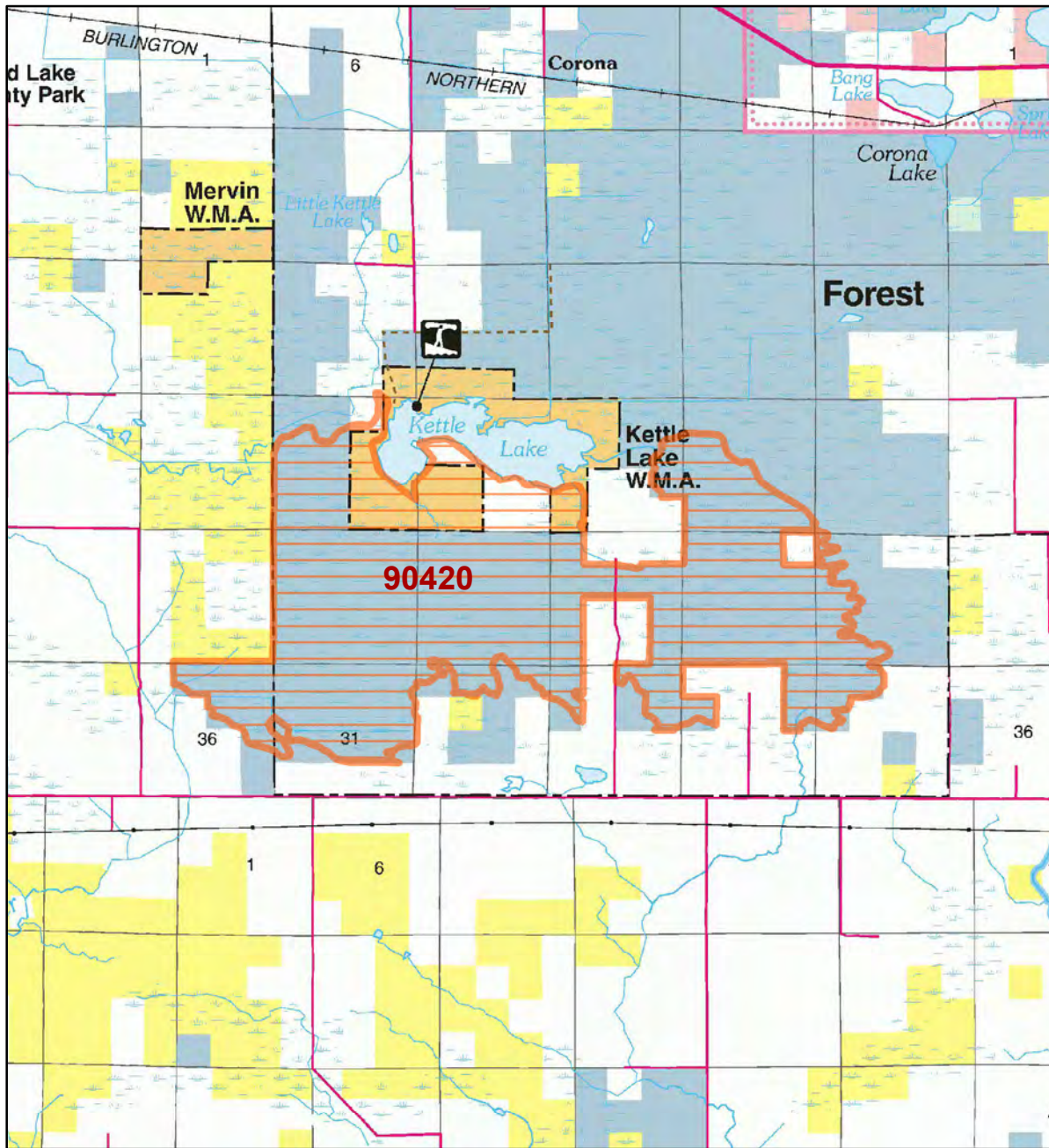
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 90420

Kettle Lake Peatlands, Carlton County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

- State Trail
- State Forest Road

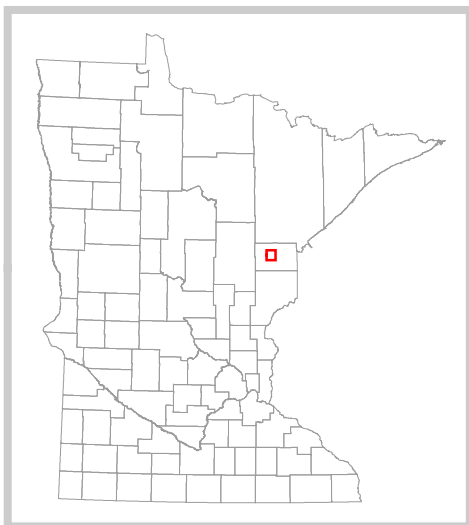
DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

- D.N.R. Office
- Travel Information Center
- Rest Area (with facilities)
- Rest Area (limited facilities)
- Campground
- Watercraft Camping
- Equestrian Camping
- Water Access
- Carry-in Access
- Dam (on designated canoe route)
- Fishing Pier
- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road

HCVF: Some of the features shown in this map are not shown on the map.



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2 4 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 90420

HCVF Name: Kettle Lake Peatlands

Acres of HCVF site: 4661.63

County: Carlton

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR F&W, Forestry

Management Unit Name(s) (if applicable): Kettle Lake WMA, Fond Du Lac State Forest

HCVF Summary

HCVF site centered on extensive high-quality peatlands around Kettle Lake. Portions of Kettle Lake WMA and Fond du Lac SF. Native plant communities: Northern Spruce Bog (APn80), APn81, WFn53, WFn64, FFn73, APn91, and OPn92. MHn35 and MHn46, both dominated by aspen and birch, present in uplands. HCVF acres include ~1000 acres (nearly all of the type in peatland basin) of a classic raised black spruce bog (APn80a) with winter roads on east side and another APn80 bog of similar size on the west side. APn80a is uncommon in the WSU section. Site lies on the line between WSU, NSU and MDL sections and could be compared to any of those sections for Regional significance. Some recent logging on upland islands within the peatland. An acid peatland of this size in this part of MN without significant ditching (within the APn portion of the larger wetland complex) and utility corridors is notable; ditching does occur within the larger wetland complex outside of State HCVF acres. APn80 with water track feature (MN's southernmost occurrence?).

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 Botrychium. HCV1e (Rare species concentration): SGCN birds. HCV1f (Taxonomic group concentration): SGCN birds. HCV1g (Outstanding Key Habitats Examples): Forest lowland conifer, Wetland non-forest, potential for Forest Upland mixed hardwood-pine (areas mapped as FDn43). HCV2-LMFa (Large habitat block): forested peatland with upland forest islands. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3e (Old-growth forest): probable lowland conifer. HCV3f (Primary forest): probable lowland conifer.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant locations through maintenance of existing canopy cover and ground layer conditions. Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Evaluate upland forest native plant community occurrences for potential to enhance mixed hardwood-conifer composition. Evaluate site for lowland conifer old growth potential and primary forest potential. Apply DNR HCV General Landscape Guidance.

Management direction from the following sources was considered in developing the above recommendations:

North Four SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?
Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

Carlton County FSC certified but has not yet designated HCVF.

General Comments

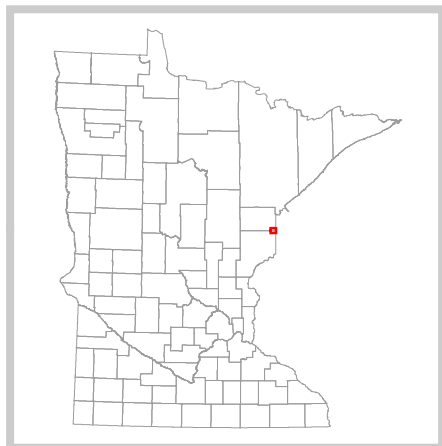
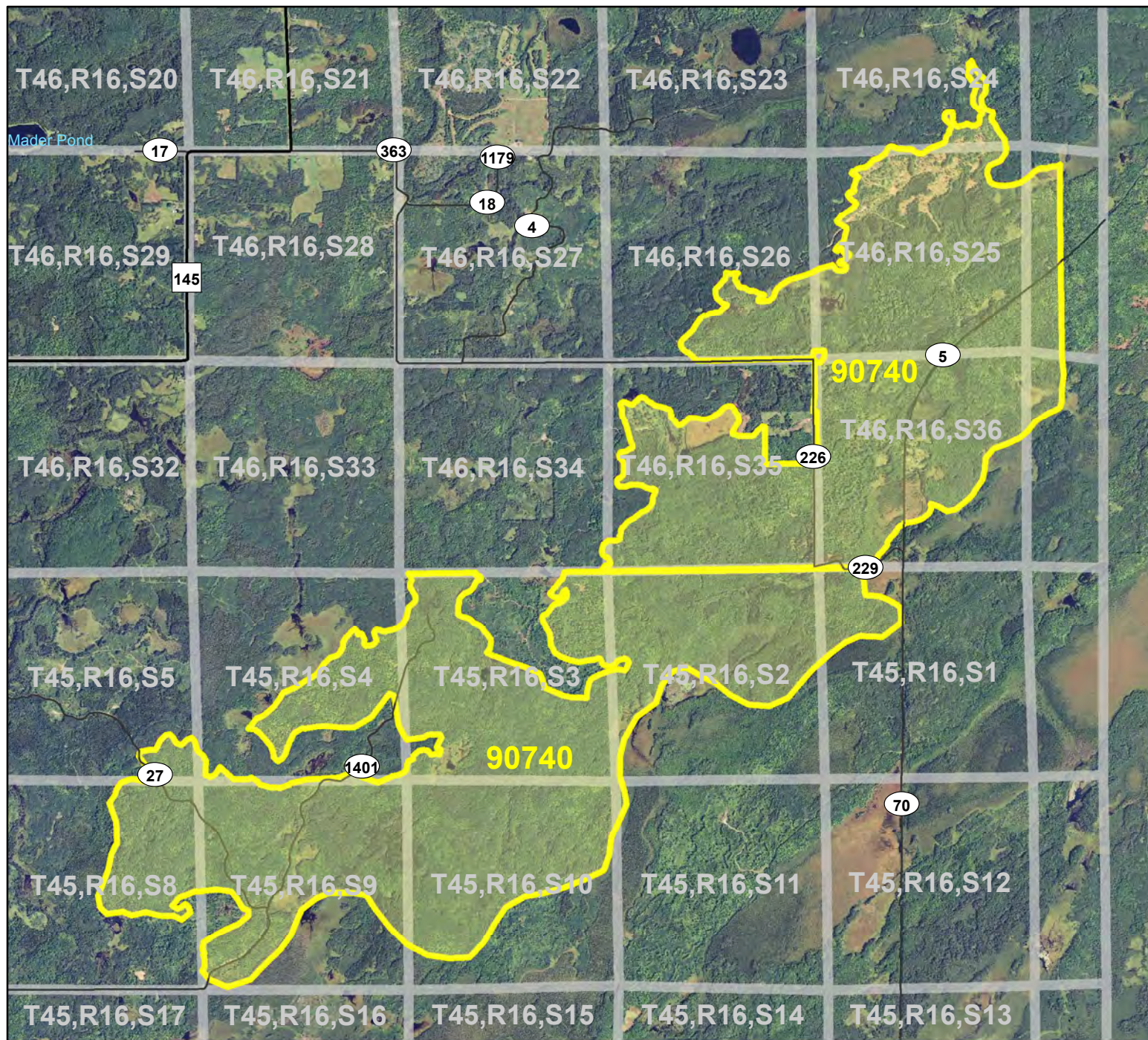
Address conflict between lowland conifer insect and disease (mistletoe and spruce bud worm) treatments and the value of these disturbances to SGCN birds.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

HCVF Site 90740

Holyoke Hardwoods, Carlton County



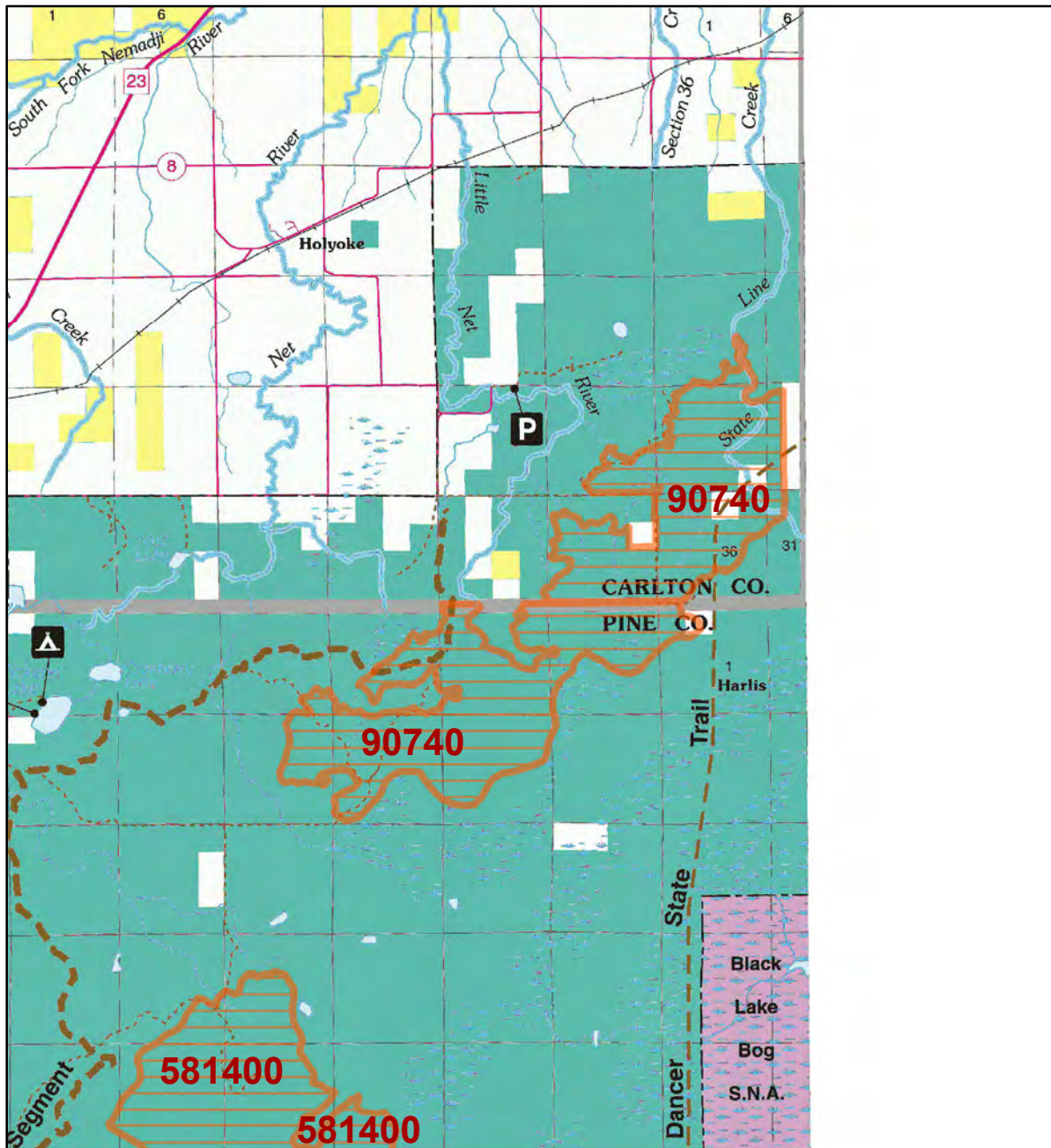
Legend

- County Highways
- Municipal, Township or Other Roads
- HCVF Site
- PLS Sections



HCVF Site 90740

Holyoke Hardwoods, Carlton County



LEGEND

HCVF Site

MAP EXPLANATION

LAND OWNERSHIP

- County Land
- Recreation Area under 40 acres
- State Forest Land
- State Park and Recreation Land
- State Wildlife Management Area Land
- W.M.A.'s under 40 acres
- State Scientific & Natural Area Land
- S.N.A.'s under 40 acres
- National Waterfowl Production Area
- N.W.P.A.'s under 40 acres
- National Forest, Park, Wildlife Refuge & Recreation Land
- Bureau of Indian Affairs Land

BOUNDARIES

- County Unit Boundary
- State Unit Boundary
- National Unit Boundary

TRAILS AND FOREST ROADS

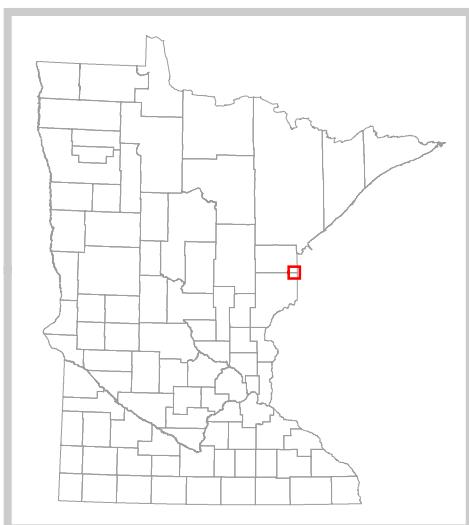
- State Trail
- State Forest Road

DESIGNATED WATERWAYS

- State Trout Stream
- State Canoe and Boating Route
- State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)

FACILITIES

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- Overlook
- Parking
- Historic Site
- Geologic Feature
- Fish Hatchery
- Forestry Nursery
- National Great River Road
- State Great River Road



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0 2.5 5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 90740

HCVF Name: Holyoke Hardwoods

Acres of HCVF site: 3874.00

County: Carlton

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR Forestry

Management Unit Name(s) (if applicable): Nemadji State Forest

HCVF Summary

Site contributes to one of the least fragmented, least developed areas in the WSU section. Site straddles the Carlton/Pine county line with about equal acreage on both sides. Predominately MHn with small to medium sized wetlands & numerous ephemeral ponds on classic pitted, end-moraine topography; provides critical habitat for rare salamander and rare fern species. Notable rare species in the site include Blunt-lobed Grapefern (E) locations, Four-toed Salamander (SPC) and Spotted Salamander (SPC) records, and two tracked rare plants. The overall landscape area of the site is good, with high quality matrix and small patch native plant communities (including S3s) and a high potential for intact ecological functioning. Site contains surface water features with intact corridors/buffers of native vegetation, and a landscape context with connections to significant natural areas to the south, NW and east in Wisconsin. As a unit, it is one of the best landscape areas in the subsection/section. Although portions of the site have been recently managed towards young forest, large blocks of mature forest and continuous canopy still exist. Rare species habitat is abundant in the more mature and undisturbed portions of the site. RR grade, currently managed as recreational trail, bisects the site SW/NE. Abuts Wisconsin. Many upland soil types in this site are considered highly erodible.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 Botrychium. HCV1e (Rare species concentration): 2 amphibians. HCV1f (Taxonomic group concentration): 2 amphibians. HCV1g (Outstanding Key Habitats Examples): Forest lowland conifer, Forest upland conifer (limited), Upland forest deciduous- mixed hardwood-pine (limited). HCV2-LMFa (Large habitat block): Matrix forest of upland with wetland. HCV2-LMFbi (late-successional forest block): potential exists. HCV2-LMFbii (blocks with rare species): yes. HCV3c (Special S3 plant community): MHn47a, WFn55b. HCV3d (Natural origin pine stand): 11 acres red pine. HCV3e (Old-growth forest): NH.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance rare plant locations - maintain existing canopy cover and ground layer conditions. Maintain/enhance rare amphibian locations and habitat; develop DNR salamander management guidance that meet HCVF standards. Maintain/enhance >500 acre blocks around potential designated OG (OFMCs) or as part of SFRMP old, large patches. Maintain/enhance >500 blocks around forested areas with rare salamanders or rare ferns. Apply DNR HCV General Landscape Guidance. Silviculture in rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Field verify potential natural origin pine stands. Look for opportunities to maintain/enhance/create mixed hardwood - pine native plant communities.

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

No

General Comments

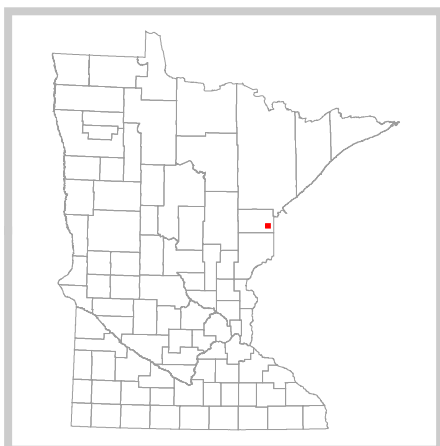
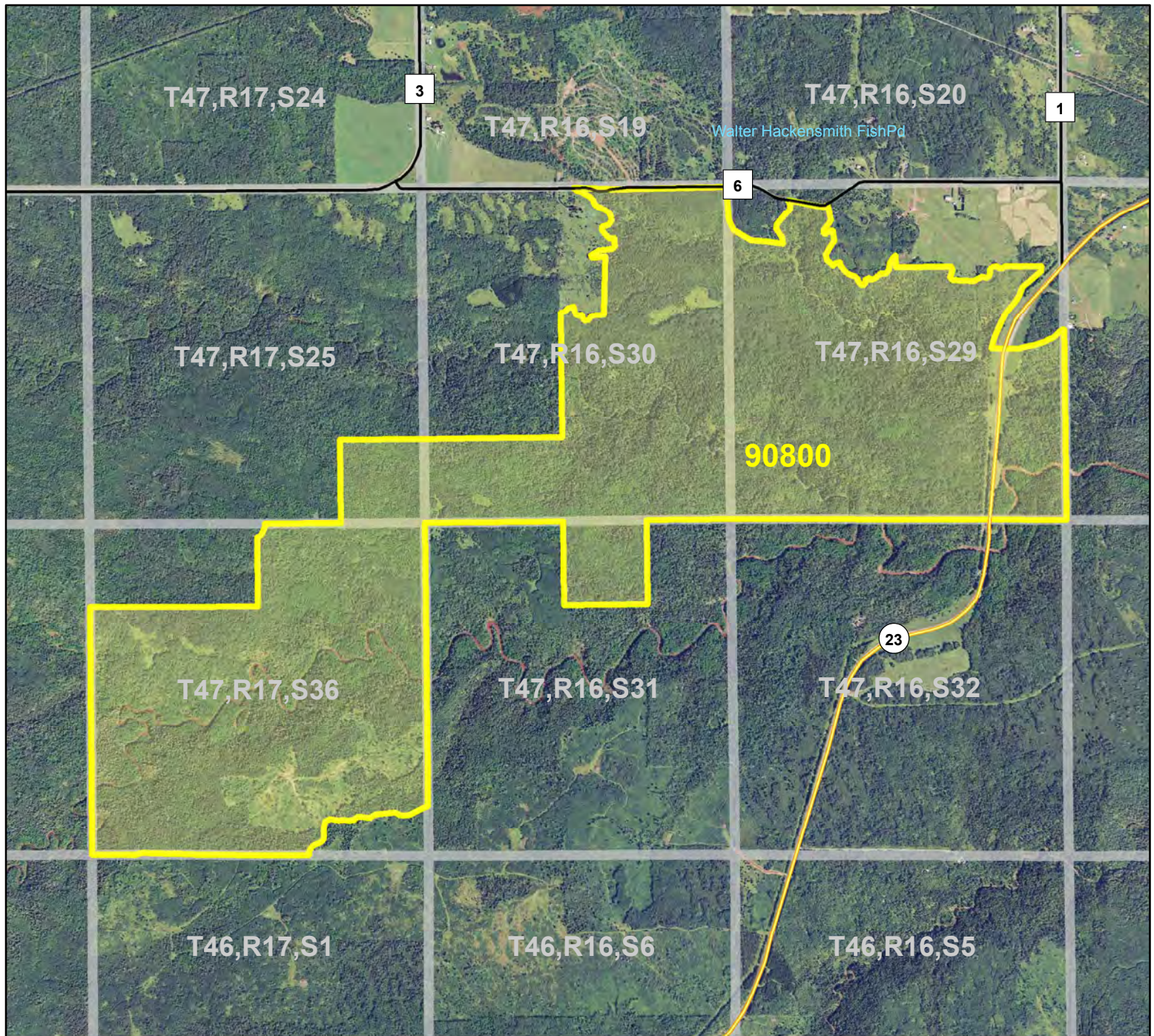
HCV 3e: No current designated old growth; one NH stand under review per FSC Type II OG CAR.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...

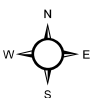
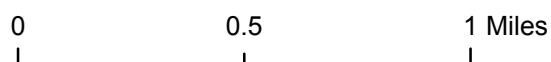
HCVF Site 90800

Blackhoof River WMA, Carlton County



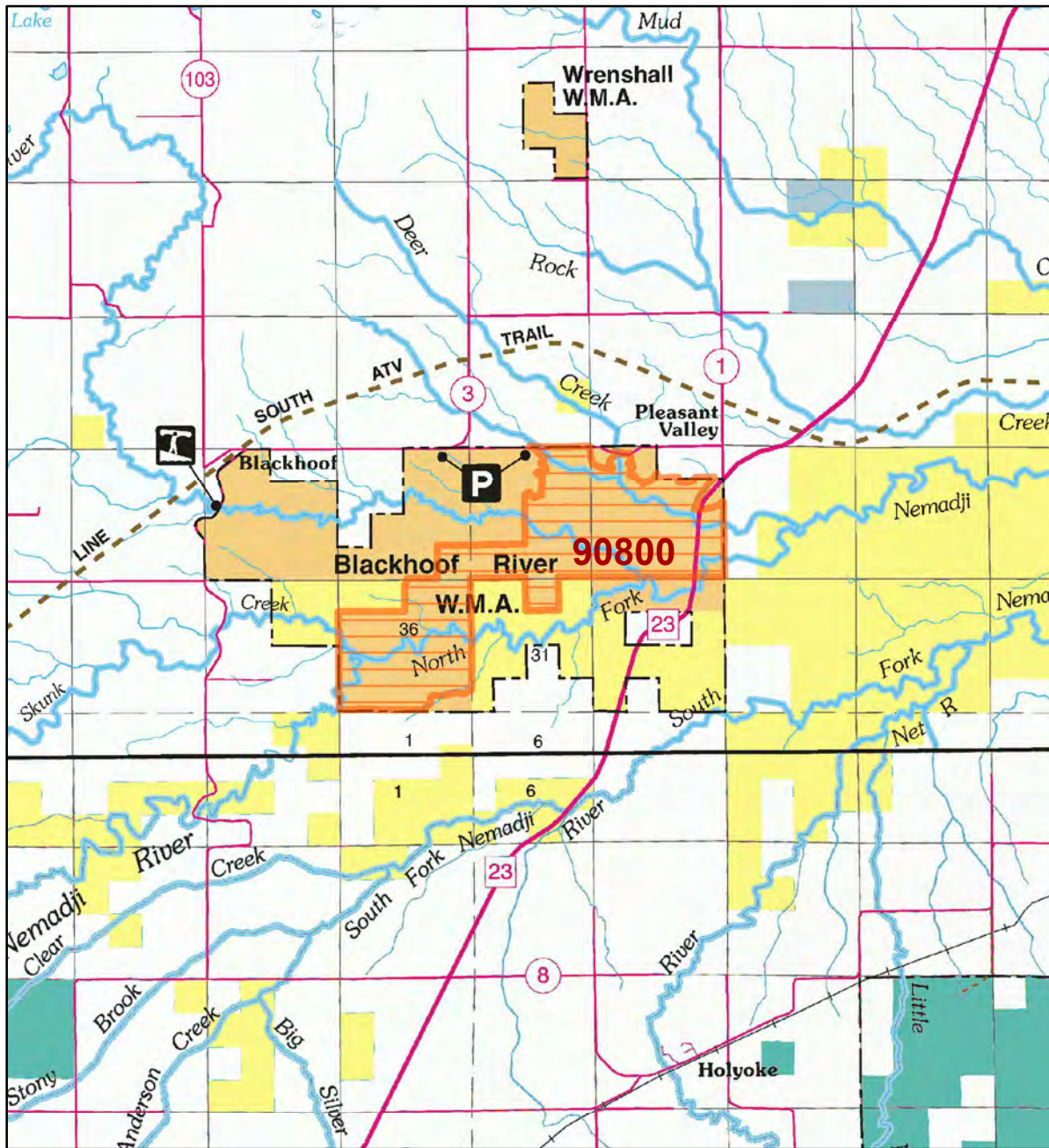
Legend

- State Trunk Highways
- County Highways
- HCVF Site
- PLS Sections

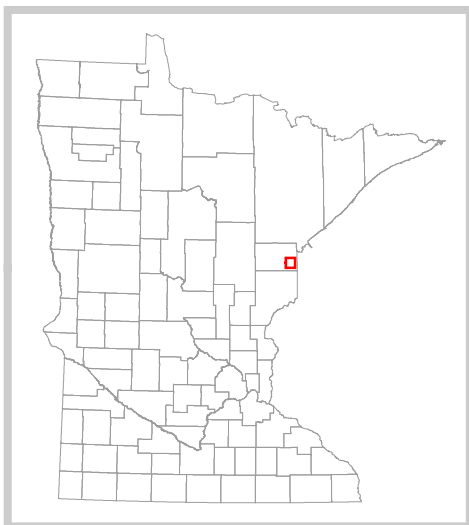


HCVF Site 90800

Blackhoof River WMA, Carlton County



- LEGEND**
- HCVF Site**
- MAP EXPLANATION**
- LAND OWNERSHIP**
- County Land
 - Recreation Area under 40 acres
 - State Forest Land
 - State Park and Recreation Land
 - State Wildlife Management Area Land
 - W.M.A.'s under 40 acres
 - State Scientific & Natural Area Land
 - S.N.A.'s under 40 acres
 - National Waterfowl Production Area
 - N.W.P.A.'s under 40 acres
 - National Forest, Park, Wildlife Refuge & Recreation Land
 - Bureau of Indian Affairs Land
- BOUNDARIES**
- County Unit Boundary
 - State Unit Boundary
 - National Unit Boundary
- TRAILS AND FOREST ROADS**
- State Trail
 - State Forest Road
- DESIGNATED WATERWAYS**
- State Trout Stream
 - State Canoe and Boating Route
 - State Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
 - National Wild, Scenic & Recreational River (also designated Canoe & Boating Route)
- FACILITIES**
- D.N.R. Office
 - Travel Information Center
 - Rest Area (with facilities)
 - Rest Area (limited facilities)
 - Campground
 - Watercraft Camping
 - Equestrian Camping
 - Water Access
 - Carry-in Access
 - Dam (on designated canoe route)
 - Fishing Pier
 - Overlook
 - Parking
 - Historic Site
 - Geologic Feature
 - Fish Hatchery
 - Forestry Nursery
 - National Great River Road
 - State Great River Road



The PRIM series was developed using funds provided through the Legislative Commission on Minnesota Resources (LCMR).

Base information was compiled from 1:100,000 series U.S. Geologic Survey planimetric maps.

Facility and ownership information was compiled from the following sources: Minnesota Department of Natural Resources, Minnesota Department of Transportation, State Planning Agency, Minnesota Historical Society and the respective counties.



0 2.25 4.5 Miles

Land ownership categories on this map are in some cases outdated. HCVF sites are on DNR-managed land only; DNR HCVF sites have not been identified on other ownerships.



HCVF Informational Report

Report Run: September 3, 2013

General Information

HCVF #: 90800

HCVF Name: Blackhoof River WMA

Acres of HCVF site: 1439.26

County: Carlton

Data edited by: NE HCVF Workgroup

Role: NE HCVF Workgroup

Date edited on: 2013-07-26

Corresponding Land Administrator(s): DNR F&W

Management Unit Name(s) (if applicable): Blackhoof River WMA

HCVF Summary

HCVF site within a 13,052 acre MBS site (09800, Outstanding Biodiversity Significance) centered on the Nemadji River and its numerous tributaries and significant Wood Turtle populations. The HCVF site is entirely within the Blackhoof River WMA; it contains stretches of Skunk Creek, Deer Creek, Nemadji River North Fork, and the Blackhoof River; the Nemadji stretch includes documented Wood Turtle (S2) occurrences. The HCVF site has good landscape context with some of the largest, least fragmented upland forests and shrublands in the Southern Superior Uplands Section although the north and east sides of the HCVF site are bounded by roads. The site is also characterized by high-quality native plant communities, especially on slopes and river terraces (includes designated Old Growth), and minimal recent human disturbance. All the tributaries within the site have a natural course and a significant forested riparian zone. Northern wet-mesic boreal hardwood-conifer forests (MHn44 and MHn46) dominate the landscape with wet ash (WFn) and alder swamps (WFn, FPN) occupying the lower, wetter portions of the flat upland between drainages and northern wet-mesic hardwood forest dominating the river terraces.

HCVs known to be present that factored into HCVF designation.

FSC expects DNR to maintain HCVs within designated HCVFs. Because HCVF boundaries are not the same as the larger, multi-ownership MBS Sites, this list will differ from the values identified during the MBS Survey.

HCV1b (S1 or S2 species): 1 reptile. HCV1f (Taxonomic group concentration): reptile. HCV1g (Outstanding Key Habitats Examples): Forest Upland Deciduous (Aspen) (MHn44a), Forest Upland Deciduous (Mixed hardwood-conifer) (MHn44c), River Headwater to Large (Blackhoof River and Nemadji North Fork River). HCV2-LMFa (Large habitat block): upland forest with wetland. HCV3c (Special S3 plant community): RVx54b2. HCV3e (Old-growth forest): 44 acres combined white spruce and ash. HCV3f (Primary forest): yes.

Management Considerations

Overall management objectives for the entire HCVF:

Maintain/enhance forest and river features important for wood turtles; develop DNR Wood Turtle guidelines that meet HCVF standards. Apply MFRC SLG Trout Stream guidelines as a surrogate for addressing rare mussels and the river's maintenance/enhancement as viable habitat (river is also a trout stream). Silvicultural prescriptions in Key Habitat or rare native plant communities maintains or enhances the floristic, structural, and spatial components that define the native plant community; see SRM Objective code CON1. Silviculture in these native plant community types either aims to prolong an existing native plant community growth stage or complement a transition to the next older growth stage. Apply DNR HCV General Landscape Guidance. Avoid management activity in RVx54b2 due to slumping clay soils on slopes. Field evaluate primary forest. Revisit historical hemlock location. Nongame review site for goshawk significance.

Management direction from the following sources was considered in developing the above recommendations:

MLU SFRMP

Are the HCVs within this HCVF likely to benefit from coordination with adjacent landowner(s)?

Yes

This HCVF was flagged by the Regional HCVF Team as warranting cross-ownership coordination efforts. The specific HCVs likely to benefit from such coordination with adjacent landowners are identified below.

Carlton County FSC certified but has not yet designated HCVF in the SSU.

General Comments

No information entered.

Reference to rare plants and animals, Minnesota Biological Survey Sites of Biological Significance and mapped native plant communities are records maintained in the Minnesota DNR's Natural Heritage Information System (NHIS). A date of information is associated with each record. The NHIS is continually updated as new information becomes available. The lack of data listed for any geographic area should not be construed to mean that no significant features are present.

... Report End ...