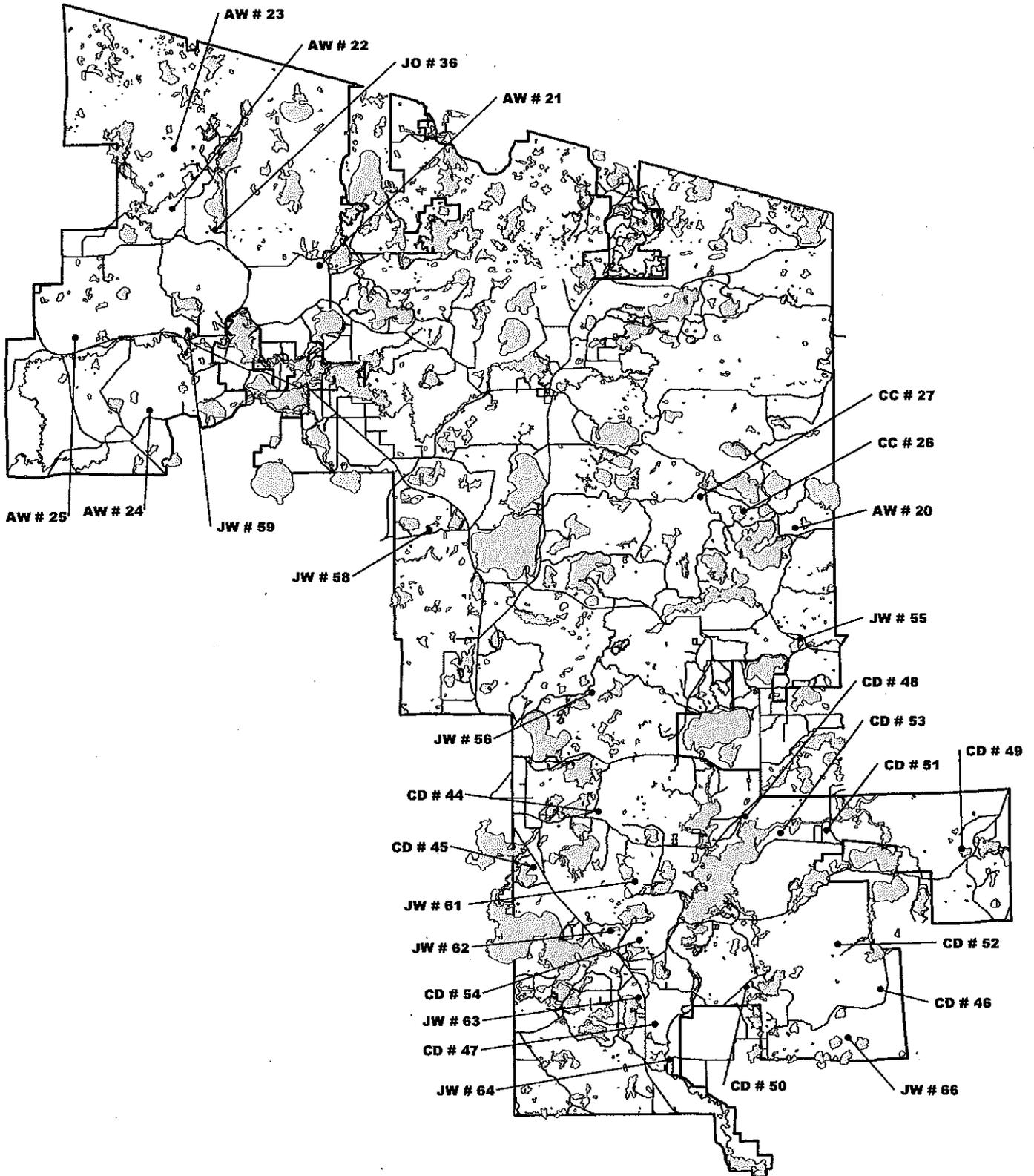


Northern Highland American Legion Pre-Sales 2013/2014 Timber Sale Establishment Location Map



Northern Highland – American Legion State Forest
C26H Stands 4, 9, 12, 13, 14, 17 and 21 Salsich/Siphon Creek 278 acres
Town of Land O' Lakes, Vilas County, T42N R8E Sec. 9, 10, 14, 15 and 16
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production
Mgmt. Area 13 – Special Aquatic – Garland and Salsich Spring Sites – Native Community
Mgmt. Area 14 – Johnson Lake Barrens – Native Community



Map produced by
 Todd Anderson &
 Paul Schultz, 2/13

Legend

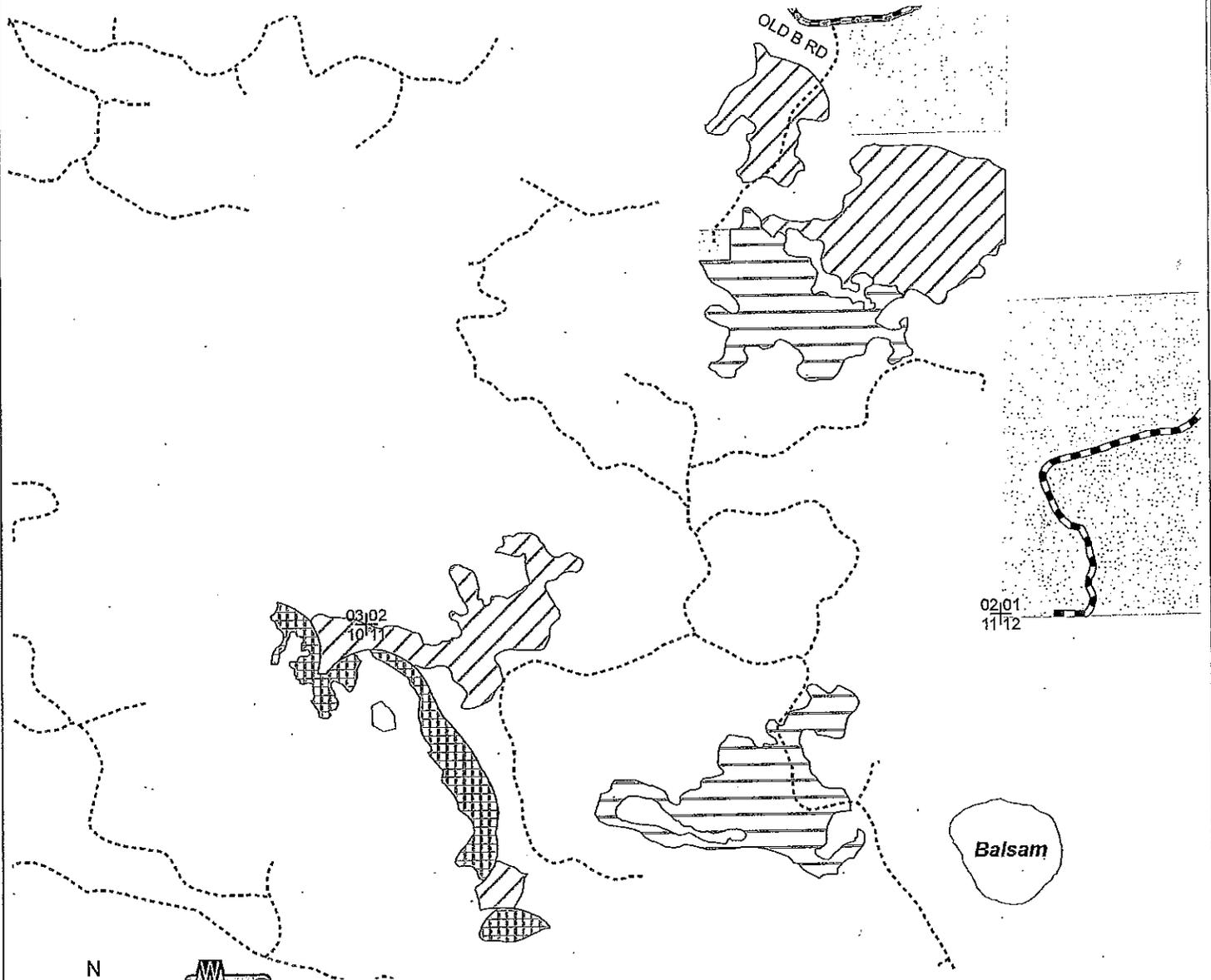
- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- == Highways and Town Roads
- ▨ Sale Proposed Area
- Lakes
- ▤ Private Lands

Objectives for Area 3 are to maintain the aspen, jack pine and tamarack stands; and increase the presence and age of red and white pine. The objectives for areas 13 and 14 are similar – use a variety of active management techniques to maintain aspen and jack pine in the uplands.

Stand 9 is 71-year old jack pine in Area 13 and Stand 21 is 55-year old aspen in Area 14. These will be clearcut and replanted to jack pine to maintain its presence in the landscape. The following stands are in Area 3. Stand 4 is 80-year old jack pine growing on a sphagnum bed. This will be clearcut and converted to black spruce / tamarack. Stand 14 is 71-year old jack pine and will clearcut and replanted to jack pine. Stand 12 is 55-year old aspen, this will undergo a coppice harvest to regenerate the aspen. Stand 13 is a 98-year old sawlog sized red pine stand of natural origin. This stand will undergo a thinning. Stand 17 is a stand of 101-year old tamarack which will be clearcut.

Biomass harvest will not be allowed.

Northern Highland – American Legion State Forest
C28H Stands 6, 9, 14, 15, 16 and 19 Perry Lake 160 acres
Town of Land O Lakes, Vilas County, T42N R8E Sec. 2, 3, 10 11
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production
Mgmt. Area 13 – Special Aquatic – Garland & Salsich Creek Sites – Native Community



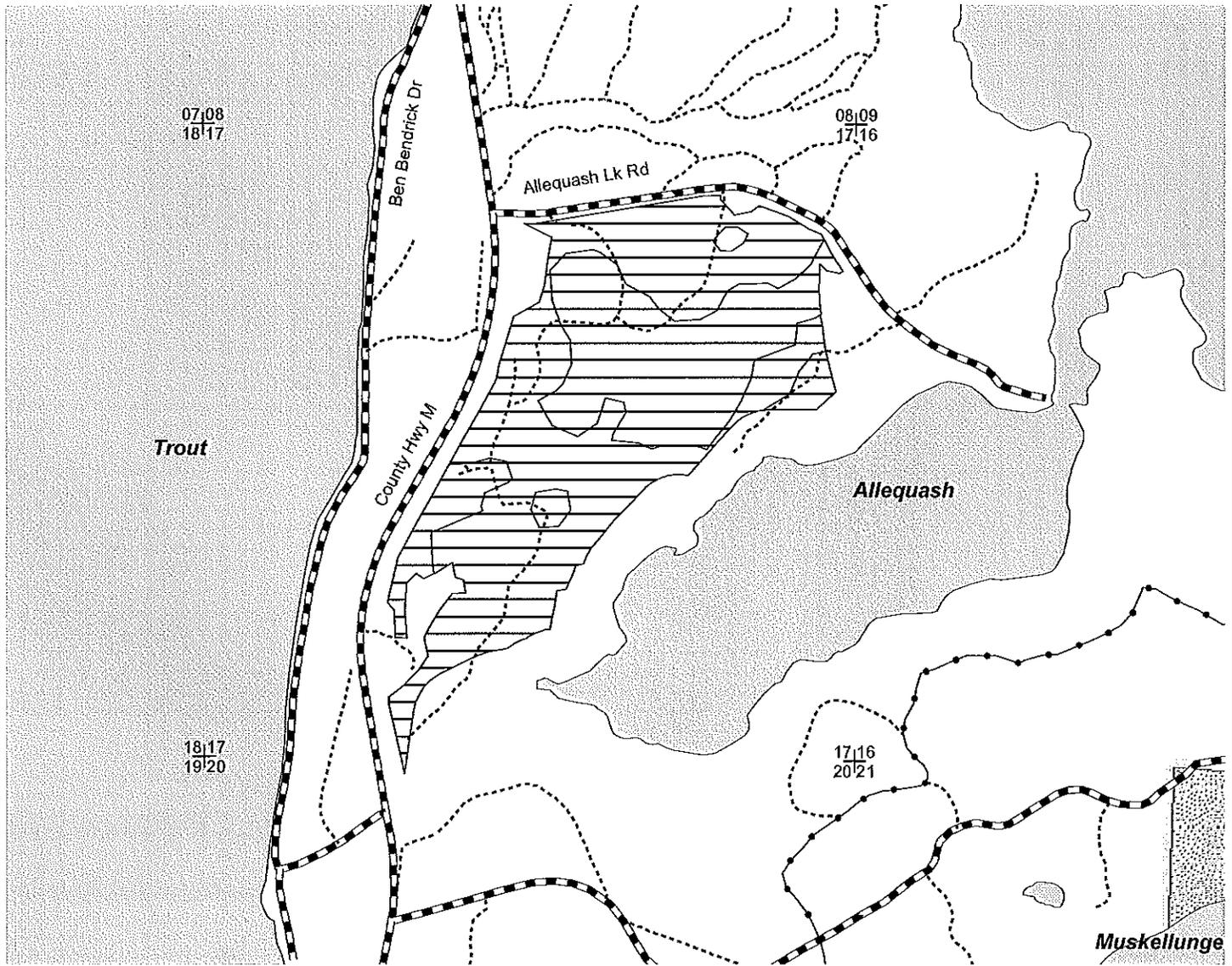
N
 Scale: 4" = 1 Mile
 1:15,840
 Map produced by
 Todd Anderson &
 Paul Schultz, 6/12

Legend	
+	Section Corner
-----	Woods Roads
—•—•—	Snowmobile Trails
==	Highways and Town Roads
///	Aspen Proposed Area
	Aspen/NC Proposed Area
----	White/Red Pine Proposed Area
○	Lakes
.....	Private Lands

The objectives for the stands in the forest production areas call for an increase in both acres and age of red and white pine, and to maintain aspen, tamarack and black spruce. The objective for the Aspen/NC Area in the native community area calls for the use of active management techniques to maintain aspen in the upland forested areas. The Aspen Area stands will be clearcut so the aspen can regenerate through root suckers. The tamarack / black spruce stands within this same area will be clearcut to release the understory seedlings, and to allow new seedlings from residual trees to sprout and renew the stand.

The White/Red Pine Area stands are overstocked. The emphasis will be on keeping large crowned, healthy pine, selectively marking for removal suppressed and poorly formed pine. The pine stand will be thinned because in certain areas it is overstocked; too many trees are competing for the available sunlight, moisture and nutrients. Biomass harvesting (removing the tops from the site) is not allowed due to the poor soils. Best Management Practices for Water Quality will be adhered to in the Garland Springs Creek Riparian Management Zone.

**Northern Highland – American Legion State Forest
 C132H Stands 2 and 3 Allequash Lake South 164 acres
 Town of Boulder Junction, Vilas County, T41N R7E Sec. 16, 17 and 20
 NHAL – SF Master Plan: Mgmt. Area 12 – Mixed Forest – Native Community**



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Todd Anderson &
 Paul Schultz, 2/13

Legend

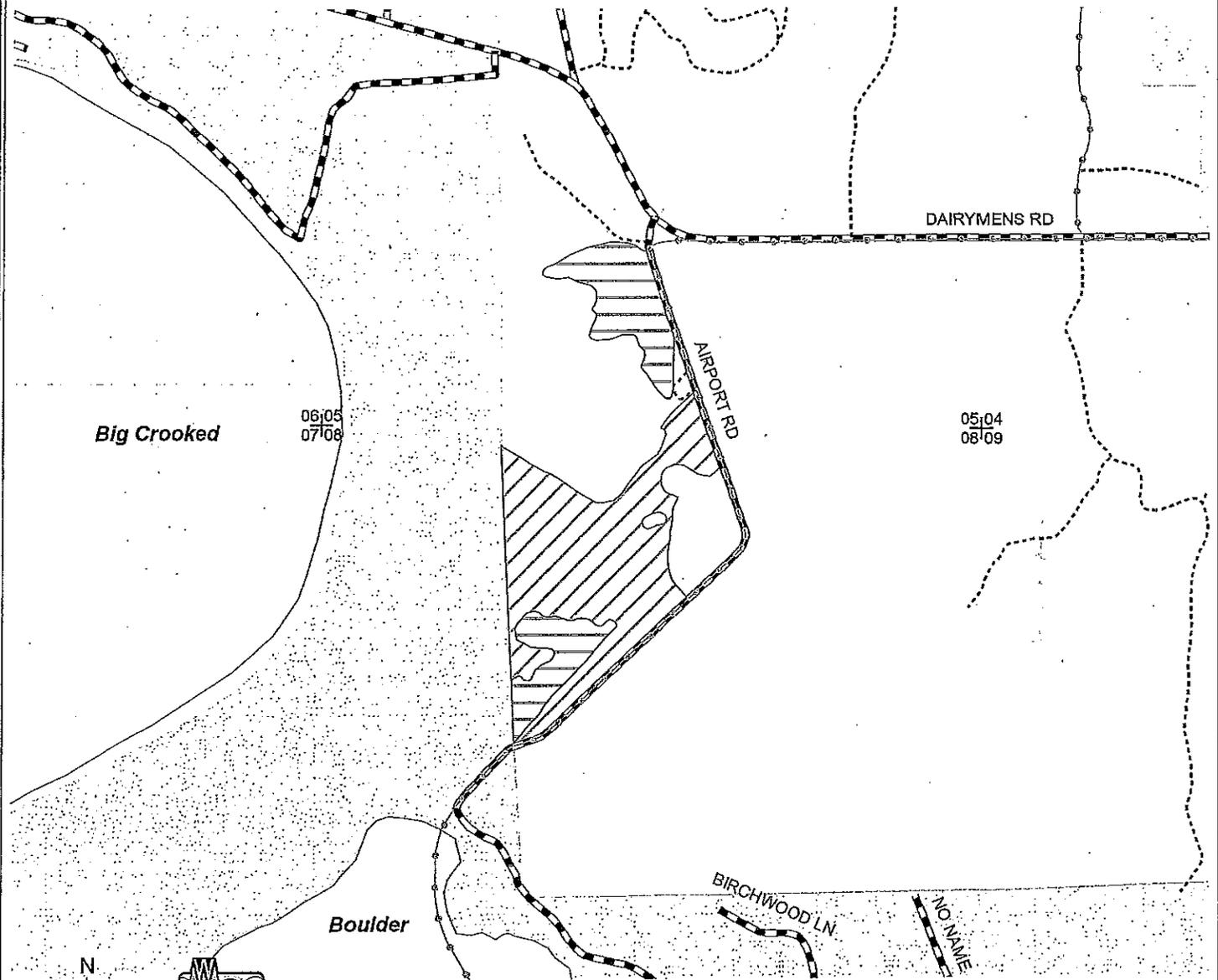
- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Sale Proposed Area
- ▧ Lakes
- ▩ Private Lands

The objective for Area 12 in this sale area is to enhance the development of a mixed forest dominated by old trees and large amounts of coarse woody debris and snags.

Stands 2 and 3 are comprised of 100-150 year old red oak with a major component of white birch or sugar maple. Scattered around the sale area are numerous super canopy white pine. Merchantable balsam fir will be designated, and all other trees will be marked individually for removal.

BMP's for water quality will be adhered to next to Allequash Creek.
 Biomass harvest will not be allowed.

Northern Highland – American Legion State Forest
C126H Stands 1, 2, and 4 Boulder Junction Airport 73 acres
Town of Boulder Junction, Vilas County, T42N R7E Sec. 5 & 8
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Todd Anderson &
 Paul Schultz, 6/12

Legend

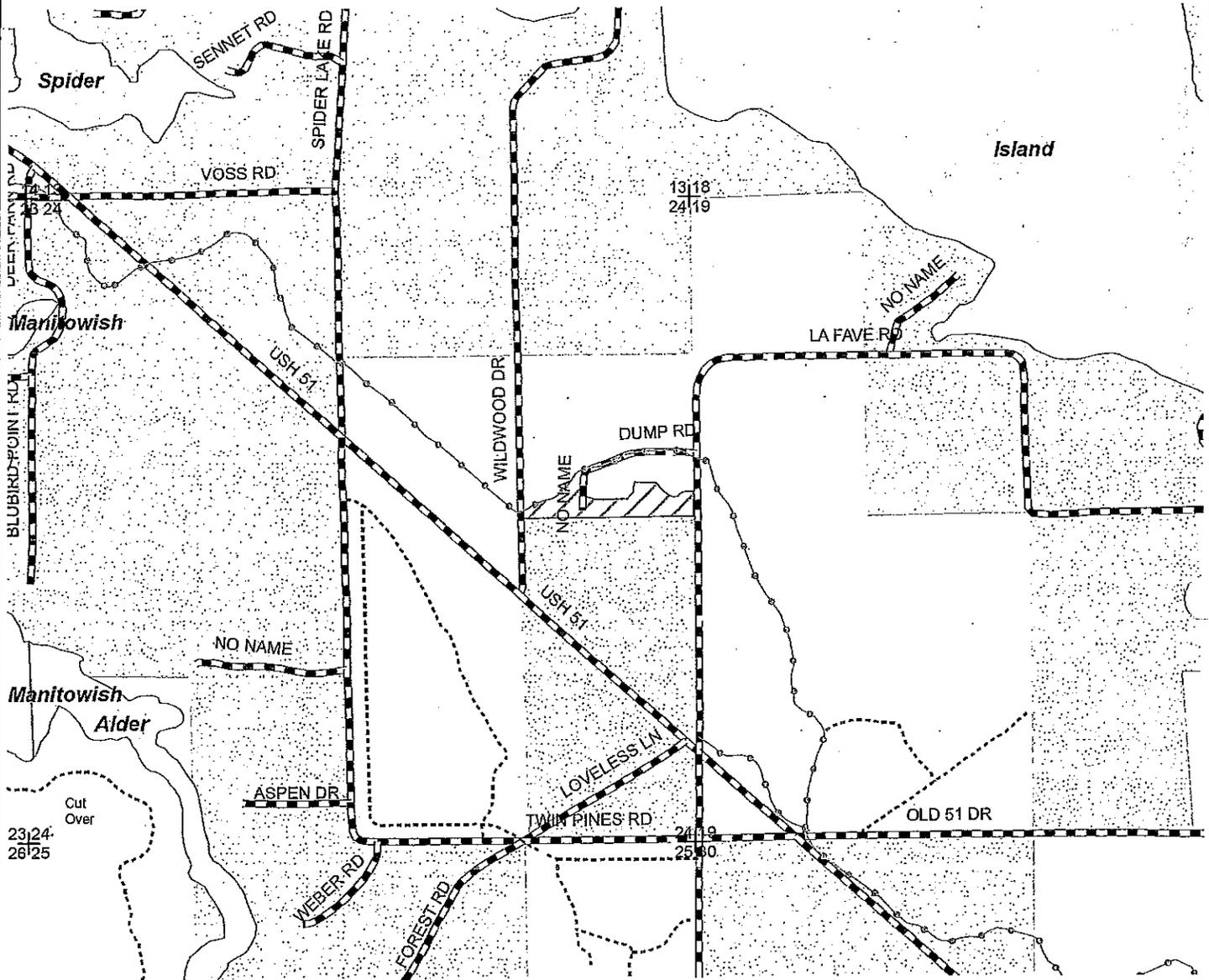
- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Aspen/Red Pine Proposed Area
- ▭ Rad Pine Proposed Area
- Lakes
- ▤ Private Lands

The objective for this area is to maintain aspen as a strong component in mixed stands and increase the presence and age of red and white pine.

The 52-year old Aspen/Red Pine Area will be clearcut so the aspen can regenerate through root suckers. In the spots where the pine is growing close together, suppressed and poorly formed pine will be marked for removal. The majority of the large diameter red and white pine will remain.

The Red Pine Area consists of two stands. The first is a plantation planted in 1949. It has been thinned twice before and has grown so much, the pine need to be thinned again because too many trees are competing for the available sunlight, moisture and nutrients. This will provide room for the crowns to grow larger and the tree trunks to grow in diameter more quickly. The other pine stand is a well stocked natural origin stand. This stand has been thinned before, and needs to be thinned again. Trees with large crowns and diameters will be retained, removing those that are suppressed and of poor quality. Biomass harvesting (removing the tops from the site) is not allowed due to the poor soils. This sale is located along Airport Road, part of which is used as a snowmobile trail. The snowmobile club will be notified if any signage is necessary.

Northern Highland – American Legion State Forest
C234H Stand 11 Dump Road 7 acres
Town of Boulder Junction, Vilas County, T42N R5E Sec. 24
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production



Scale: 4" = 1 Mile
1:15,840

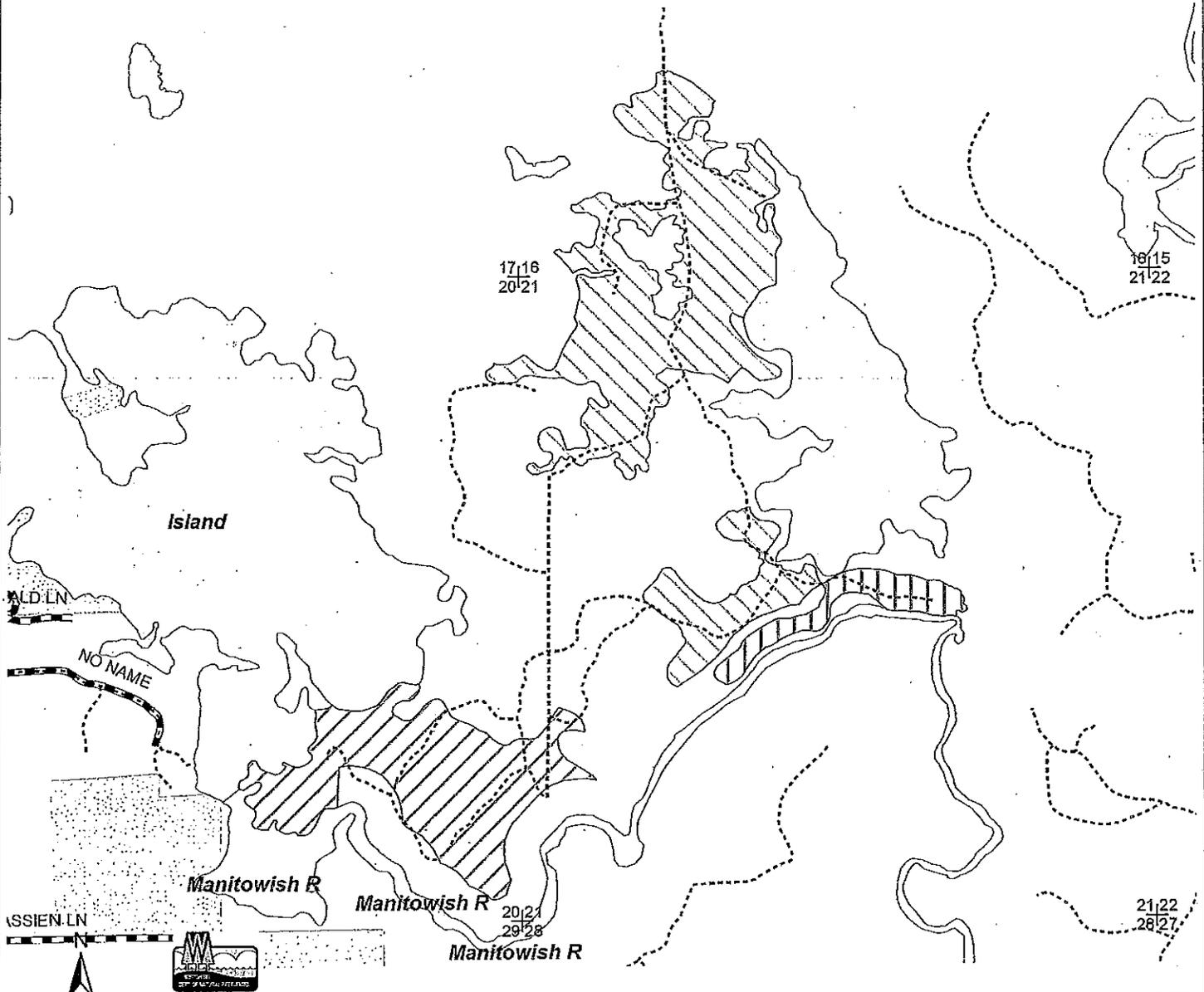
Map produced by
Todd Anderson &
Paul Schultz, 6/12

Legend

- ✚ Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Pine Proposed Area
- Lakes
- ▤ Private Lands

The objective for Management Area 3 is to increase the presence and age of red and white pine. The prescription in this stand will be to cut all balsam fir and selected red and white pine. These red and white pine trees are about 62 years old, and have been thinned once before. The purpose of this harvest is to maintain the health, vigor and growth of the pines. Biomass harvest (removing the tops from the site) will be allowed. A snowmobile trail runs through the stand. The local club will be contacted for signage if necessary.

Northern Highland – American Legion State Forest
C206H Stands 1, 3, 8 and 14 Island Creek 169 acres
Town of Boulder Junction, Vilas County, T42N R6E Sec. 16, 17, 20 and 21
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production Mgmt.
Area 13 – Special Aquatic – Manitowish River Site – Native Community



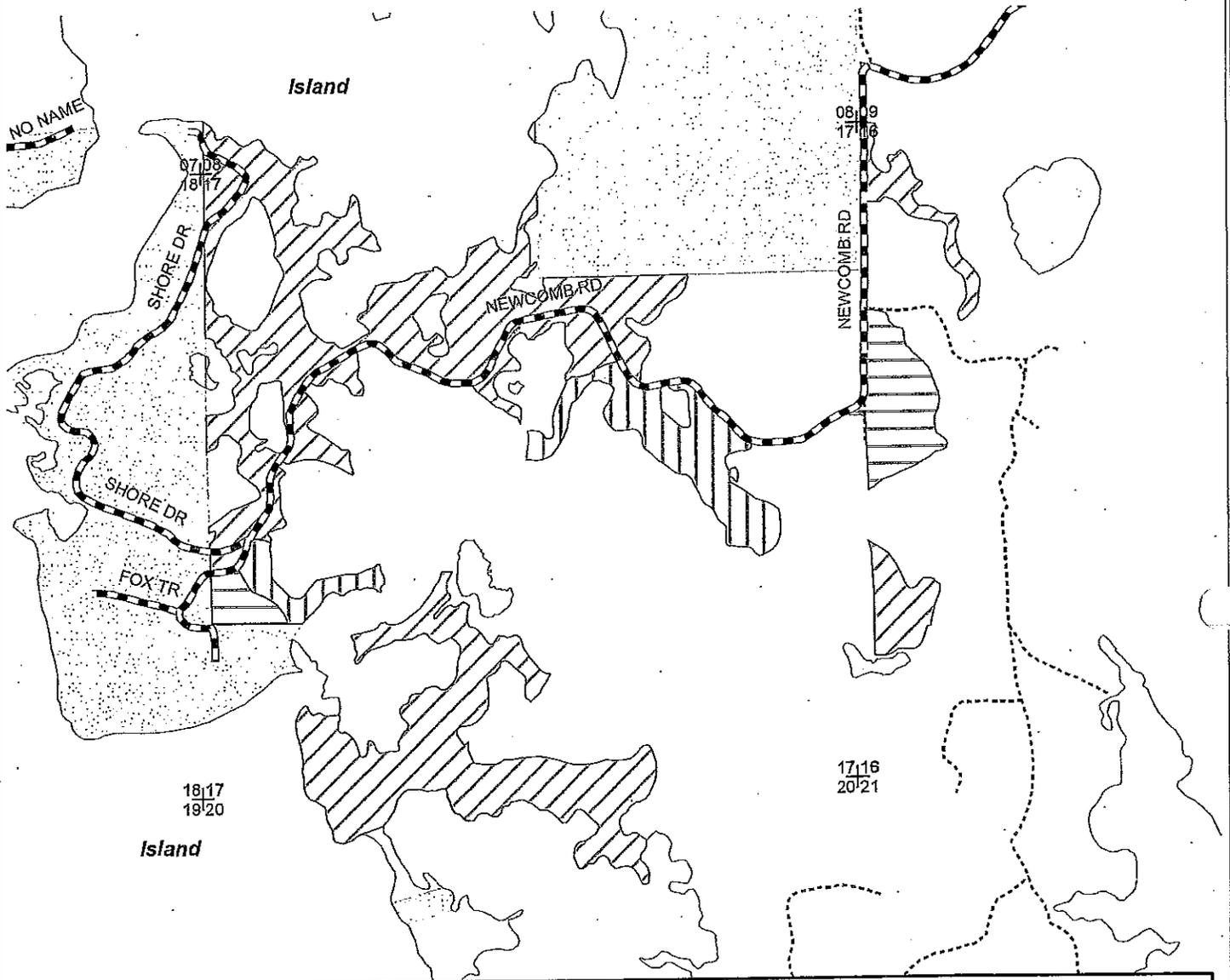
Scale: 4" = 1 Mile
 1:15,840

Map produced by
 Todd Anderson &
 Paul Schultz, 8/12

Legend	
+	Section Corner
-----	Woods Roads
—●—	Snowmobile Trails
====	Highways and Town Roads
▨	Aspen Proposed Area
▧	Pine/Birch Proposed Area
▩	Fir Proposed Area
○	Lakes
⋯	Private Lands

The objective for the stands in the forest production area is to develop a mixed forest dominated by older red and white pine with aspen and white birch as important secondary species. The objective for the native area is to improve the forest composition by accelerating or enhancing the long-lived tree species component. The Pine/Birch Area will be selectively harvested, removing poorly formed and lower quality stems. The remaining pine will have space for the crowns to expand, and the tree trunks to grow larger in diameter. In the Aspen Area the aspen and white birch will be cut and will regenerate within the pine stand. Where the aspen grows in a more pure stand, it will grow back as a uniform stand of aspen through root suckers. The Fir Area stand in the native community area is dominated by balsam fir. Patches will be cut out of this stand, creating openings for longer lived pine to grow within them. Biomass harvesting (removing the tops from the site) is not allowed due to the poor soils. Best Management Practices for Water Quality will be adhered to in the Island Creek and Manitowish River Riparian Management Zones.

Northern Highland – American Legion State Forest
C205H Stands 3, 6, 7, 8 and 15 Island Lake 160 acres
Town of Boulder Junction, Vilas County, T42N R6E Sec. 16, 17 and 20
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production



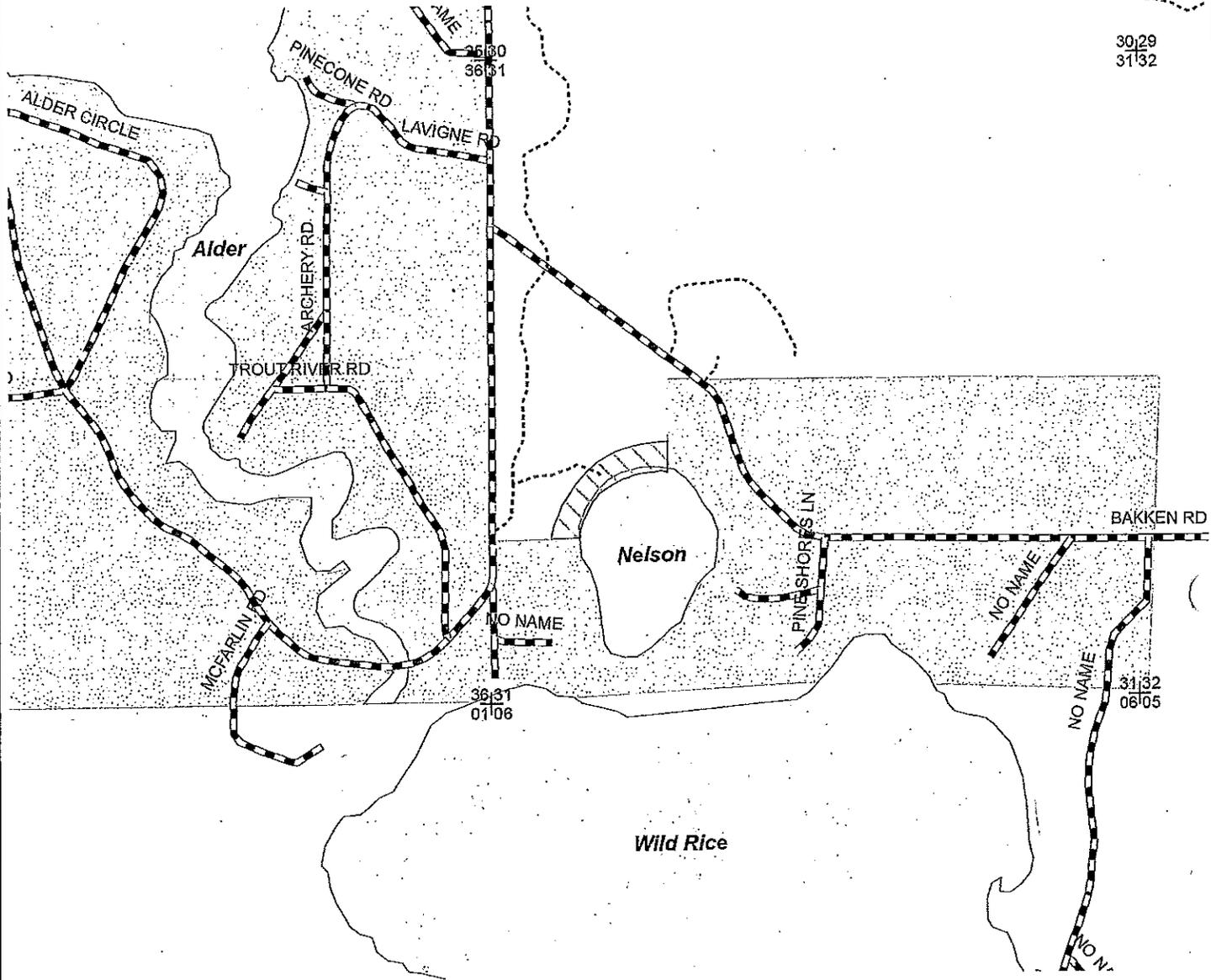
N

 Scale: 4" = 1 Mile
 1:15,840
 Map produced by
 Todd Anderson &
 Paul Schultz, 6/12

Legend	
+	Section Corner
-----	Woods Roads
==	Highways and Town Roads
▨	Aspen/Fir/Birch Area
▧	Pine Proposed Area
▩	Oak Proposed Area
○	Lakes
.....	Private Lands

The objective for the stands in the forest production area is to develop a mixed forest dominated by older red and white pine with aspen and white birch as important secondary species, and to manage for current levels of red oak, aspen, and white birch. The Pine Areas are sawlog pine stands that were last thinned in 1983. The pine will be selectively marked, maintaining the health, vigor and growth of the remaining pine trees. The Oak Area stands will undergo two silvicultural treatments. One stand will be thinned. This will help develop bigger crowns on the remaining crop trees, which in turn will produce more acorns. The other stand will undergo a shelterwood harvest. This is the first stage in regenerating an oak stand. This will open up the canopy significantly, allowing more sunlight to reach the ground. This increase in sunlight allows the oak seedlings to grow. The Aspen/Fir/Birch Area stands will be harvested removing the majority of the trees. Aspen in particular needs full sunlight to warm the soil and encourage root suckers to sprout, amounting to thousands of seedlings per acre. Biomass harvesting (removing the tops from the site) is not allowed due to the poor soils. Best Management Practices for Water Quality will be adhered to in the Island Creek and Island Lake Riparian Management Zones.

Northern Highland – American Legion State Forest
C232H Stand 9 Nelson Lake 6 acres
Town of Boulder Junction, Vilas County, T42N R6E Sec. 31
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production



30/29
31/32



Scale: 4" = 1 Mile
1:15,840

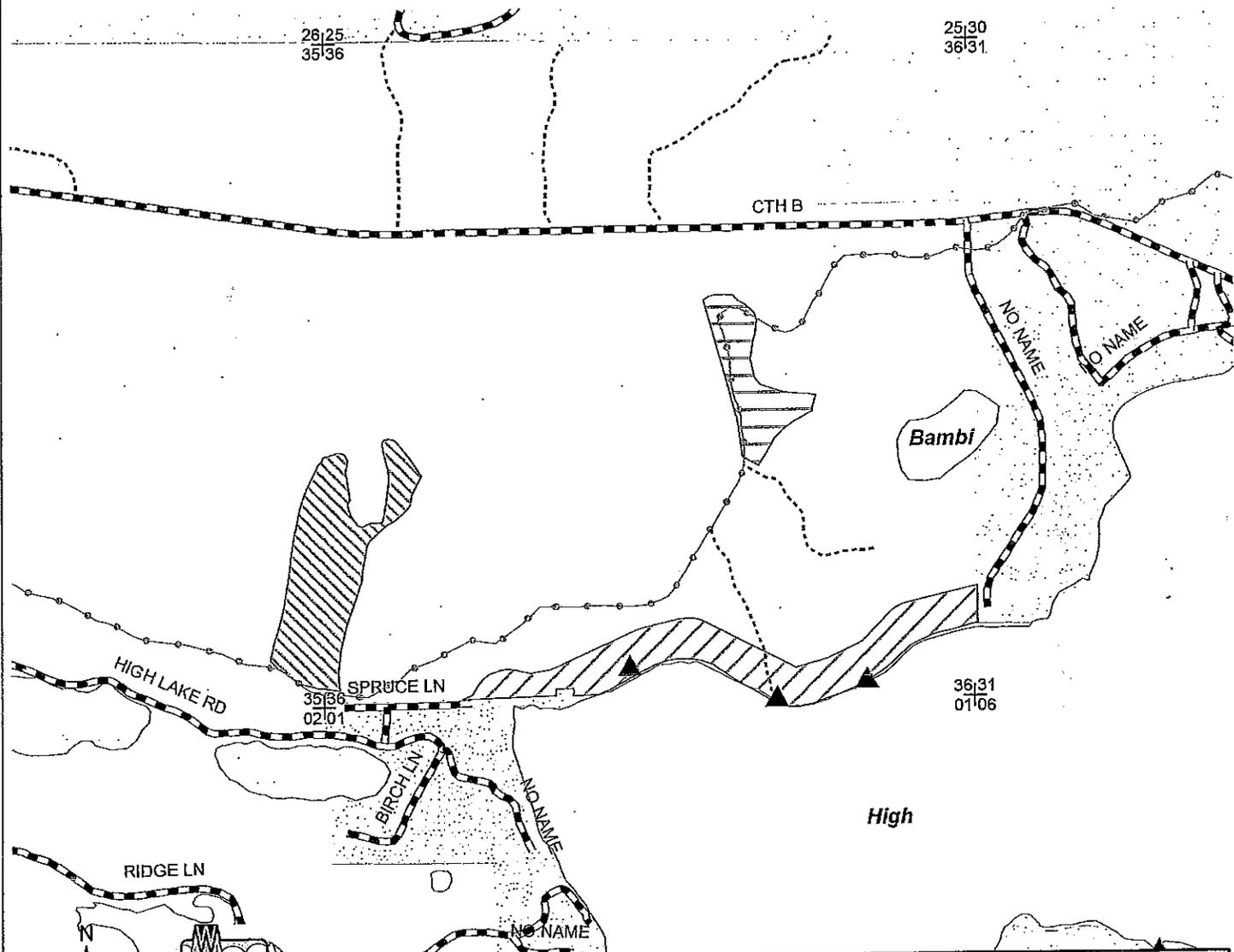
Map produced by
Todd Anderson &
Paul Schultz, 6/12

Legend

- + Section Corner
- Woods Roads
- Snowmobile Trails
- == Highways and Town Roads
- ▨ Oak Proposed Area
- Lakes
- ▤ Private Lands

The objective for Management Area 3 is to develop a primarily mixed forest with areas dominated by older red and white pine, with aspen, white birch, red maple and oak as important secondary species. This 95-year old stand of scrub oak is overmature and exhibiting signs of severe crown die-back. The aspen and white birch will be designated for cutting, leaving a few scattered trees for species diversity. Only marked oak will be removed, leaving scattered red and white pine to grow older. Biomass harvesting (removing the tops from the site) is not allowed. Best Management Practices for Water Quality will be adhered to in the Nelson Lake Riparian Management Zone.

Northern Highland – American Legion State Forest
C90H Stands 12, 13, and 17 North High Lake 60 acres
Town of Presque Isle, Vilas County, T43N R7E Sec. 35, 36
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production



Scale: 4" = 1 Mile
 1:15,840

Map produced by
 Todd Anderson &
 Paul Schultz, 6/12

Legend

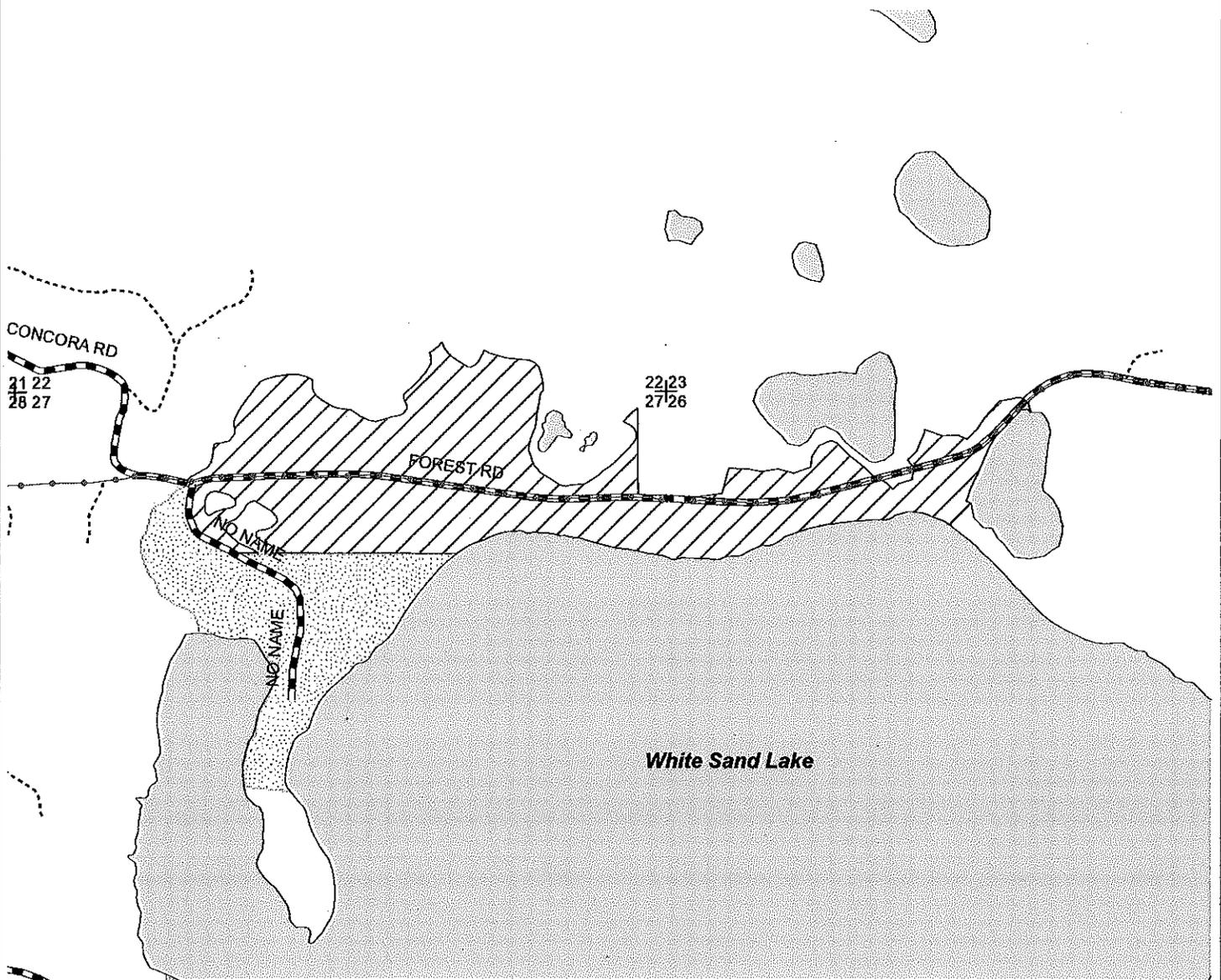
- + Section Corner
- ▲ Canoe Campsite
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Aspen/Red Pine Proposed Area
- ▧ Red Pine Proposed Area
- ▩ White Pine Proposed Area
- Lakes
- ▤ Private Lands

The objective for this area is to maintain aspen as a strong component in mixed stands and increasing red and white pine as a dominant community type. The Aspen/Red Pine Area stand will be clearcut so the aspen can regenerate through root suckers. The majority of the large diameter red oak and red pine will remain. Upon opening up the canopy, the understory white pine seedlings will be released, helping them grow faster.

The Red Pine Area is a plantation, planted in 1965, that has been thinned once before. It has grown so much, the pine need to be thinned again because too many trees are competing for the available sunlight, moisture and nutrients. This will provide room for the crowns to grow larger and the tree trunks to grow in diameter more quickly.

The White Pine Area, also a plantation, planted at the same time, has essentially failed. Aspen grew over the white pine and these mature aspen need to be removed to allow the pine to grow. Some of the white pine still grow in rows, and individual trees in these rows will be removed, to allow the remaining pine space to develop more fully. Biomass harvesting (removing the tops from the site) is not allowed due to the poor soils. Best Management Practices for Water Quality will be adhered to in the High Lake Riparian Management Zone. Access will be to CTH B, via the snowmobile trail. The snowmobile club will be notified if any signage is necessary.

**Northern Highland – American Legion State Forest
 C95H Stand 5 / C119H Stands 1 and 7 North White Sand Lake 129 acres
 Town of Boulder Junction, Vilas County, T42N R7E Sec. 22, 23, 26 and 27
 NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production**

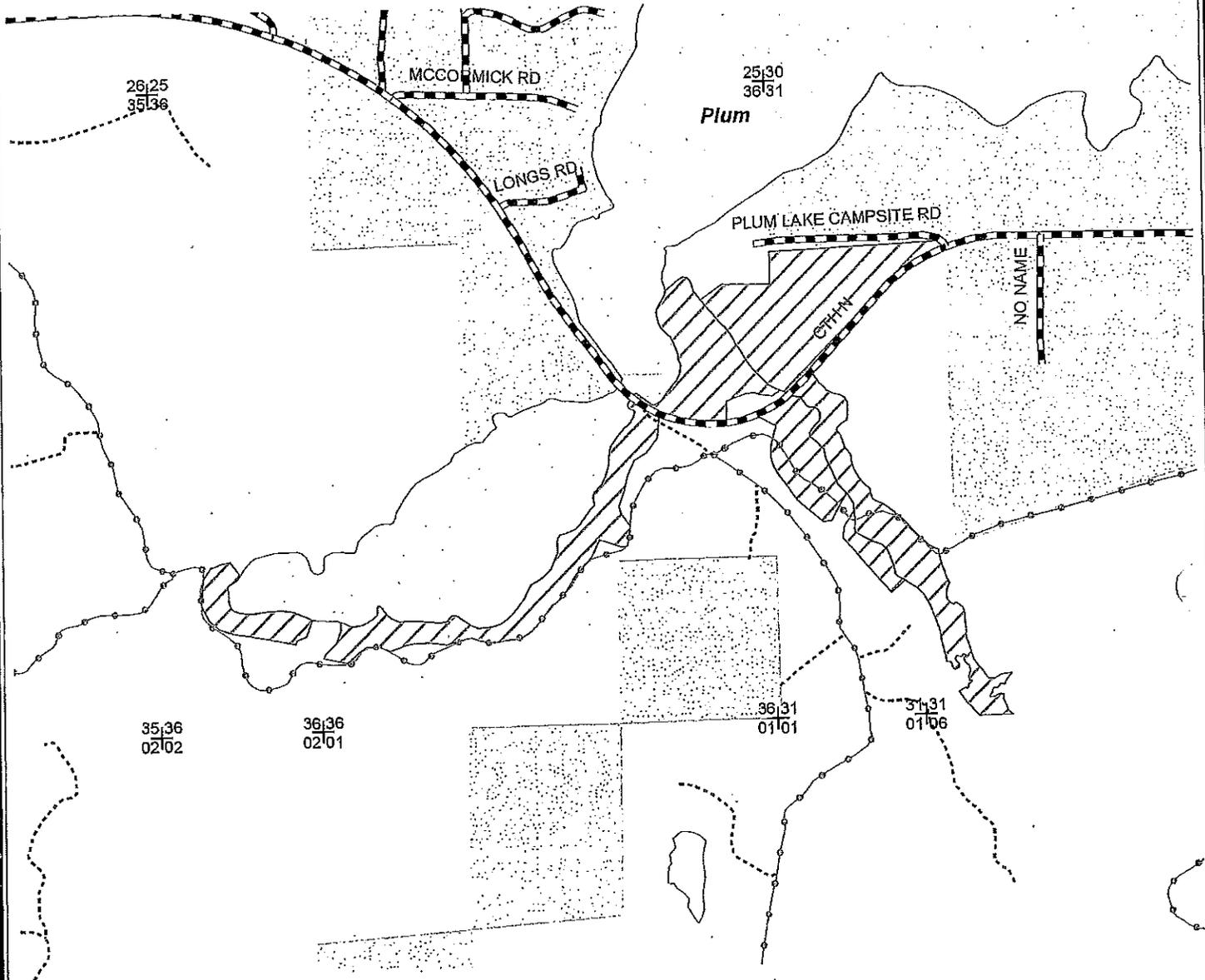


N
 Scale: 4" = 1 Mile
 1:15,840
 Map produced by
 Todd Anderson &
 Paul Schultz, 3/13

- Legend**
- + Section Corner
 - Woods Roads
 - Snowmobile Trails
 - == Highways and Town Roads
 - ▨ Oak Proposed Area
 - Lakes
 - ▤ Private Lands

The objective for this Oak Area is to manage for the current levels of red oak and northern hardwoods. This 95-year old stand of red oak is ready to undergo the first stage of a regeneration harvest. This will involve removing a significant amount of the overstory in order to get more sunlight down to the ground. With more available sunlight, the oak seedlings will be able to grow more quickly. When the oak seedlings are established, the majority of the remaining older red oak will be removed. This area is suitable for using prescribe fire to help regenerate the red oak. The northern hardwood stand will undergo a selective thinning, leaving a variety of different sized trees after the harvest. Biomass harvesting (removing the tops from the site) is allowed. Best Management Practices for Water Quality will be adhered to in the White Sand Lake Riparian Management Zone. A snowmobile trail runs through this proposed sale, and if the timber sale takes place during the winter, the snowmobile trail club will be contacted.

Northern Highland – American Legion State Forest
C72H Stands 3 and 6 / C81H Stands 15 and 19 Plum Lake and Creek 98 acres
Town of Plum Lake, Vilas County, T41N R7E Sec. 36 T41N R8E Sec. 31
NHAL – SF Master Plan: Mgmt. Area 4 – Vilas Sandy Plains Central – Forest Production



Scale: 4" = 1 Mile
 1:15,840

Map produced by
 Todd Anderson &
 Paul Schultz, 6/12

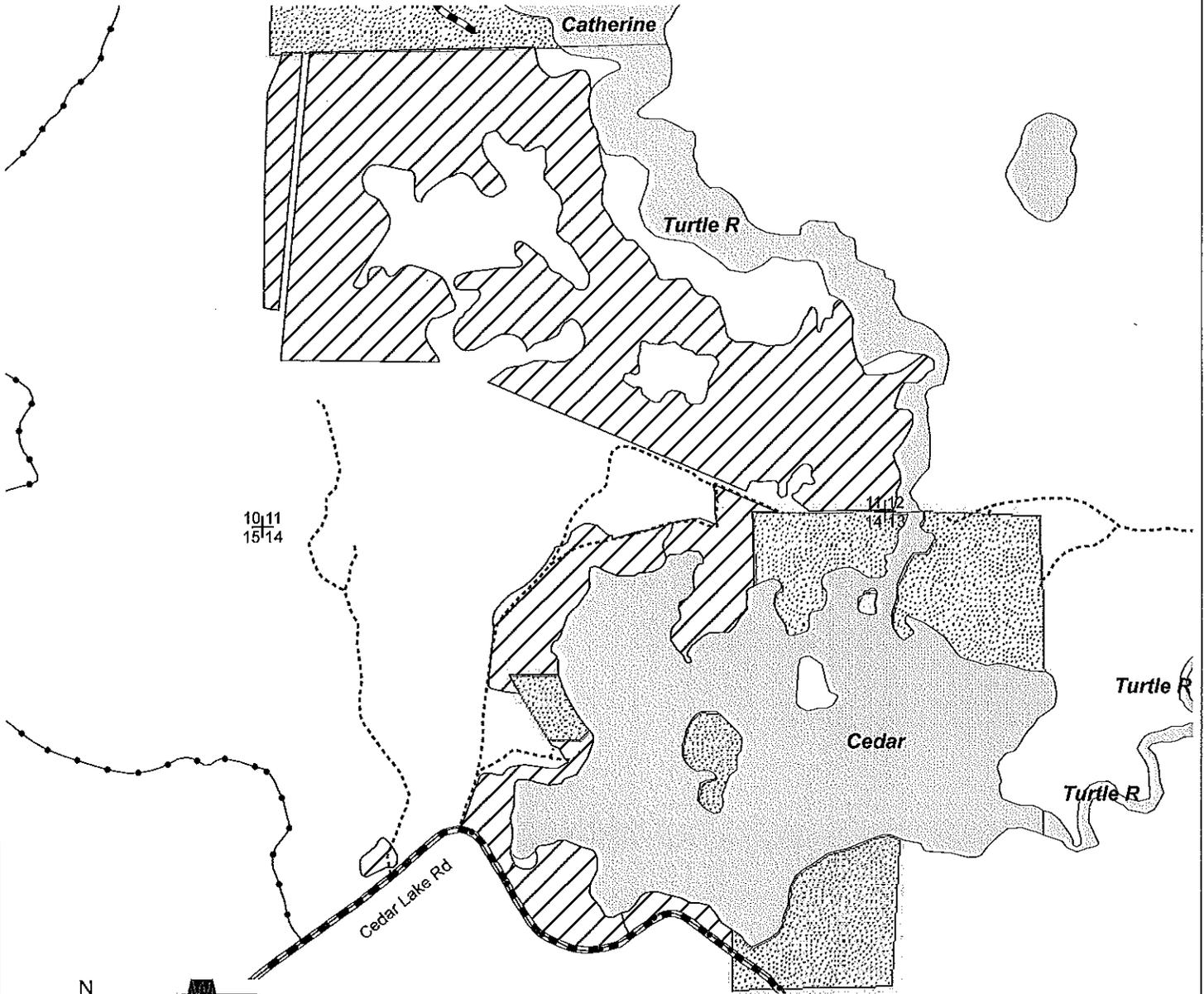
Legend

- Section Corner
- Woods Roads
- Snowmobile Trails
- Highways and Town Roads
- Aspen/Birch Proposed Area
- Lakes
- Private Lands

Sale area is located in the Towns of Boulder Junction and Plum Lake and borders CTH N. Objectives for the Management Class are to maintain a mixed forest dominated by red and white pines with aspen, red oak, white birch and jack pine as important secondary species. Specific to these stands, we will harvest most aspen and white birch while maintaining the red oak, red pine and white pine components. The stands in the Aspen/Birch Area are both 65 years old and harvests were scheduled for 2000. Harvest goals are cut the aspen, white birch, balsam fir and some maple to promote natural regeneration of these species and encourage the oak and pine natural regeneration also. White pine, red pine and a few oaks will be cut selectively. Aesthetics will be a primary concern for the lake shore, creek shore, campground and hike trail to the fishing pier. Large trees and setbacks will be left to reduce the visual effects of the harvesting. Access is good to all stands with existing roads. The campground, bike trail and snowmobile trail are considered and disturbance to recreationalists will be minimized with seasonal restrictions.

Northern Highland – American Legion State Forest
 C267H Stands 1, 16, 17 and 21 Catherine Lake 265 acres
 Town of Mercer, Iron County, T43N R4E Sec. 11, 14

NHAL – SF Master Plan: Mgmt. Area 1 – Winegar Moraines – Forest Production
 Mgmt. Area 9 – Hemlock/Northern Hardwood – Native Community



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Todd Anderson &
 Paul Schultz, 2/13

Legend

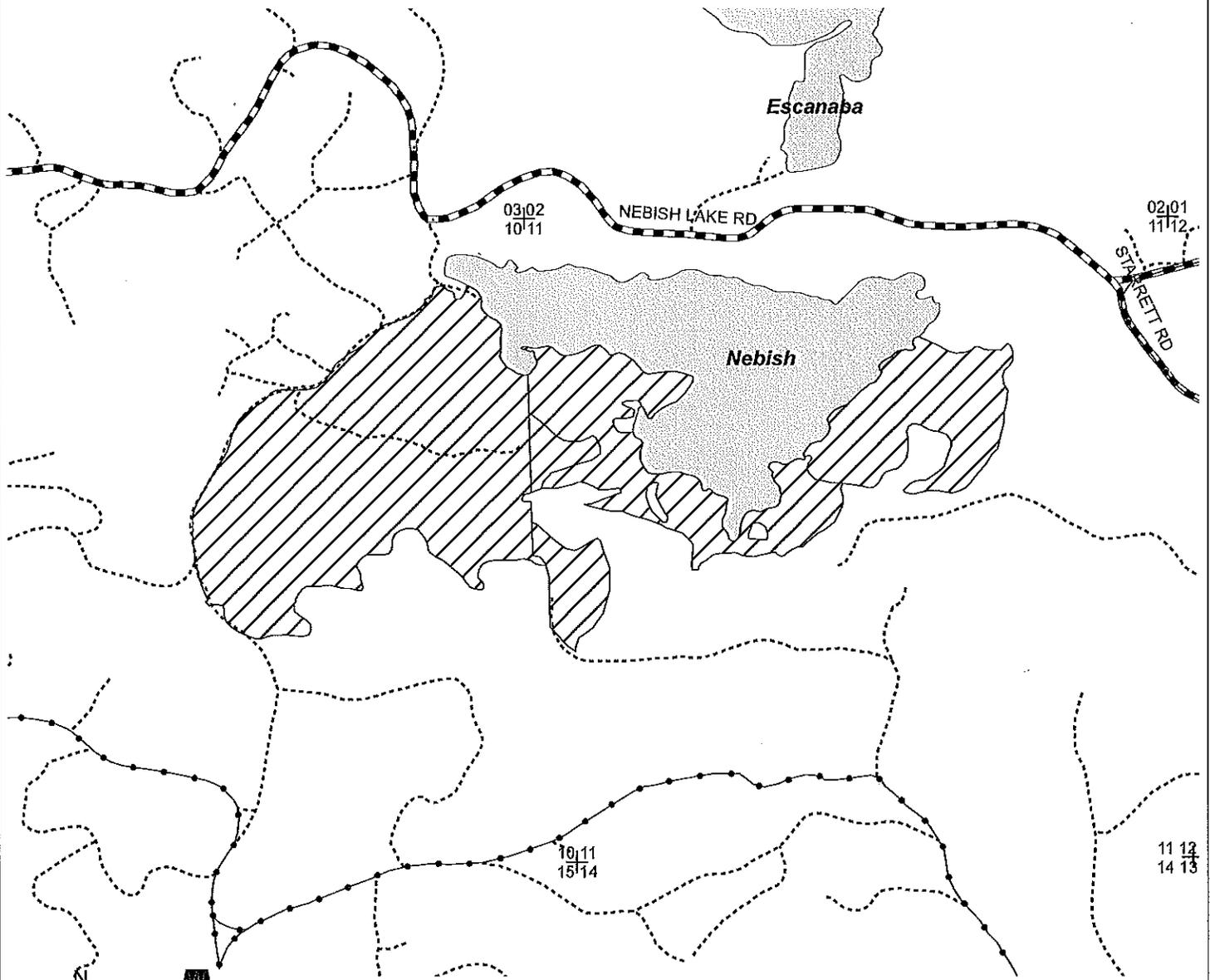
- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- == Highways and Town Roads
- ▨ Sale Proposed Area
- Lakes
- ▤ Private Lands

Objectives for Area 1 are to maintain and enhance existing stands of northern hardwoods and hemlock to increase age diversity and to maintain stand health vigor. In addition, increase the NH component through the reduction of the aspen and white birch type. Objectives for Area 9 are to increase the age diversity and composition of the northern hardwood type, and to establish and maintain coarse woody debris and snags.

Stand 1 is northern hardwood in Area 9. It will be thinned to promote growth of large diameter trees, retaining snags and coarse woody debris. Stands 16, 17, and 21 are in the FP area along the lakeshore of Cedar Lake. Stand 16 is 63-year old aspen with an understory of NH; it will be selectively harvested leaving some aspen as residuals to shade the aspen sprout regeneration. Stand 17 is hemlock and white birch with white pine in the understory. The white birch will be removed to release the white pine. Stand 21 is 81-year old white birch which will be harvested to encourage understory northern hardwoods.

BMP's will be implemented along the shores of Catherine and Cedar Lakes. Biomass harvest will not be allowed on this sale.

Northern Highland – American Legion State Forest
C98H Stands 2, 4 and 21 C116H Stand 5 Nebish Lake Buffer 202 acres
Town of Plum Lake, Vilas County, T41N R7E Sec. 10 and 11
NHAL – SF Master Plan: Mgmt. Area 12 – Mixed Forest – Native Community



Scale: 4" = 1 Mile
 1:15,840

Map produced by
 Todd Anderson &
 Paul Schultz, 2/13

Legend

- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Sale Proposed Area
- Lakes
- ⋯ Private Lands

The objective for Area 12 in this sale area is to maintain the mid-tolerant tree species and increase the overall age of the forest.

Stand 2 and 21 are 97-year old oak that will undergo a thinning, leaving larger diameter, older trees. Stand 4 is dominated by 98-year old white birch, with sugar maple seedlings in the understory. Most of the birch will be cut, regenerating the stand thru stump sprouts, and releasing the sugar maple seedlings. Stand 5 is 101-year old red oak with a major component of white birch. The birch will be harvested, and the oak will be thinned where necessary.

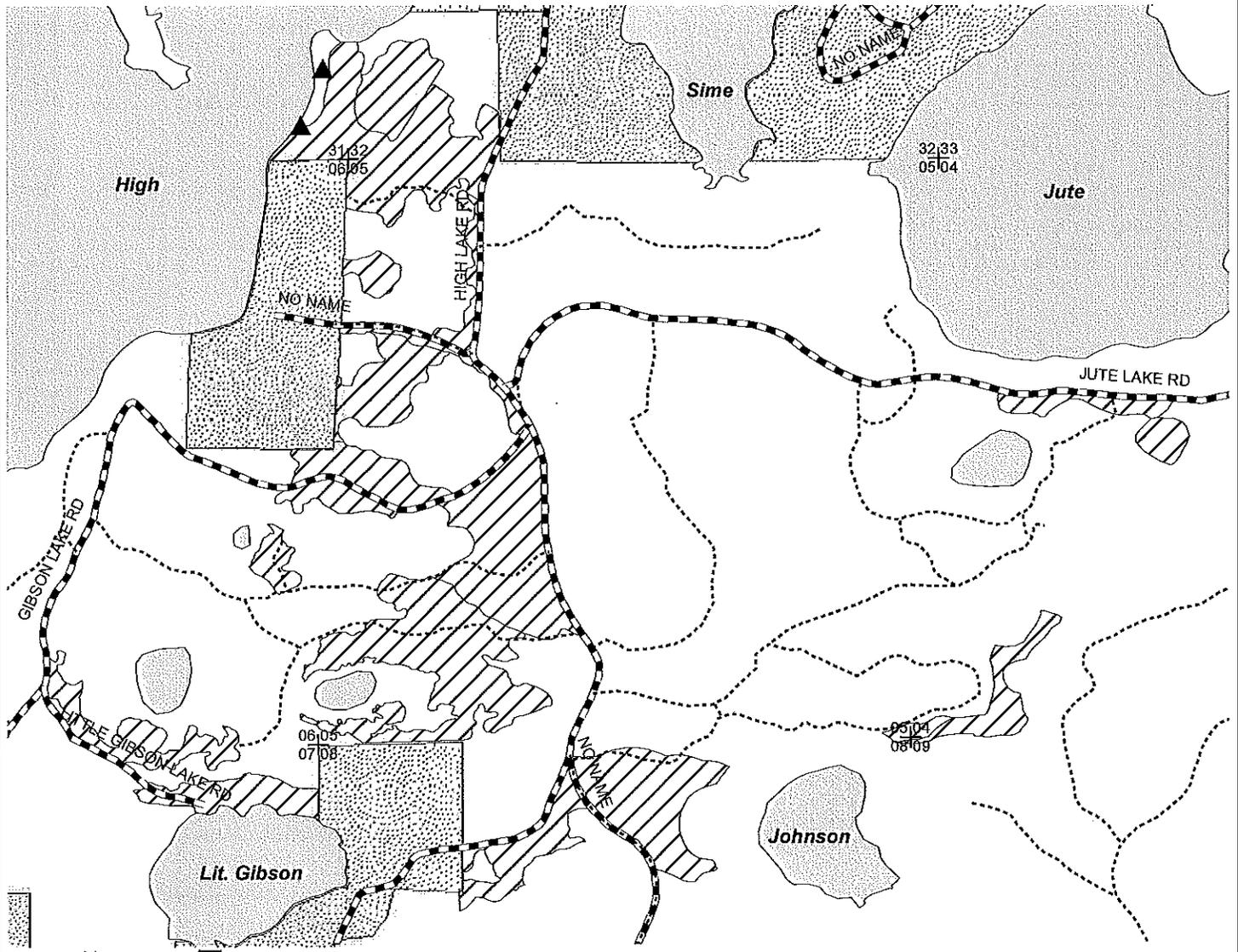
BMP's for water quality will be adhered to next to Nebish Lake.
 Biomass harvest will not be allowed.

Northern Highland – American Legion State Forest
 C59H Stands 13, 15 and 17 C62H Stands 3, 4, 5, 15, 16, 18 and 20

C63H Stand 4 Little Gibson 201 acres

Town of Land O' Lakes, Vilas County, T43N R8E Sec. 31, 32 T42N R8E Sec. 4, 5, 6, 7, 8

Mgmt. Area 13 – Special Aquatic – Garland and Salsich Springs Site – Native Community
 Mgmt. Area 14 – Johnson Lake Barrens – Johnson Creek and Pines Site – Native Community



1:17,000



Map produced by
 Todd Anderson &
 Paul Schultz, 2/13

Legend

- ⊕ Section Corner
- ▲ Canoe Campsite
- Woods Roads
- Snowmobile Trails
- +— Highways and Town Roads
- ▨ Sale Proposed Area
- Lakes
- ▤ Private Lands

Objectives for Area 3 are to maintain the aspen, red oak and increase the presence and age of red and white pine. The objectives for areas 13 and 14 are similar – use a variety of active management techniques to maintain aspen and jack pine in the uplands.

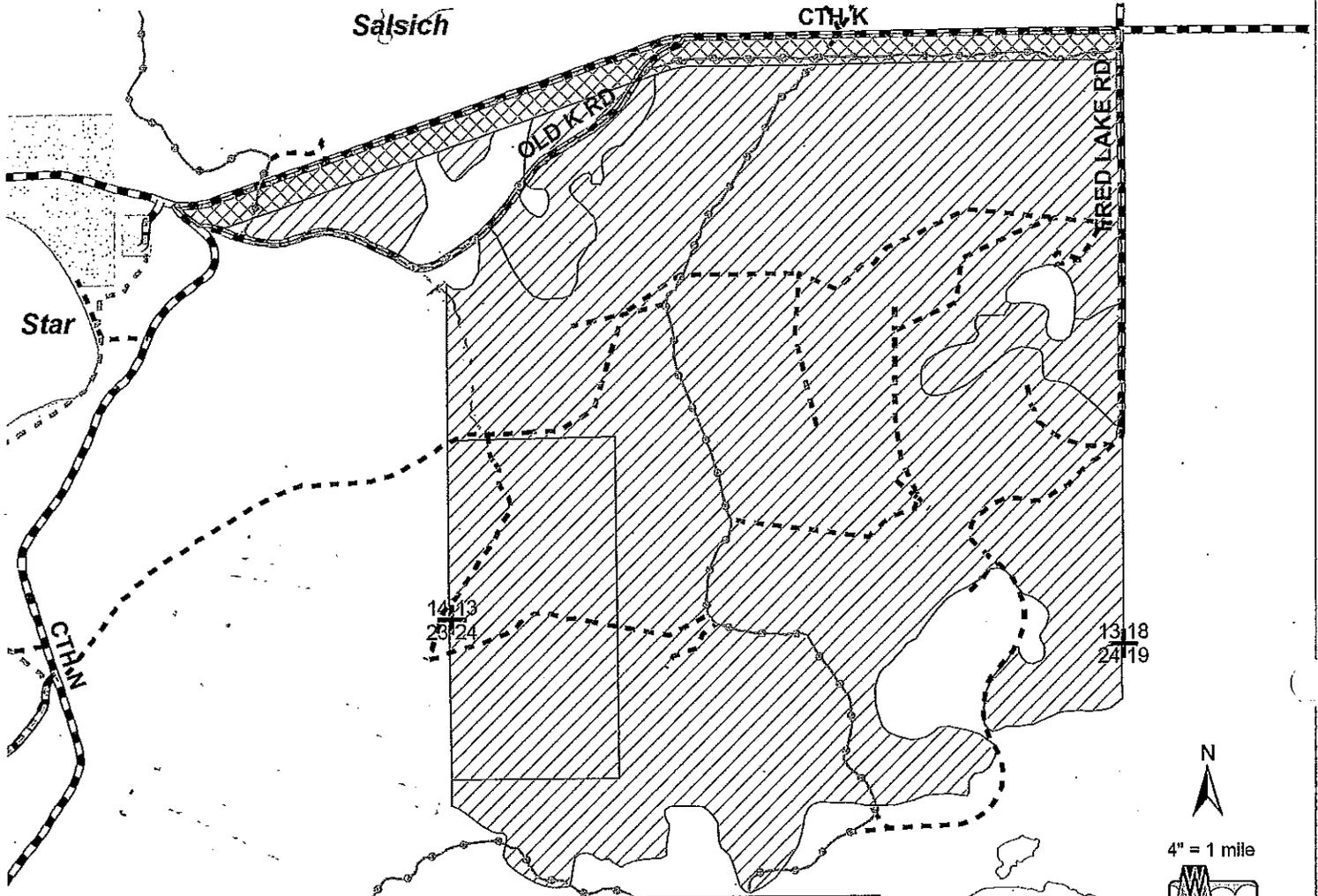
Stands 59-13 and 59-17 are 65-year old aspen in an NC area. Stand 59-13 will be regenerated to aspen and 59-17 will be converted to jack pine. Stand 59-15 is 93-year old red oak in a FP area and will undergo a shelterwood harvest.

Compartment 62 is all in FP. The oak in stands 5, 16, and 18 will undergo a shelterwood harvest. The sawlog pine in stands 3 and 4, which are about 75 years old, will be thinned. Stands 15 and 20 are dominated by aspen, which will be removed to encourage the remaining longer lived oak and pine to grow in these road and lakeshore stands.

Stand 4 in Compartment 63 is in an NC area. The mature aspen and jack pine will be harvested, allowing aspen to regenerate the stand.

Biomass harvest will not be allowed.

NORTHERN HIGHLAND STATE FOREST
C9 Stands 1, 2, 4, 6, 10
FRED LAKE ROAD SALE - 716 ACRES
Town of Plum Lake, Vilas County, T41N R8E Section 13, 14, & 24
NHAL Master Plan: Area 8 - Lake Laura Loamy Hills - Native Community Area
Area 16 - Rustic Road Scenic Resource Area



N

 4" = 1 mile

 Map produced by
 Adem Wallace, 6/12

Mgmt Class Goals: Area 8 - Increase old growth forest attributes, increase white pine, yellow birch, cedar, and hemlock. Maintain old growth northern hardwood characteristics and enhance stand composition and structure. Regenerate some aspen, white birch and other early successional species. Convert early successional stands not regenerated to northern hardwoods.
 Area 16 - Favor long-lived species to enhance the aesthetic and scenic beauty of the rustic corridor. Remove dead, declining, or short-lived species near maturity.

Stand Attributes, Access, & History: This sale encompasses 716 acres of un-even age northern hardwood, 126 year old oak, and 156 year old hemlock. The sale area can be accessed off of Fred Lake Road, Cty K, or Old Hwy K and existing woods roads. Records indicate the last cutting was a diameter limit cut between 1951 - 1953.

Silvicultural Prescription: Cut all aspen, white birch, and balsam fir, except for a few that will be left for diversity, cavity trees, or seed. Selectively thin all other species except for hemlock and cedar. Highly favor yellow birch and white pine, with some canopy gaps created to regenerate birch and other early successional species. The largest and healthiest trees will remain uncut to push the stand to an older forest with old growth characteristics. Along the Rustic Road area - same prescription as above, except there will be a 50' no-cut buffer along Hwy K.

Biomass Suitability: No, biomass must be retained to increase the coarse woody debris component.

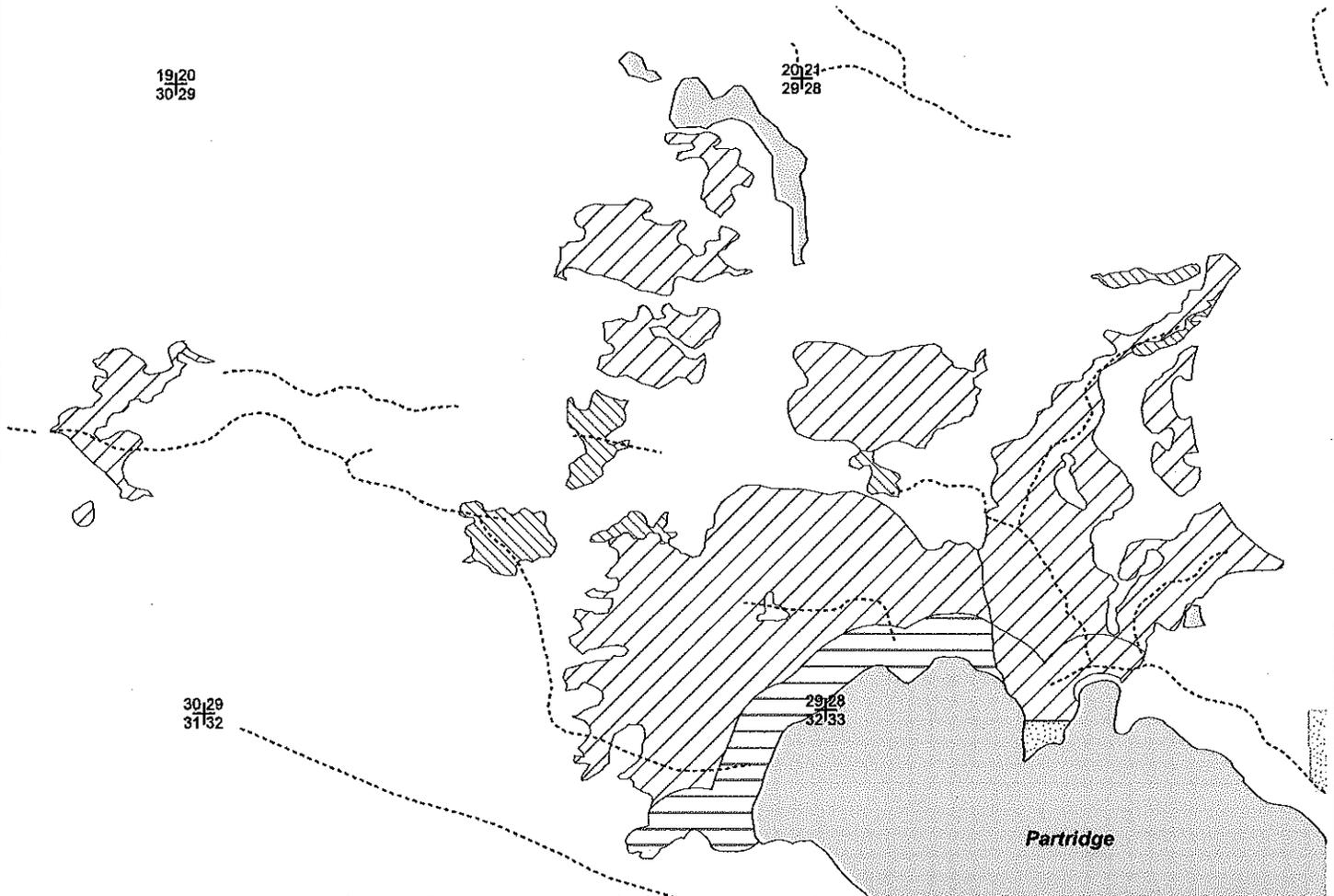
Recreation/Aesthetic Concerns: The snowmobile trail will be signed or closed if cutting occurs in winter. Aesthetic concerns should be minimal along Hwy K with the no-cut buffer and along other town roads and the snowmobile trail with this being a selective thinning.

Seasonal Restrictions: None

Legend

- Rustic Road Area
- Northern Hdwds/Oak/Hemlock
- Section Corner
- Snowmobile Trails
- Woods Roads
- Vilas County Roads
- Lakes
- Private Lands

Northern Highland – American Legion State Forest
C56H Stands 1, 4, 6 and 14 Partridge Lake and Creek 328 acres
Town of Boulder Junction, Vilas County, T42N R8E Sec. 28, 29, 32
NHAL – SF Master Plan: Mgmt. Area 3 – Vilas Sandy Plains North – Forest Production
Area 13 – Special Aquatic – Native Community



1:18,000



Map produced by
 Jeffrey Olsen &
 Paul Schultz, 2/13

Legend

- + Section Corner
- Woods Roads
- ==== Highways and Town Roads
- ▨ White Birch Proposed Area
- ▬ Scenic Lake Zone Proposed Area
- ▩ Pine Thinning Proposed Area
- ▭ Lakes
- ▨ Private Lands

Goals for these Management Classes are to increase red and white pines as a dominant community type, maintain sites with early successional forest types and maintain current levels of red oak in Area 3. In Area 13, maintain high quality forests for their ecological, water quality and rare species habitat values. Specific to these stands in Area 13, we will harvest to maintain aspen, balsam fir and white birch while maintaining the red and white pine components. Only stand 4 is in the Area 13 zone. No wetland harvest is planned. In the White Birch Area, stands 1, 4 and 14 are 90-100 year old white birch and aspen with scattered red maple, balsam fir, red pine and white pine. Harvest prescriptions are cut the aspen, white birch, balsam fir and maple for natural regeneration. White pine, red pine and a few red oaks will not be cut. Stand 6 is 56 year old balsam fir. These scattered stands will be clearcut for natural regeneration of aspen and balsam fir. There will be residual of pines and other hardwoods. In the Pine Thinning Area, stand 8 is a red and white pine forest type, 84 years old, which will be selectively thinned to promote stand health and growth vigor. These 6 small scattered stands were thinned in 1978. In the Scenic Lake Zone Area, stand 11 is a 400 foot zone and will be modified to preserve the aesthetics of Partridge Lake shoreline. The setback will be variable depending on vegetation, slope and keeping the large tree component. Biomass harvest is approved for stands as soils are appropriate and there are blow down areas to clean up. Access will be a challenge to management of this remote area. There is a creek crossing on the west end to culvert and reestablish approaches. The former road access came off CHY K. The possibility of access off Weschler Road would require wetland crossing, winter conditions.

NORTHERN HIGHLAND STATE FOREST

C86 Stands 1, 7, and 9

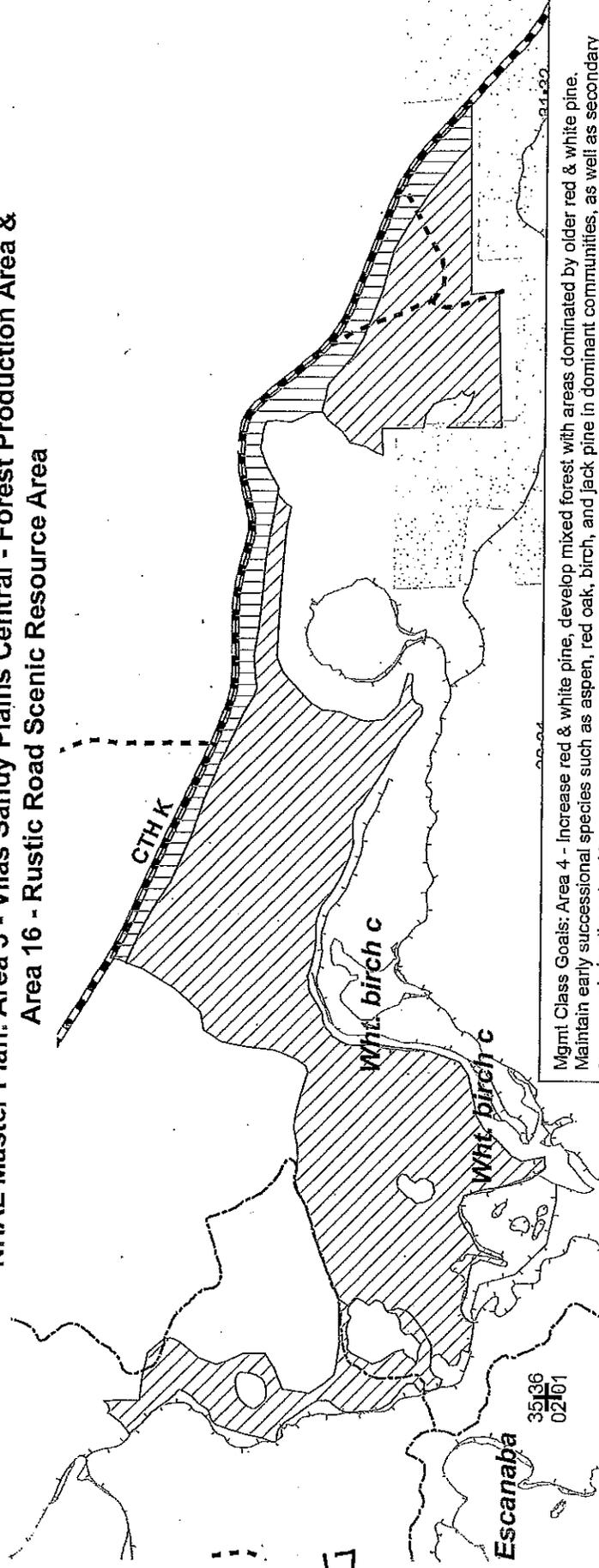
WHITE BIRCH CREEK SALE - 255 ACRES

Town of Boulder Junction, Vilas County, T42N R7E Section 36

Town of Plum Lake, Vilas County, T42N R8E Section 31

NHAL Master Plan: Area 3 - Vilas Sandy Plains Central - Forest Production Area &

Area 16 - Rustic Road Scenic Resource Area



Mgmt Class Goals: Area 4 - Increase red & white pine, develop mixed forest with areas dominated by older red & white pine. Maintain early successional species such as aspen, red oak, birch, and jack pine in dominant communities, as well as secondary components in other stand types.

Area 16 - Favor long-lived species to enhance the aesthetic and scenic beauty of the rustic corridor. Remove dead, declining, or short-lived species near maturity.

Stand Attributes, Access, & History: The Aspen/Pine/Birch Area and the Rustic Road Area make up 255 acres of 50 year old aspen and birch that was last harvested between 1960 and 1962. It is well mixed with areas of white & red pine, oak, maple, and balsam fir scattered throughout. Aspen and white birch have reached maturity, with much white birch mortality being seen throughout the stand. The sale can easily be accessed off of Cty K and has some existing woods roads, however a new stub road may be needed to access the west side of the sale.

Silvicultural Prescription: Aspen/Pine/Birch Area - Cut all aspen, white birch, balsam fir, jack pine, and red maple to regenerate these species. Selectively thin dense white/red pine and oak areas to increase this type and to increase health and vigor of residual trees. Rustic Road Area - Within the first 50' of Cty K there will be no cutting to reduce visual impacts. Beyond 50', trees will be selectively marked removing only declining trees or short-lived species near maturity.

Biomass Suitability: No, contains restricted soils (Rubicon Sand, Sayner-Rubicon Complex)

Recreation/Aesthetic Concerns: The Lumberjack trail will be closed while cutting is occurring near the trail. Aesthetic concerns should be minimal with the buffer and feathered edge along Hwy K. Additional trees will be kept along the Lumberjack trail to lessen visual impacts.

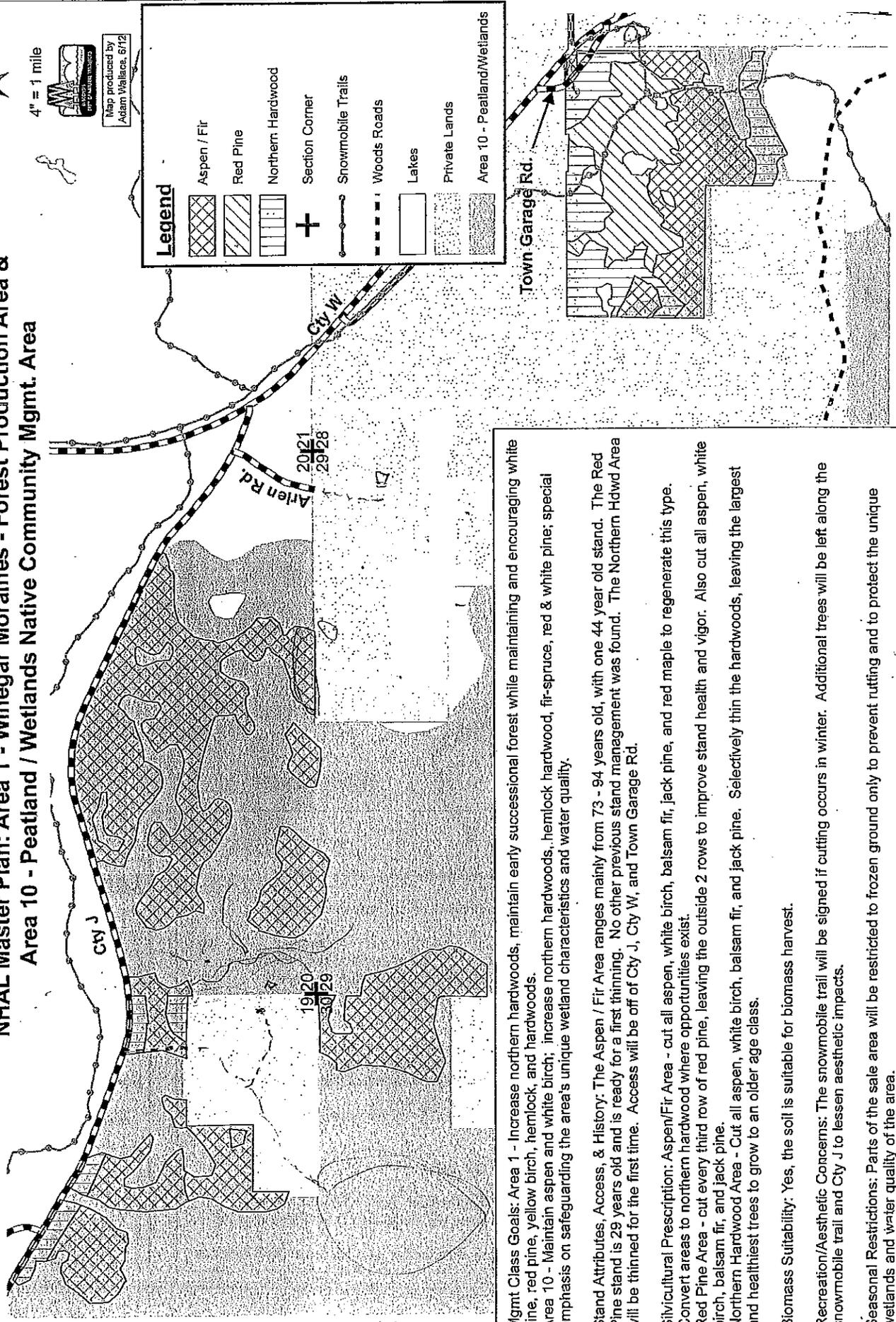
Seasonal Restrictions: None

Legend

- Aspen/Pine/Birch Area
- Rustic Road Area
- Section Corner
- Lumberjack Trail
- Woods Roads
- Vilas County Roads
- Lakes
- Private Lands

4" = 1 mile

NORTHERN HIGHLAND STATE FOREST
C251 Stands 2, 10, 17, 19, 20, 21; C262 Stands 2, 9, 11
TOWN GARAGE & HWY J SALE - 258 ACRES
Town of Winchester, Vilas County, T43N R5E Sections 19, 20, 28, 29, & 30
NHAL Master Plan: Area 1 - Winegar Moraines - Forest Production Area &
Area 10 - Peatland / Wetlands Native Community Mgmt. Area



Map produced by
Adam Wallace, 6/12

Legend

- Aspen / Fir
- Red Pine
- Northern Hardwood
- Section Corner
- Snowmobile Trails
- Woods Roads
- Lakes
- Private Lands
- Area 10 - Peatland/Wetlands

Mgmt Class Goals: Area 1 - Increase northern hardwoods, maintain early successional forest while maintaining and encouraging white pine, red pine, yellow birch, hemlock, and hardwoods.
 Area 10 - Maintain aspen and white birch; increase northern hardwoods, hemlock hardwood, fir-spruce, red & white pine; special emphasis on safeguarding the area's unique wetland characteristics and water quality.

Stand Attributes, Access, & History: The Aspen / Fir Area ranges mainly from 73 - 94 years old, with one 44 year old stand. The Red Pine stand is 29 years old and is ready for a first thinning. No other previous stand management was found. The Northern Hdw Area will be thinned for the first time. Access will be off of City J, City W, and Town Garage Rd.

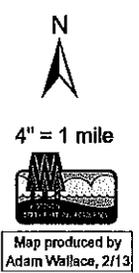
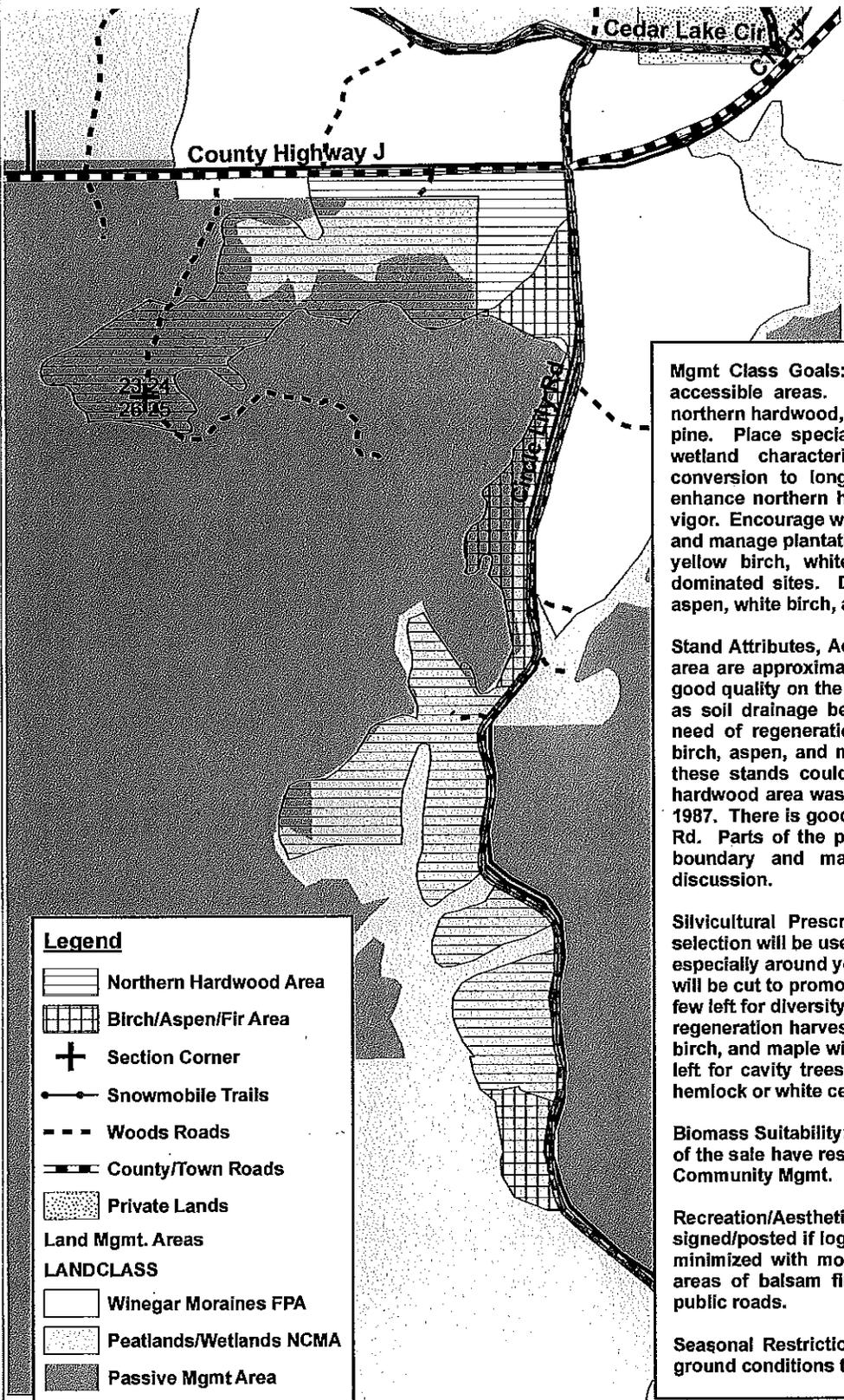
Silvicultural Prescription: Aspen/Fir Area - cut all aspen, white birch, balsam fir, jack pine, and red maple to regenerate this type. Convert areas to northern hardwood where opportunities exist.
 Red Pine Area - cut every third row of red pine, leaving the outside 2 rows to improve stand health and vigor. Also cut all aspen, white birch, balsam fir, and jack pine.
 Northern Hardwood Area - Cut all aspen, white birch, balsam fir, and jack pine. Selectively thin the hardwoods, leaving the largest and healthiest trees to grow to an older age class.

Biomass Suitability: Yes, the soil is suitable for biomass harvest.

Recreation/Aesthetic Concerns: The snowmobile trail will be signed if cutting occurs in winter. Additional trees will be left along the snowmobile trail and City J to lessen aesthetic impacts.

Seasonal Restrictions: Parts of the sale area will be restricted to frozen ground only to prevent rutting and to protect the unique wetlands and water quality of the area.

Northern Highland - American Legion State Forest
C269H Stands 3, 4, & 12; C270H Stand 11
Circle Lily Hardwood Sale - 191 Acres
Town of Mercer, Iron County, T43N R4E Section 24, 25 & 36
NHAL Master Plan: Area 10 - Peatland Wetlands Native Community Area
Area 1 - Winegar Moraines Forest Production Area



Mgmt Class Goals: Area 10 - Maintain aspen and white birch in accessible areas. On suitable sites, increase the abundance of northern hardwood, hemlock hardwood, fir-spruce, and red and white pine. Place special emphasis on safeguarding the area's unique wetland characteristics. On appropriate sites, manage for conversion to longer-lived forest types. Area 1 - Maintain and enhance northern hardwoods to increase age diversity, health, and vigor. Encourage white pines, red pine components in natural stands and manage plantations to biological maturity. Retain and encourage yellow birch, white pine, and hardwood components on aspen dominated sites. Develop a diversity of ages and stand sizes for aspen, white birch, and northern hardwood.

Stand Attributes, Access, & History: All forested types in this sale area are approximately 95 years old. The northern hardwood is of good quality on the upland portions but quickly fades to poor quality as soil drainage becomes impeded. The birch/aspen/fir area is in need of regeneration harvest as indicated by the many declining birch, aspen, and maple crowns. No prior management history for these stands could be found, but the north part of the northern hardwood area was thinned in the past when the state acquired it in 1987. There is good access into the sale along Hwy J and Circle Lily Rd. Parts of the proposed sale area are within the passive mgmt. boundary and may be excluded from the sale upon further discussion.

Silvicultural Prescription: Northern Hardwood Area - Single tree selection will be used throughout, with a few gaps in opportune areas especially around yellow birch. All aspen, white birch, and balsam fir will be cut to promote the longer-lived species with the exception of a few left for diversity and wildlife. Birch/Aspen/Fir Area - This will be a regeneration harvest to try to maintain this type. All aspen, fir, white birch, and maple will be cut. A few maples and other species will be left for cavity trees, future coarse woody debris, and diversity. No hemlock or white cedar will be cut in either area.

Biomass Suitability: Biomass harvest will not be allowed since parts of the sale have restricted soils, along with most of it being in Native Community Mgmt.

Recreation/Aesthetic Concerns: The snowmobile trail will be signed/posted if logging occurs in winter. Aesthetic concerns will be minimized with most of it being a thinning. There are also dense areas of balsam fir saplings that will provide a screen along the public roads.

Seasonal Restrictions: Parts of this sale will likely require frozen ground conditions to prevent rutting from occurring.

Legend

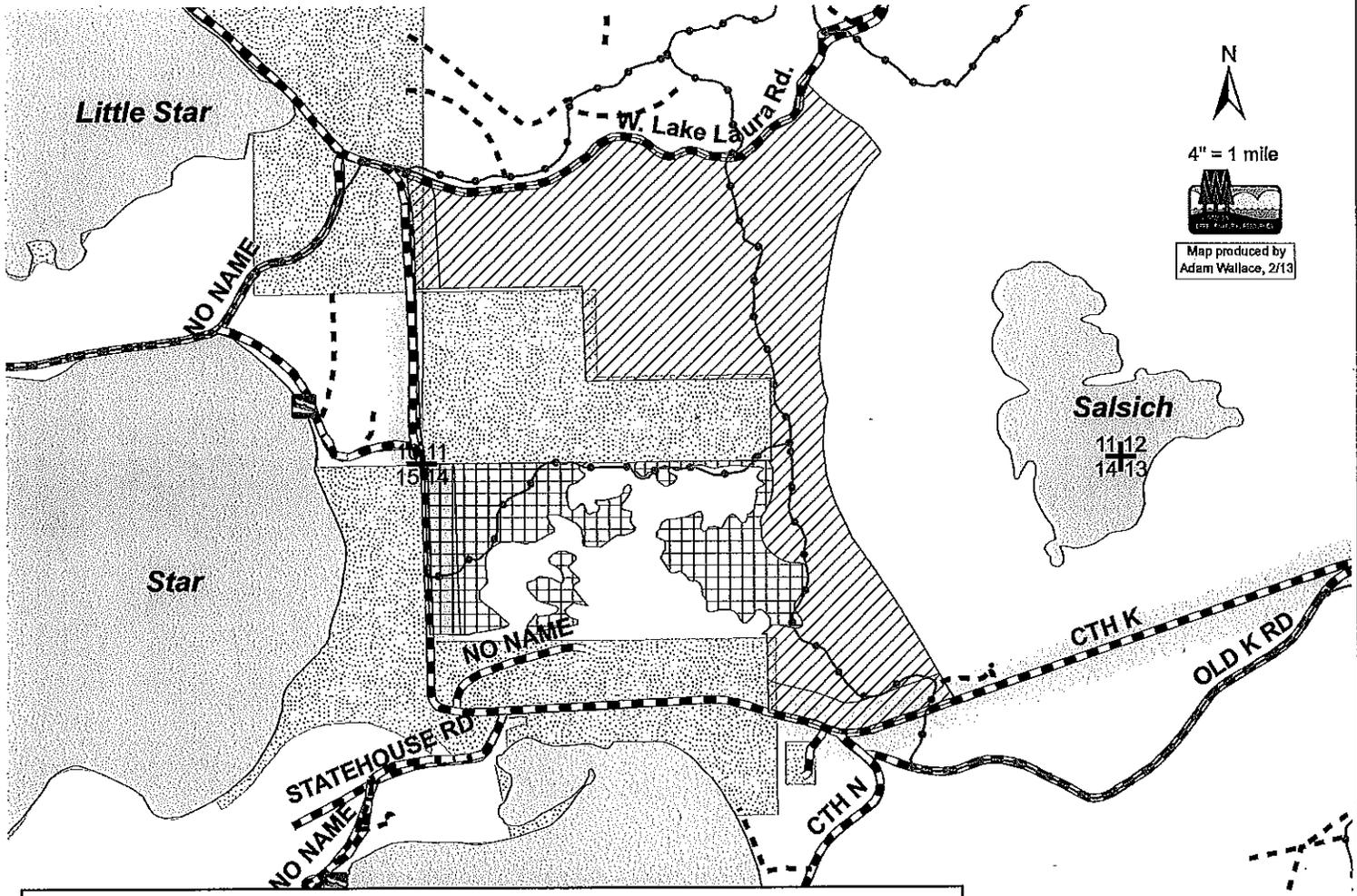
- Northern Hardwood Area
- Birch/Aspen/Fir Area
- Section Corner
- Snowmobile Trails
- Woods Roads
- County/Town Roads
- Private Lands

Land Mgmt. Areas

LANDCLASS

- Winegar Moraines FPA
- Peatlands/Wetlands NCMA
- Passive Mgmt Area

Northern Highland - American Legion State Forest
C21 Stands 1, 4, 7, & 15
Salsich Lake Sale - 196 Acres
Town of Plum Lake, Vilas County, T41N R8E Sections 11 & 14
NHAL Master Plan: Area 8 - Lake Laura Loamy Hills - Native Community Area
Area 16 - Rustic Road Scenic Management Area



N
 4" = 1 mile
 Map produced by
 Adam Wallace, 2/13

Mgmt Class Goals: Area 8 - Increase old growth forest attributes, increase white pine, yellow birch, cedar, and hemlock. Maintain old growth northern hardwood characteristics and enhance stand composition and structure. Manage for a mixed forest, particularly with large vigorous trees, and increased dominance of white pine and other long-lived species. Regenerate some aspen, white birch and other early successional species. Convert early successional stands not regenerated to northern hardwoods. Area 16 - Favor long-lived species to enhance the aesthetic and scenic beauty of the rustic corridor. Remove dead, declining, or short-lived species near maturity.

Stand Attributes, Access, & History: The oak stands are 97 years old and trees are of good quality. The white pine stands are 68 years old. No prior management has been done in this area with the exception of a tornado salvage sale in 1986 in part of the sale area. The sale can be accessed by W. Lake Laura Rd or Cty Hwy K and the snowmobile trail.

Silvicultural Prescription: The prescription in both sale areas is a thinning from below. All aspen, white birch, and balsam fir will be cut, except for a few that will be left for diversity, cavity trees, or seed. The largest and healthiest trees will remain uncut to push the stand to an older forest with old growth characteristics. Along the Rustic Road area - same prescription as above, except there will be a 50' no-cut buffer along Hwy K.

Biomass Suitability: No, biomass must be retained to increase the coarse woody debris component.

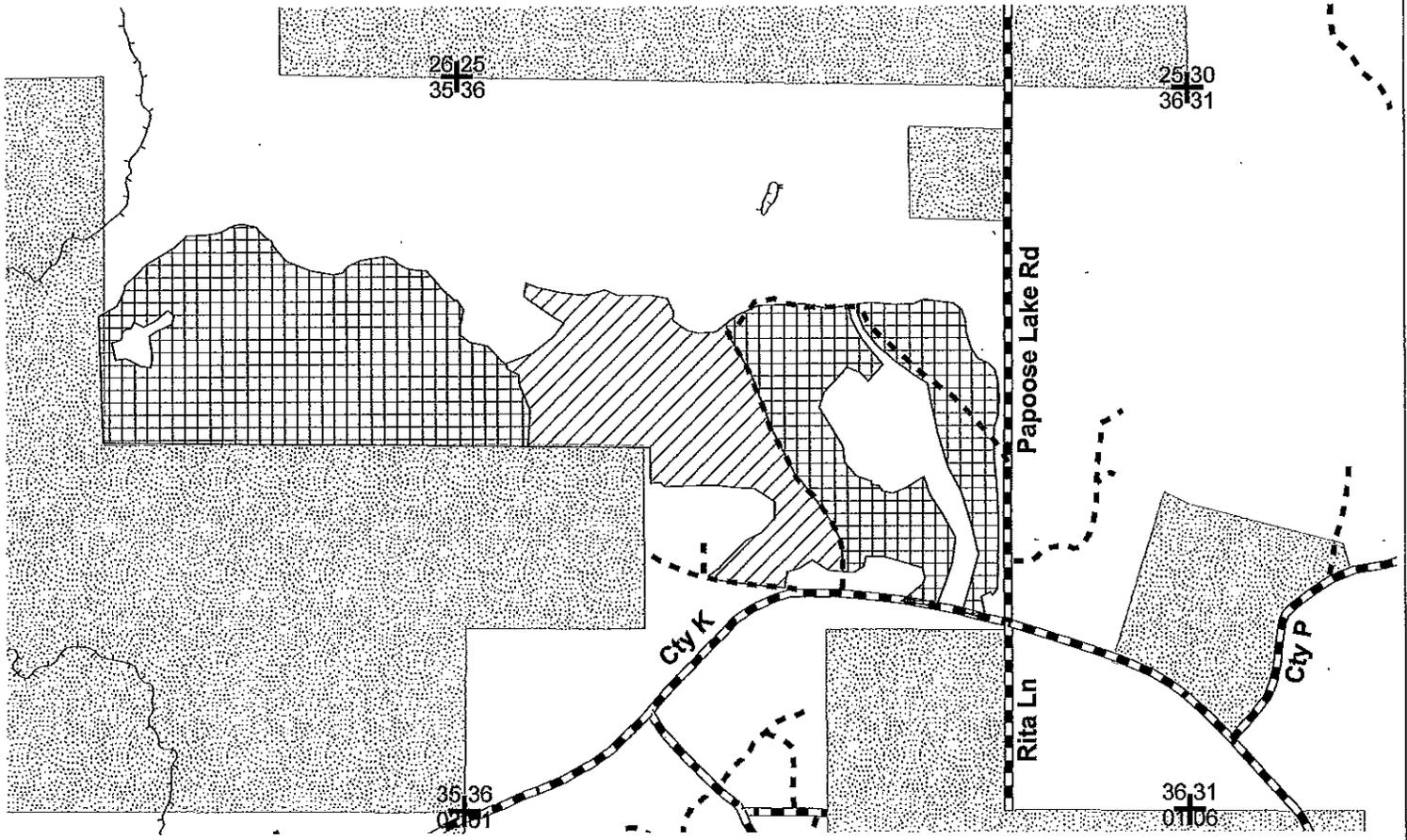
Recreation/Aesthetic Concerns: The snowmobile trail will be signed or closed if cutting occurs in winter. Aesthetic concerns should be minimal along Hwy K with the no-cut buffer and along other town roads and the snowmobile trail with this being a selective thinning.

Seasonal Restrictions: None

Legend

-  Oak Thinning Area
-  Pine Thinning Area
-  Section Corner
-  Snowmobile Trails
-  Woods Roads
-  Town/County Roads
-  Lakes
-  Private Lands
-  Rustic Road SMA

Northern Highland - American Legion State Forest
C237H Stands 1 & 3
Papoose & Cty K Sale - 194 Acres
Town of Winchester, Vilas County, T43N R5E Sections 35 & 36
NHAL Master Plan: Area 3 - Vilas Sandy Plains North Forest Production Area



Legend

- Spruce Area
- Pine Thinning Area
- Section Corner
- County/Town Roads
- Woods Roads
- Lakes
- Creeks/Rivers
- Private Lands

Mgmt Class Goals: Area 3 - Increase red and white pine components. Maintain aspen as a strong component in mixed stands. Manage for current levels of red oak, white birch, jack pine, fir-spruce, and northern hardwood. Maintain forested wetlands by applying active management techniques.

Stand Attributes, Access, & History: Both the red pine and spruce plantations are 49 years old and in need of thinning. Most of the red pine was row thinned in 2004, except for the central patch which has not had any management. No prior management has been done in the spruce plantation, which needs release work now as it is in heavy competition with a variety of other short-lived species. There is good access with existing woods roads off of Papoose Lake Road and Hwy K.

Silvicultural Prescription: Red Pine Thinning Area - individual tree selection in the previously row thinned area. The unthinned area will be a mix of selection thinning and row thinning due to the variability of the stand. Balsam fir, aspen, birch, and jack pine will be designated to cut, which will favor the longer lived species here. Spruce Area - aspen, white birch, jack pine, balsam fir, and maple will be cut to release the spruce. Some areas of spruce will be thinned as well where necessary. The resulting stand will be a mix of spruce and white/red pine, with some areas of shorter-lived species regenerating.

Biomass Suitability: Parts of the red pine area have restricted soils which will not allow for biomass harvest. The spruce area is suitable for biomass harvest.

Recreation/Aesthetic Concerns: There are no recreational trails within the proposed area and aesthetic concerns should be minimal with this being a thinning.

Seasonal Restrictions: None

N

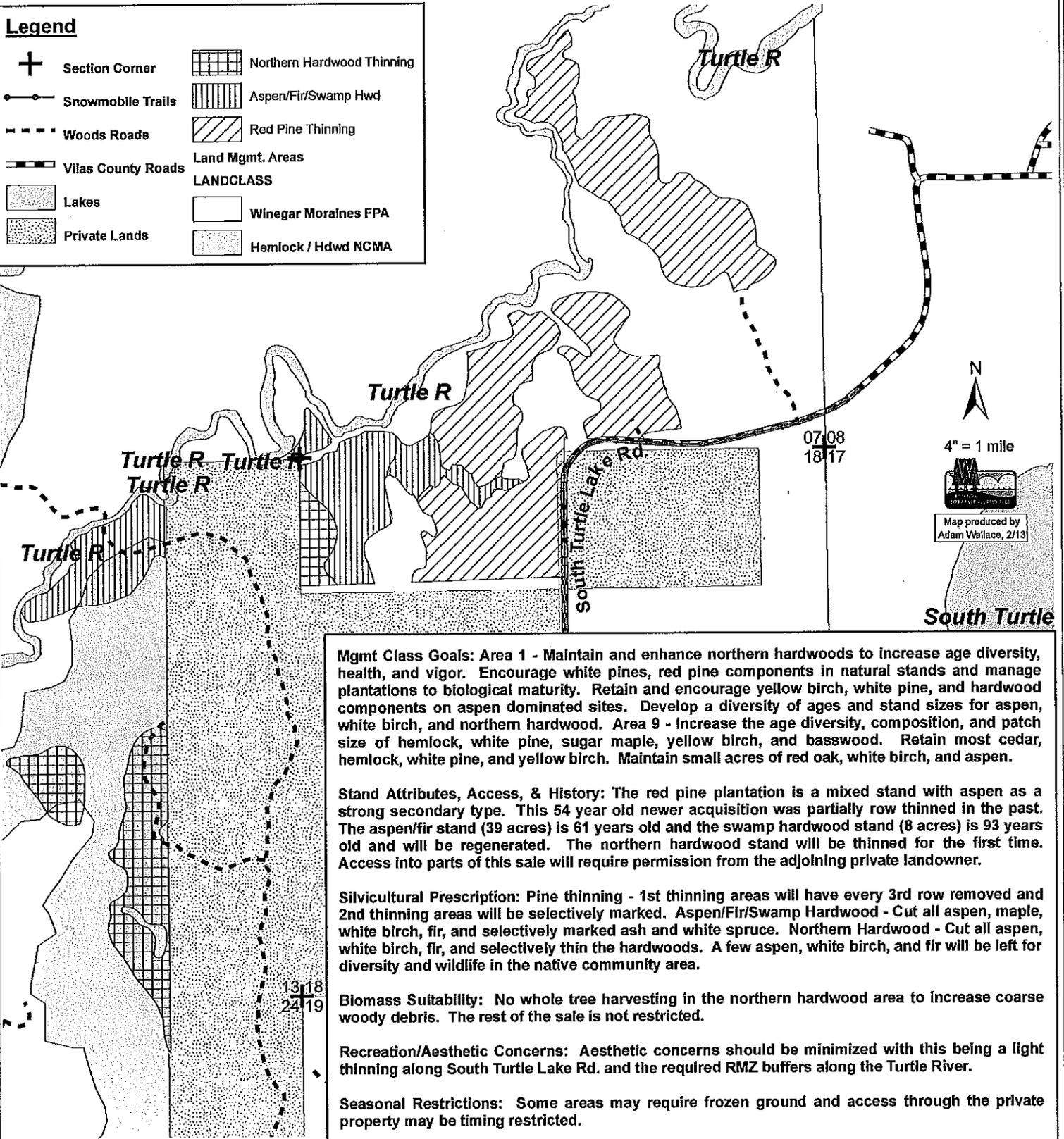
 4" = 1 mile

 Map produced by
 Adam Wallace, 2/13

Northern Highland - American Legion State Forest
C263H Stand 7, 8, 15, & 16
Turtle River Sale - 212 Acres
Town of Mercer, Iron County, T43N R4E Section 13
Town of Winchester, Vilas County, T43N R5E Sections 7 & 18
NHAL Master Plan: Area 1 - Winegar Moraines - Forest Production Area
Area 9 - Hemlock / Northern Hardwood Native Community Mgmt. Area

Legend

	Section Corner		Northern Hardwood Thinning
	Snowmobile Trails		Aspen/Fir/Swamp Hwd
	Woods Roads		Red Pine Thinning
	Vilas County Roads		Land Mgmt. Areas
	Lakes		Winegar Moraines FPA
	Private Lands		Hemlock / Hdwd NCMA



N

 4" = 1 mile

 Map produced by
 Adam Wallace, 2/13

Mgmt Class Goals: Area 1 - Maintain and enhance northern hardwoods to increase age diversity, health, and vigor. Encourage white pines, red pine components in natural stands and manage plantations to biological maturity. Retain and encourage yellow birch, white pine, and hardwood components on aspen dominated sites. Develop a diversity of ages and stand sizes for aspen, white birch, and northern hardwood. Area 9 - Increase the age diversity, composition, and patch size of hemlock, white pine, sugar maple, yellow birch, and basswood. Retain most cedar, hemlock, white pine, and yellow birch. Maintain small acres of red oak, white birch, and aspen.

Stand Attributes, Access, & History: The red pine plantation is a mixed stand with aspen as a strong secondary type. This 54 year old newer acquisition was partially row thinned in the past. The aspen/fir stand (39 acres) is 61 years old and the swamp hardwood stand (8 acres) is 93 years old and will be regenerated. The northern hardwood stand will be thinned for the first time. Access into parts of this sale will require permission from the adjoining private landowner.

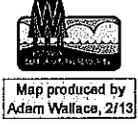
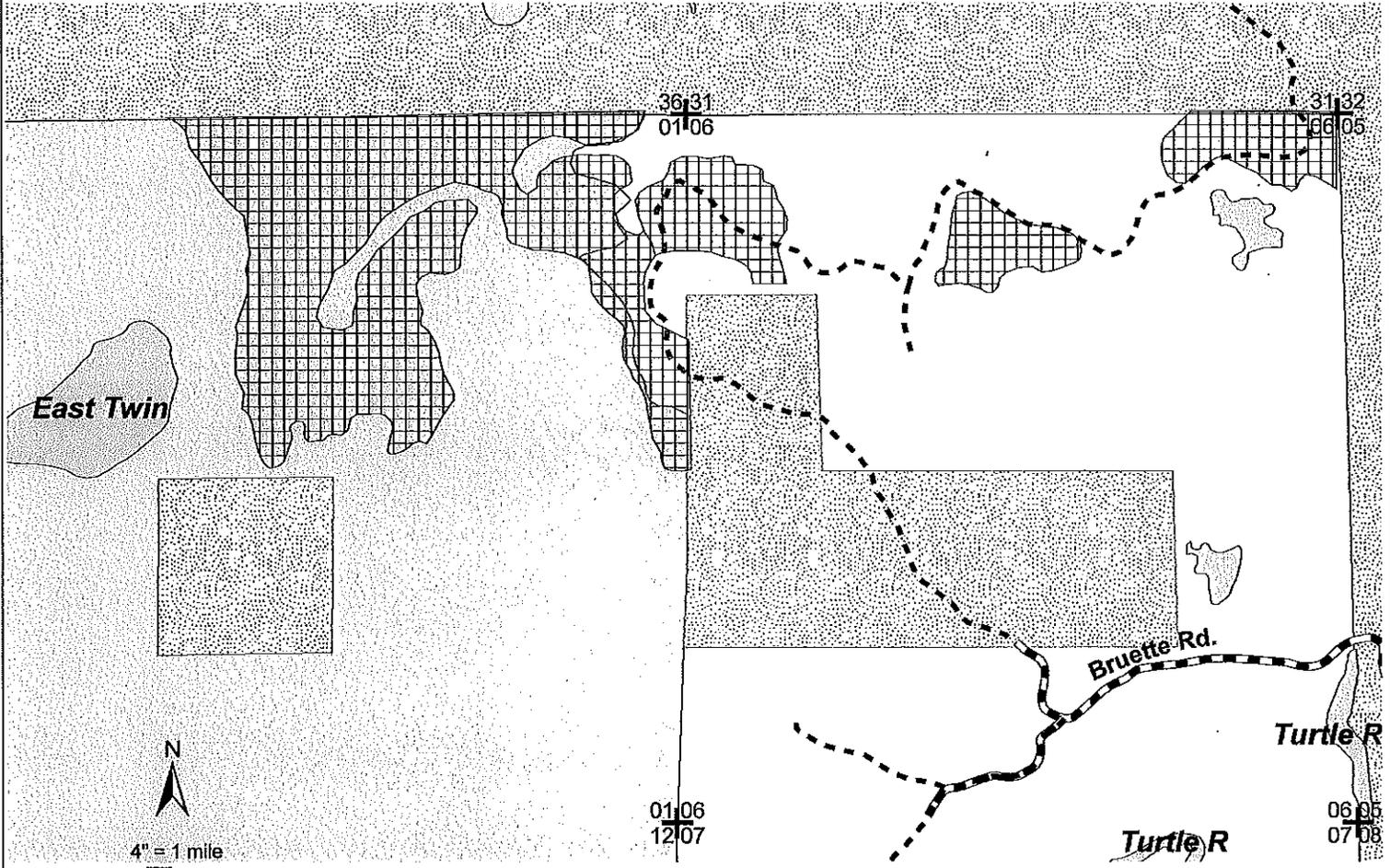
Silvicultural Prescription: Pine thinning - 1st thinning areas will have every 3rd row removed and 2nd thinning areas will be selectively marked. Aspen/Fir/Swamp Hardwood - Cut all aspen, maple, white birch, fir, and selectively marked ash and white spruce. Northern Hardwood - Cut all aspen, white birch, fir, and selectively thin the hardwoods. A few aspen, white birch, and fir will be left for diversity and wildlife in the native community area.

Biomass Suitability: No whole tree harvesting in the northern hardwood area to increase coarse woody debris. The rest of the sale is not restricted.

Recreation/Aesthetic Concerns: Aesthetic concerns should be minimized with this being a light thinning along South Turtle Lake Rd. and the required RMZ buffers along the Turtle River.

Seasonal Restrictions: Some areas may require frozen ground and access through the private property may be timing restricted.

Northern Highland - American Legion State Forest
C265H Stands 1 & 20
East Twin Lake Sale - 164 Acres
Town of Mercer, Iron County, T43N R4E Section 1
Town of Winchester, Vilas County, T43N R5E Section 6
NHAL Master Plan: Area 1 - Winegar Moraines - Forest Production Area
Area 9 - Hemlock / Northern Hardwood Native Community Mgmt. Area



Legend

- +** Section Corner
- Snowmobile Trails
- - -** Woods Roads
- - -** Vilas County Roads
- Lakes
- Private Lands
- Northern Hardwood Thinning

Land Mgmt. Areas

LANDCLASS

- Winegar Moraines FPA
- Hemlock / Hdwd NCMA

Mgmt Class Goals: Area 1 - Maintain and enhance northern hardwoods to increase age diversity, health, and vigor. Encourage white pines, red pine components in natural stands and manage plantations to biological maturity. Retain and encourage yellow birch, white pine, and hardwood components on aspen dominated sites. Develop a diversity of ages and stand sizes for aspen, white birch, and northern hardwood. Area 9 - Increase the age diversity, composition, and patch size of hemlock, white pine, sugar maple, yellow birch, and basswood. Retain most cedar, hemlock, white pine, and yellow birch. Maintain small acres of red oak, white birch, and aspen.

Stand Attributes, Access, & History: The westernmost northern hardwood stand (122 acres) will be thinned for the first time. The northern hardwood to the east was last thinned in 1990. Access into this sale will require permission from the adjoining private landowners.

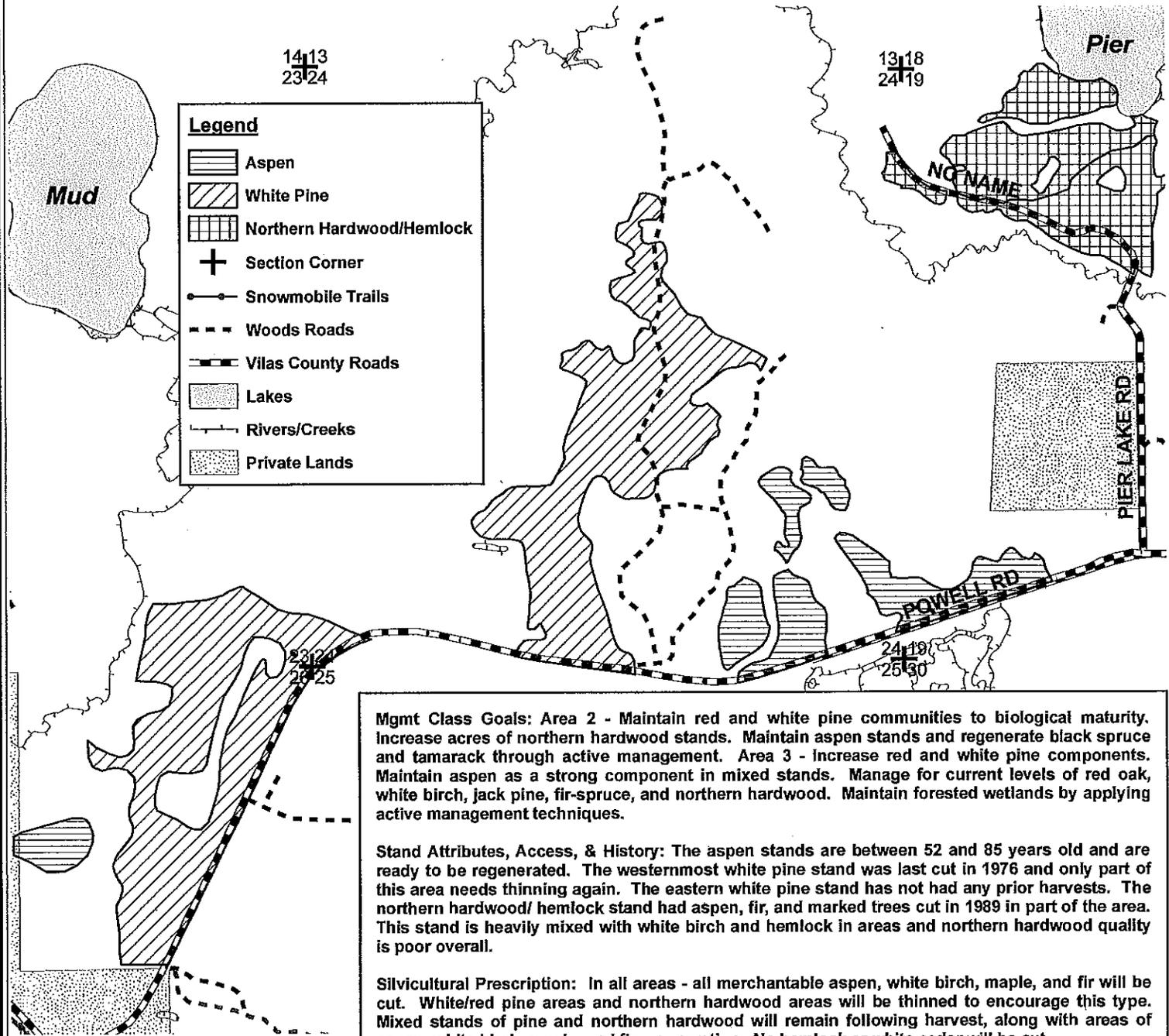
Silvicultural Prescription: Northern Hardwood - Cut all aspen, white birch, fir, and selectively thin the hardwoods. A few aspen, white birch, and fir will be left for diversity and wildlife in the native community area.

Biomass Suitability: No whole tree harvesting will be allowed because most of the sale is in the native community area and goals include increasing coarse woody debris.

Recreation/Aesthetic Concerns: There should be few aesthetic concerns due to the remoteness of this sale and because of it being a light thinning.

Seasonal Restrictions: Some areas may require frozen ground and access through the private property may be timing restricted.

Northern Highland - American Legion State Forest
C273H Stands 4, 8, 14, 17, & 18; C259H Stands 11 & 13
Pier Lake & Powell Sale - 239 Acres
Town of Sherman, Iron County, T42N R4E Section 23, 24, & 26
Town of Manitowish Waters, Vilas County, T42N R5E Section 19
NHAL Master Plan: Area 2 - Manitowish Peatlands - Forest Production Area
Area 3 - Vilas Sandy Plains North Forest Production Area



Legend

- Aspen
- White Pine
- Northern Hardwood/Hemlock
- Section Corner
- Snowmobile Trails
- Woods Roads
- Vilas County Roads
- Lakes
- Rivers/Creeks
- Private Lands

Mgmt Class Goals: Area 2 - Maintain red and white pine communities to biological maturity. Increase acres of northern hardwood stands. Maintain aspen stands and regenerate black spruce and tamarack through active management. Area 3 - Increase red and white pine components. Maintain aspen as a strong component in mixed stands. Manage for current levels of red oak, white birch, jack pine, fir-spruce, and northern hardwood. Maintain forested wetlands by applying active management techniques.

Stand Attributes, Access, & History: The aspen stands are between 52 and 85 years old and are ready to be regenerated. The westernmost white pine stand was last cut in 1976 and only part of this area needs thinning again. The eastern white pine stand has not had any prior harvests. The northern hardwood/ hemlock stand had aspen, fir, and marked trees cut in 1989 in part of the area. This stand is heavily mixed with white birch and hemlock in areas and northern hardwood quality is poor overall.

Silvicultural Prescription: In all areas - all merchantable aspen, white birch, maple, and fir will be cut. White/red pine areas and northern hardwood areas will be thinned to encourage this type. Mixed stands of pine and northern hardwood will remain following harvest, along with areas of aspen, white birch, maple, and fir regeneration. No hemlock or white cedar will be cut.

Biomass Suitability: Parts of the sale have restricted soils which will not allow for biomass harvest.

Recreation/Aesthetic Concerns: The required RMZ buffer along Pier Lake will minimize aesthetic concerns as viewed from the lake. Aesthetic concerns along Powell Road will be lessened by the small aspen patch sizes as well as the residual pine left after thinning.

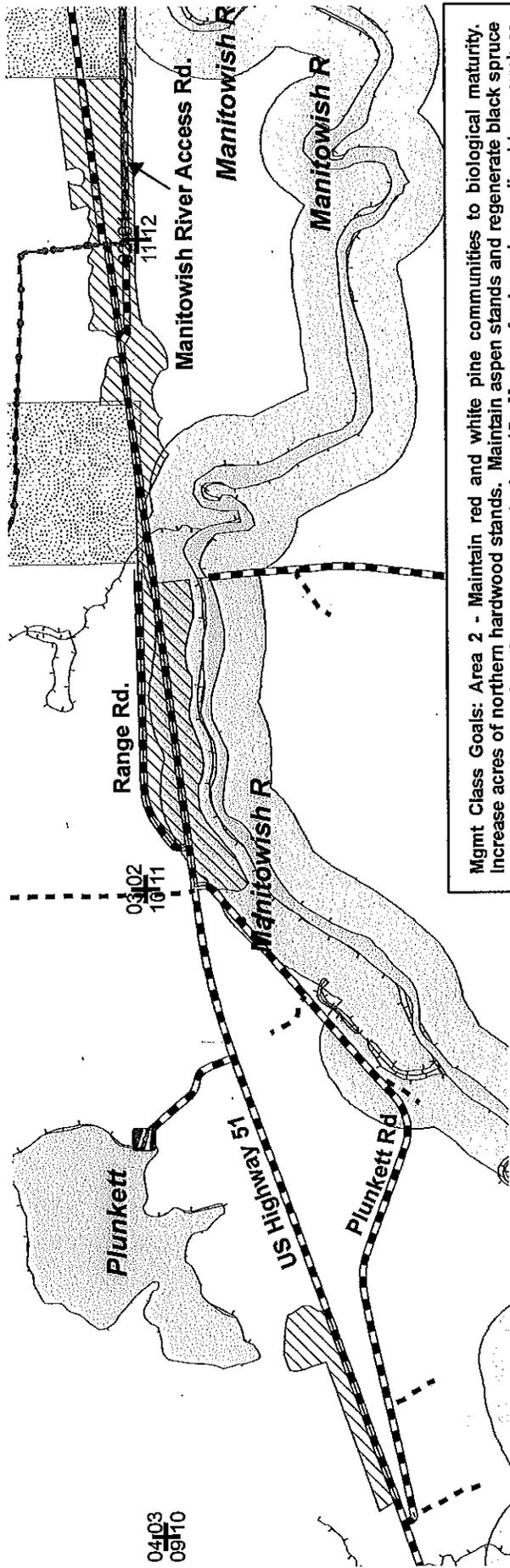
Seasonal Restrictions: Parts of this sale will probably require frozen ground conditions for logging and access.

N

4" = 1 mile

Map produced by
Adam Wallace, 2/13

Northern Highland - American Legion State Forest
 C285H St 10; C286H St 13; C278 St 14; C271 St 17; C270 St 18
 Manitowish River Access Road - 66 Acres
 Town of Mercer, Iron County, T42N R4E Sections 1, 2, 10, 11
 NHAL Master Plan: Area 2 - Manitowish Peatlands - Forest Production Area
 Area 15 - Manitowish River Scenic Mgmt. Area



0403
0910

Legend	
	Proposed Sale Area
	Section Corner
	Boat Landings
	Snowmobile Trails
	Highway/Town Roads
	Woods Roads
	Open Water
	Creeks/Rivers
	Private Lands
	Manitowish River SMA



4" = 1 mile



Map produced by
Adam Wallace, 2/13

Mgmt Class Goals: Area 2 - Maintain red and white pine communities to biological maturity. Increase acres of northern hardwood stands. Maintain aspen stands and regenerate black spruce and tamarack through active management. Area 15 - Manage for large longer-lived trees such as red and white pine on suitable sites. Retain white cedar and minimize the visibility of management activities from the river.

Stand Attributes, Access, & History: The proposed sale area is a mix of old aspen, hardwood, and pine aesthetic strips along Hwy 51. Aspen, birch, fir, and most red maple are at their biological maturity and need to be regenerated. This is evident by the many crowns that are showing dieback. Parts of these stands have planted strips of red pine or natural white pine areas which need thinning. Access will be off of three town roads and Hwy 51.

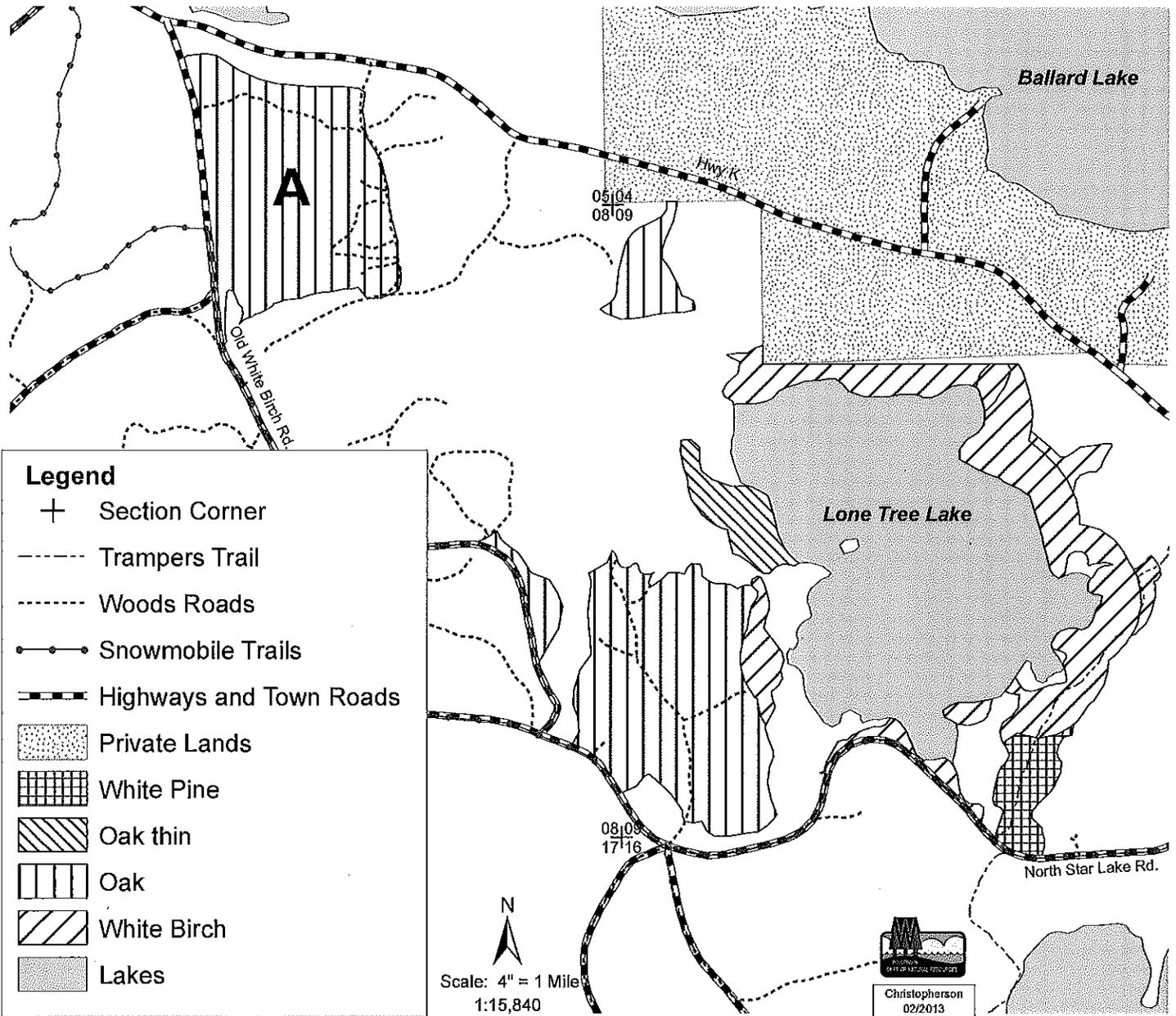
Silvicultural Prescription: All aspen, white birch, maple, and fir will be designated to cut. White/red pine areas will be thinned, and healthy maples will be retained especially in the Scenic Mgmt Area. Mixed stands of pine will remain following harvest, along with areas of aspen, white birch, maple, and fir regeneration.

Biomass Suitability: The sale contains restricted soils which will not allow for biomass harvest.

Recreation/Aesthetic Concerns: The required RMZ buffer along the Manitowish River coupled with leaving the pine and additional healthy maples will minimize aesthetic impacts. Aesthetic concerns along Hwy 51 will be lessened by the narrow strip sizes as well as the residual pine left after thinning. There are also abundant balsam fir saplings in areas that will provide a buffer to the cutting. The snowmobile trail will be signed if cutting occurs in winter.

Seasonal Restrictions: None

NORTHERN HIGHLAND - AMERICAN LEGION STATE FOREST
C53H Stands 8, 15, 16, 18, 20 and 21
Lone Tree Lake - 228 Acres
Town of Plum Lake, Vilas County, T41N R8E Sec 8, 9
Master Plan Area 4 Vilas Sandy Plains Central Forest Production Area



Goals for Area 4 include maintaining sites with early successional species, managing for current levels of red oak, and increasing the presence and age of red pine and white pine.

The oak stands will receive an overstory removal leaving 5 to 20 trees per acre for wildlife benefits. The oak stand within 400 feet of Lone Tree Lake will be thinned and managed for aesthetics.

A shelterwood harvest in the white pine stand.

Shelterwood or group selection of the birch stands.

Aesthetics are a concern around Lone Tree Lake as it is designated a scenic lake. The zone 400 feet around the lake will not be clearcut.

Biomass harvest is allowed only in zone A.

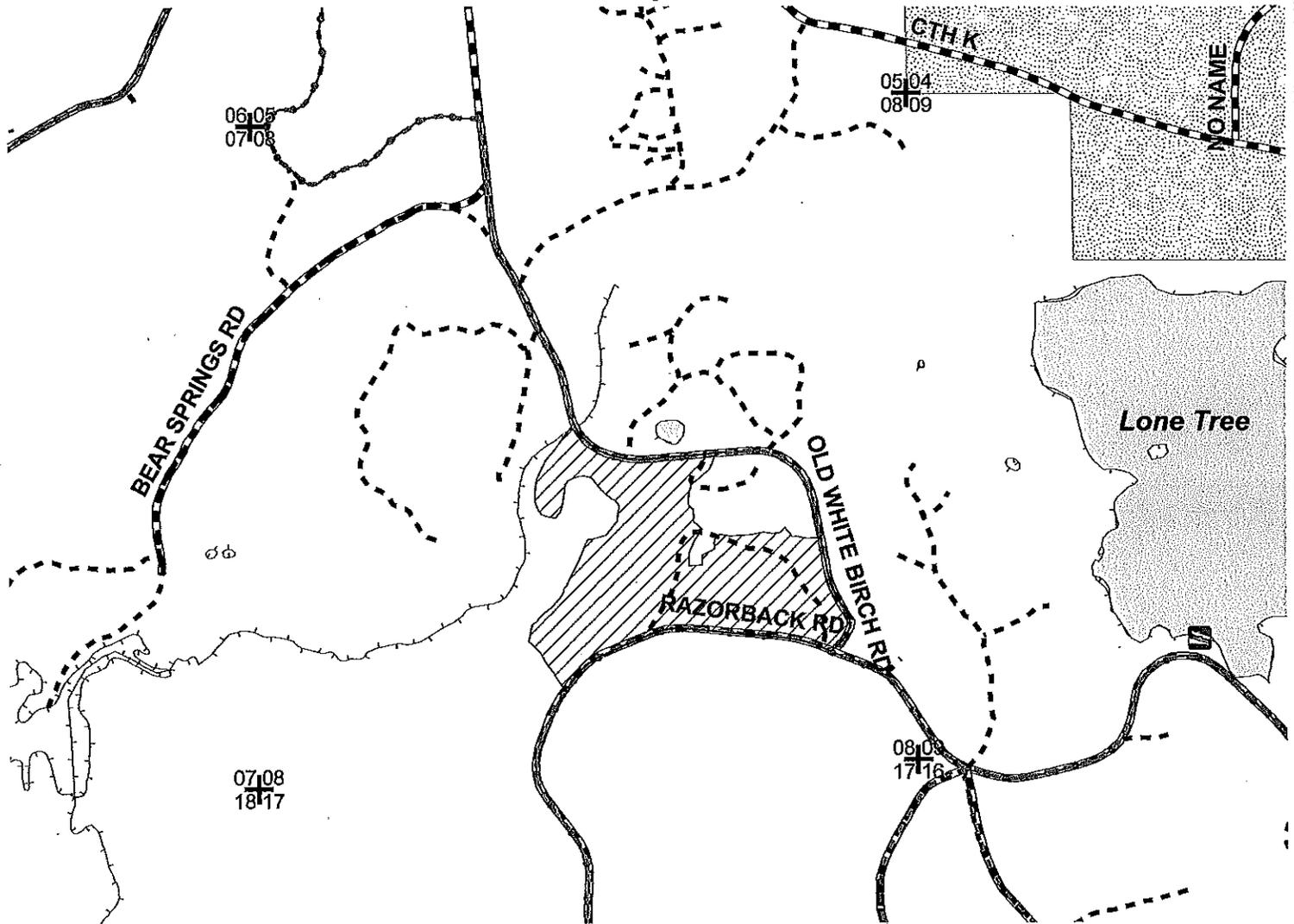
Northern Highland - American Legion State Forest

C68H Stand 6

Old White Razorback Sale - 58 Acres

Town of Plum Lake, Vilas County, T41N R8E Section 8

NHAL Master Plan: Area 4 - Vilas Sandy Plains Cental - Forest Production Area



Legend

-  Oak Proposed Area
-  Section Corner
-  Boat Landings
-  Snowmobile Trails
-  Woods Roads
-  Vilas County Roads
-  Lakes
-  Creeks/Rivers
-  Private Lands

Mgmt Class Goals: Area 4 - Increase red & white pine, develop mixed forest with areas dominated by older red & white pine. Maintain early successional forest types and manage for current levels of red oak.

Stand Attributes, Access, & History: This oak stand is 97 years old and is ready for a final regeneration harvest. It was heavily thinned in 1996, creating shelterwood conditions and a mixed stand. Currently, the remaining overstory oak and red maple trees are in a state of decline.

Silvicultural Prescription: All maple, birch, fir, aspen, and oak will be cut. Scattered healthy oak and maple will be left for wildlife, as well as all white and red pine. RMZ guidelines will be followed along the creek.

Biomass Suitability: No, part of the stand contains restricted soils.

Recreation/Aesthetic Concerns: The snowmobile trails will be signed if cutting occurs in winter. Aesthetic concerns should be minimal as this is in a remote area of the forest with only light vehicular traffic.

Seasonal Restrictions: None



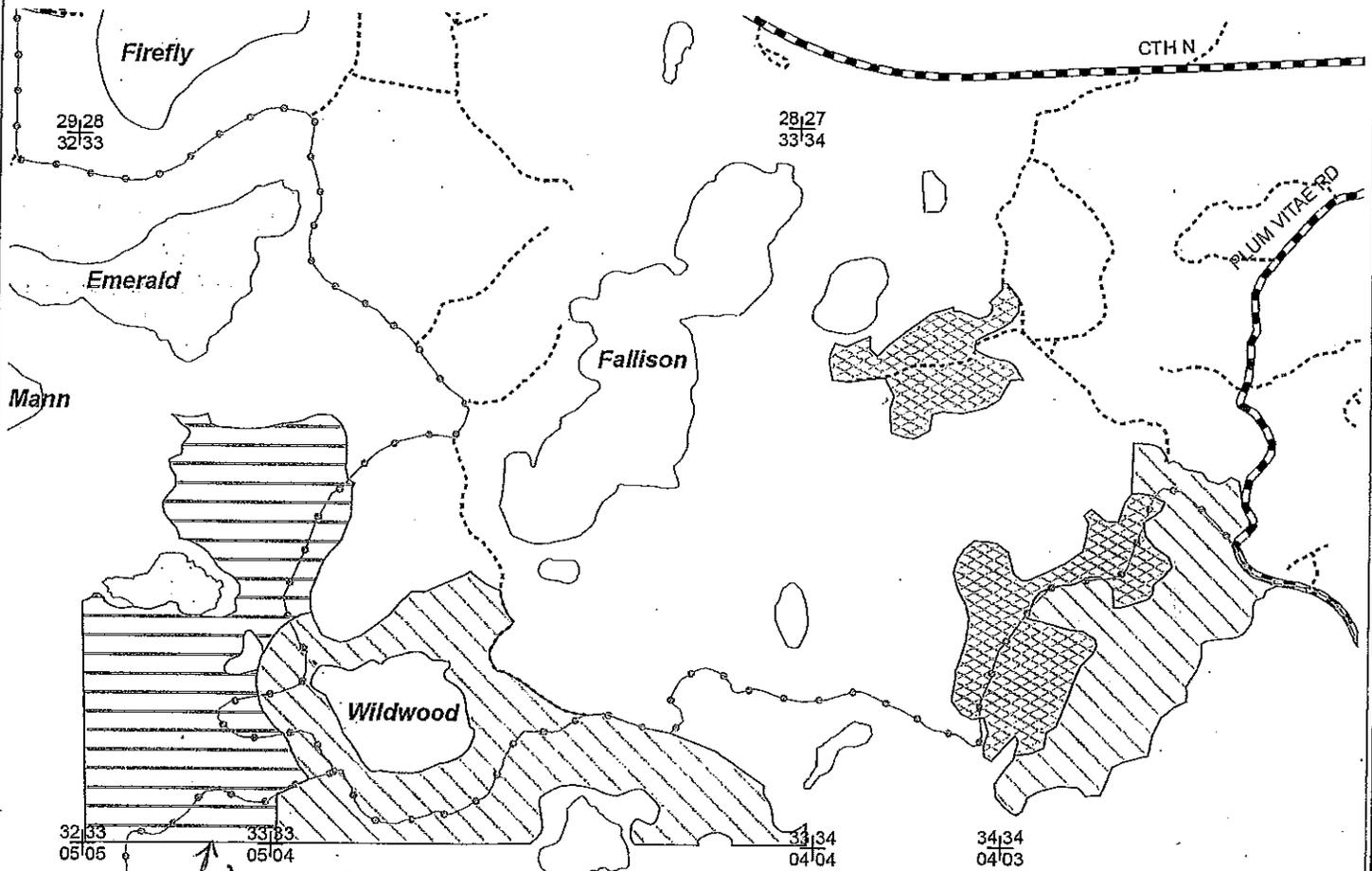
4" = 1 mile



Map produced by
Adam Wallace, 2/13

Northern Highland – American Legion State Forest
 C114H Stands 6 and 12, C136H Stands 6, 8, 9 and 10
 Wildwood Lake Sale – 190 Acres

Town of Boulder Junction and Plum Lake, Vilas County, T41N-R7E, Sections 33 and 34
 NHAL Master Plan: Area 4 – Vilas Sandy Plains Central – Forest Production



Objectives for Management Class 4 are to maintain a mixed forest dominated by red and white pines with aspen, red oak, white birch and jack pine as important secondary species. Specific to these stands, we will harvest most aspen and white birch while maintaining the red oak and mixed hardwood components. Red Oak will be favored over hardwoods where it occurs as a dominate species.

All stands in this presale are approaching 100 years old. They have not been managed prior. The Red Oak/Hardwood Area will be thinned to favor the oak. Harvest will cut the aspen, white birch, balsam fir, some maple and some red oak to promote natural regeneration of these species and encourage the oak, hardwoods and pine to an older stand age.

The Northern Hardwood Area is the same age and has no history of any management. It will be selectively cut to promote growth and regeneration of another age class of hardwood. Also favored to remain are the large red oak and pine components.

The Aspen/Birch Areas are mature stands of aspen and white birch. These two stands will be harvested to regenerate the aspen while leaving many large red oak and pine for diversity and wildlife values. The northern portion is in the Recreation Management Class 20 with the goals and prescription the same.

Wildwood Lake is a Scenic Lake Designation. Harvest will be to selectively thin in the 400 feet distance from lakeshore with aesthetic priority to promote many large, long-lived diversity of tree species. Aesthetics will be a concern for the Fallison hike trail and surrounding undeveloped lakes. Large trees and setbacks will be left to reduce to visual effects of the harvesting. Seasonal restrictions will be put on sale to avoid harvesting noise to trail users. The snowmobile trail through the south end of the area will have to be used.

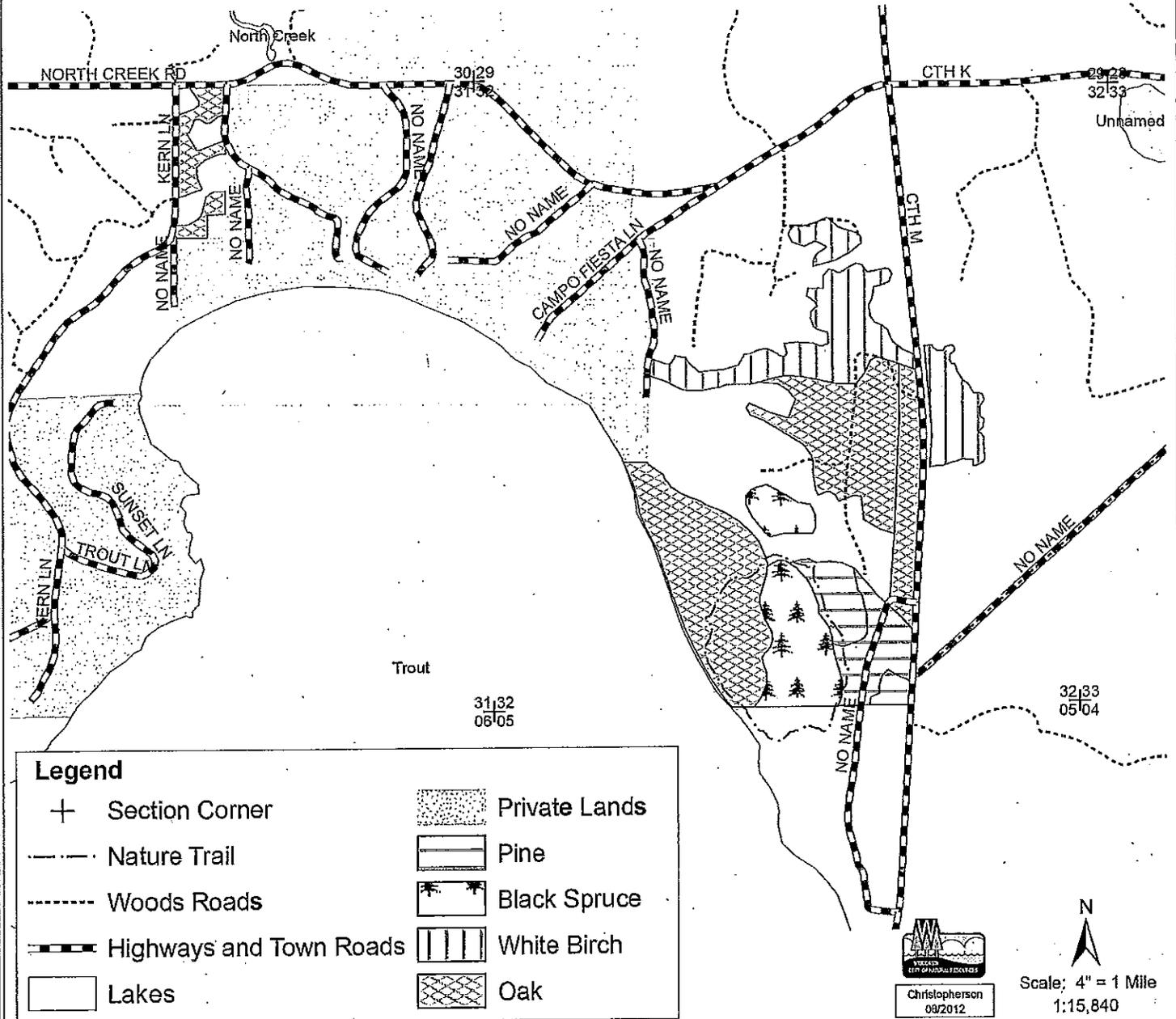
Biomass harvest is allowed on most of the sale areas.

Scale: 4" = 1 Mile
 1:15,840
 Map produced by
 Jeffrey Olsen &
 Paul Schultz, 6/12

Legend

- + Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Northern Hardwood Proposed Area
- ▧ Red Oak/Hardwood Proposed Area
- ▩ Aspen/Birch Proposed Area
- Lakes

NORTHERN HIGHLAND - AMERICAN LEGION STATE FOREST
C150H Stands 2, 3, 5, 8, 9, 10, and 13
NE Trout Lake Sale - 129 Acres
Town of Boulder Junction, Vilas County, T42N R7E Sec 32
Master Plan Area 3 Vilas Sandy Plains North Forest Production Area



Legend	
+ Section Corner	Private Lands
--- Nature Trail	Pine
----- Woods Roads	Black Spruce
== Highway and Town Roads	White Birch
□ Lakes	Oak

Goals for Area 3 include managing for current levels of red oak, white birch, and jack pine. Increase the presence and age of red and white pine. Maintain forested wetlands.

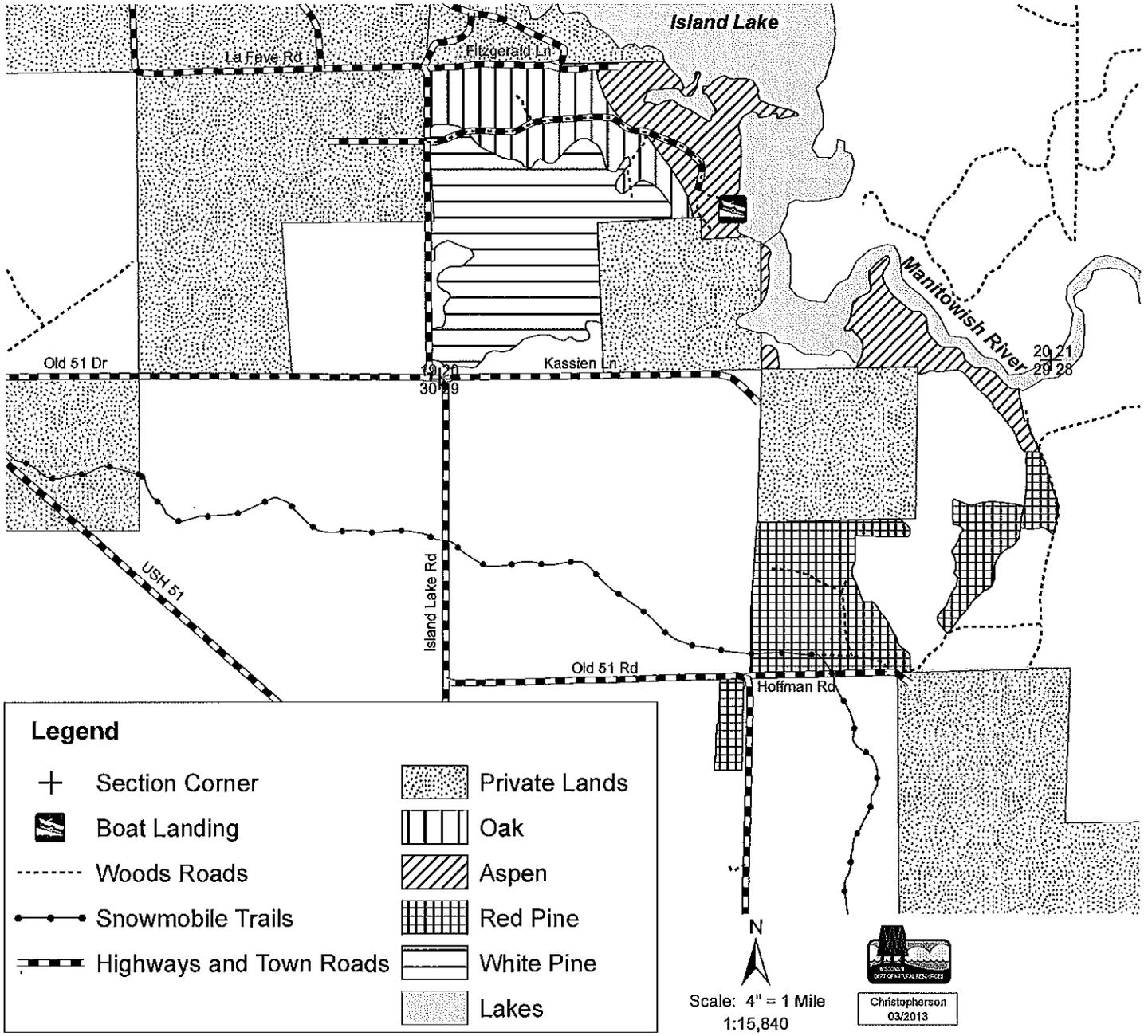
Oak stands will be managed for oak regeneration with a shelterwood harvest. In the white birch stands, the birch, aspen, and maple will be harvested, the oak thinned, and the red and white pine will be retained. Mature jack pine stands will be harvested and planted back to jack pine. White pine will be thinned where the density is above desirable levels. Clumps of trees will be retained in the black spruce stands as a seed source after harvest.

Wisconsin's BMPs for water quality will be implemented along the shore of North Trout Lake.

Aesthetics are important near the North Trout Lake nature trail.

Biomass harvest is not allowed due to dry, nutrient poor soils.

NORTHERN HIGHLAND - AMERICAN LEGION STATE FOREST
C219H Stands 4, 5, 13, 19, and 20
Island Lake Boatlanding - 185 Acres
Town of Boulder Junction, Vilas County, T42N R6E Sec 20 and 29
Master Plan Area 3 Vilas Sandy Plains North Forest Production Area



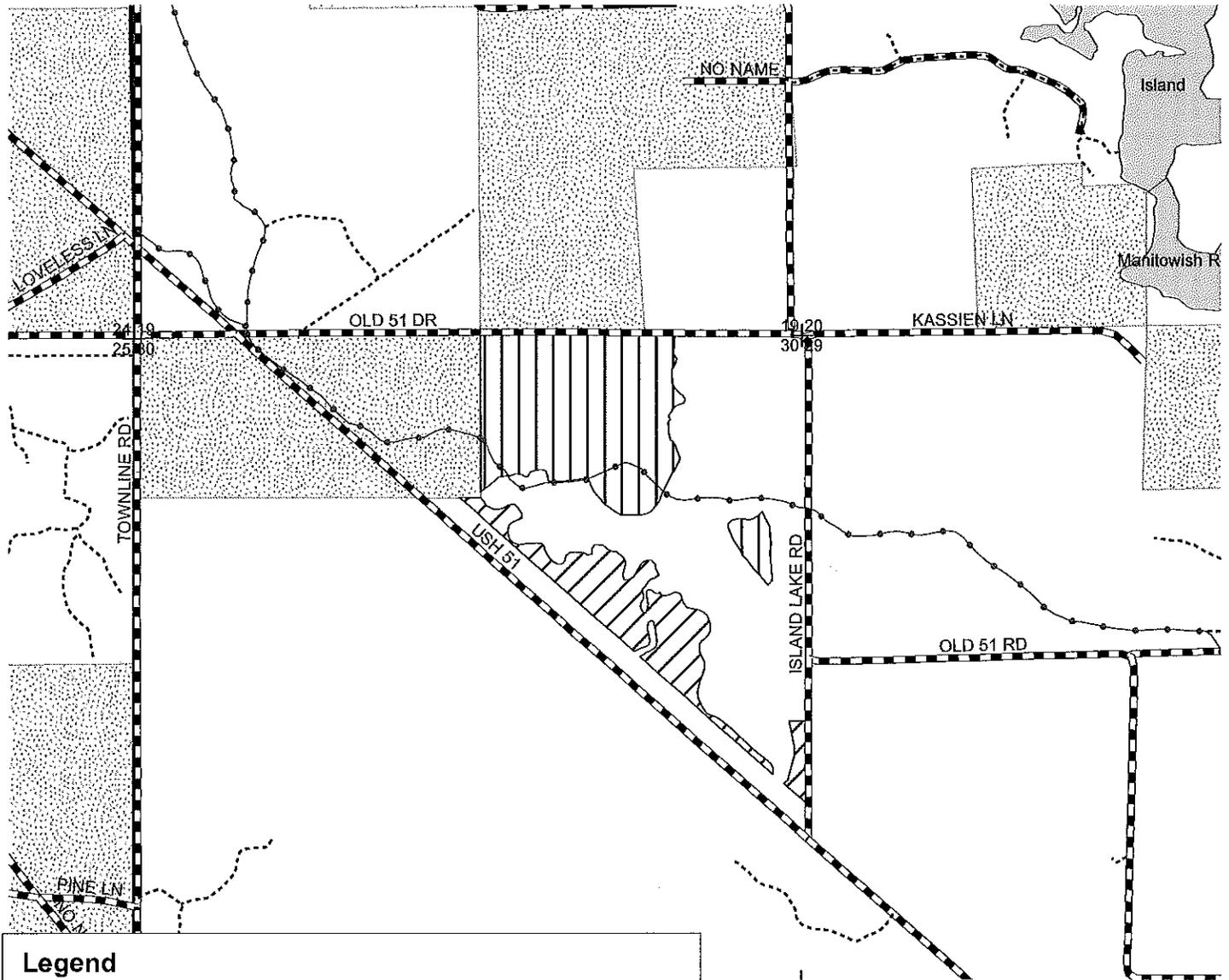
Goals for Area 3 include managing to increase the presence and age of red pine and white pine, maintaining aspen as a strong component in mixed stands, and managing for current levels of red oak.

The red pine plantation will receive a thinning. The white pine stand will be thinned where the density is above desirable levels. The aspen stand will receive a regeneration harvest while leaving longer lived tree species. The oak stand will have an overstory removal to release existing oak regeneration.

Aesthetics are a concern near Island Lake and the boat landing. Sale modifications will be made for recreation use along the snowmobile trail.

Biomass harvest is not allowed due to dry, nutrient poor soils.

NORTHERN HIGHLAND - AMERICAN LEGION STATE FOREST
C231H Stands 2 and 14
Old 51 & Island Lake Rd - 70 Acres
Town of Boulder Junction, Vilas County, T42N R6E Sec 30
Master Plan Area 3 Vilas Sandy Plains North Forest Production Area



Legend

+ Section Corner	 White Pine
..... Woods Roads	 Red Pine
--- Highways and Town Roads	 Private Lands
—●— Snowmobile Trails	 Lakes

N

 Scale: 4" = 1 Mile
 1:15,840


 Christopher's
 02/2013

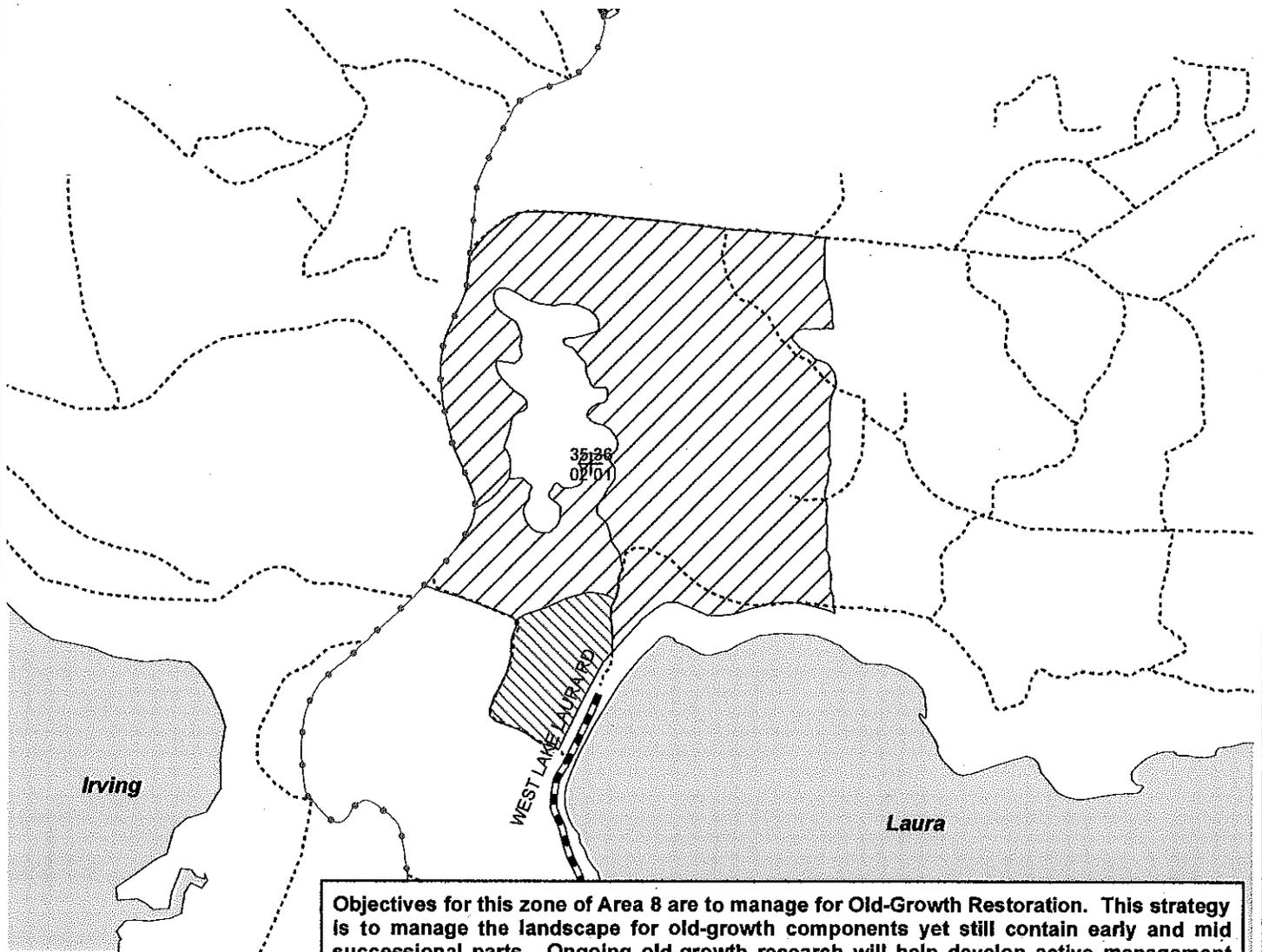
Goals for Area 3 include managing to increase the presence and age of red pine and white pine.

The red pine stand will receive an overdue 1st thinning. The white pine stand will be thinned where the density is above desirable levels and the pockets of aspen will be harvested. We will also work with the DOT to thin the Hwy 51 ROW.

Aesthetics are a concern along Highway 51.

Biomass harvest is not allowed due to dry, nutrient poor soils.

**Northern Highland – American Legion State Forest
 C7H Stands 3, 4 and 5 Lake Laura Old Growth 202 acres
 Town of Plum Lake, Vilas County, T41N R7E Sec. 1 & 2 and T42N R8E Sec. 35 & 36
 NHAL – SF Master Plan: Native Community Area 8 – Lake Laura Loamy Hills**



N
 Scale: 4" = 1 Mile
 1:15,840

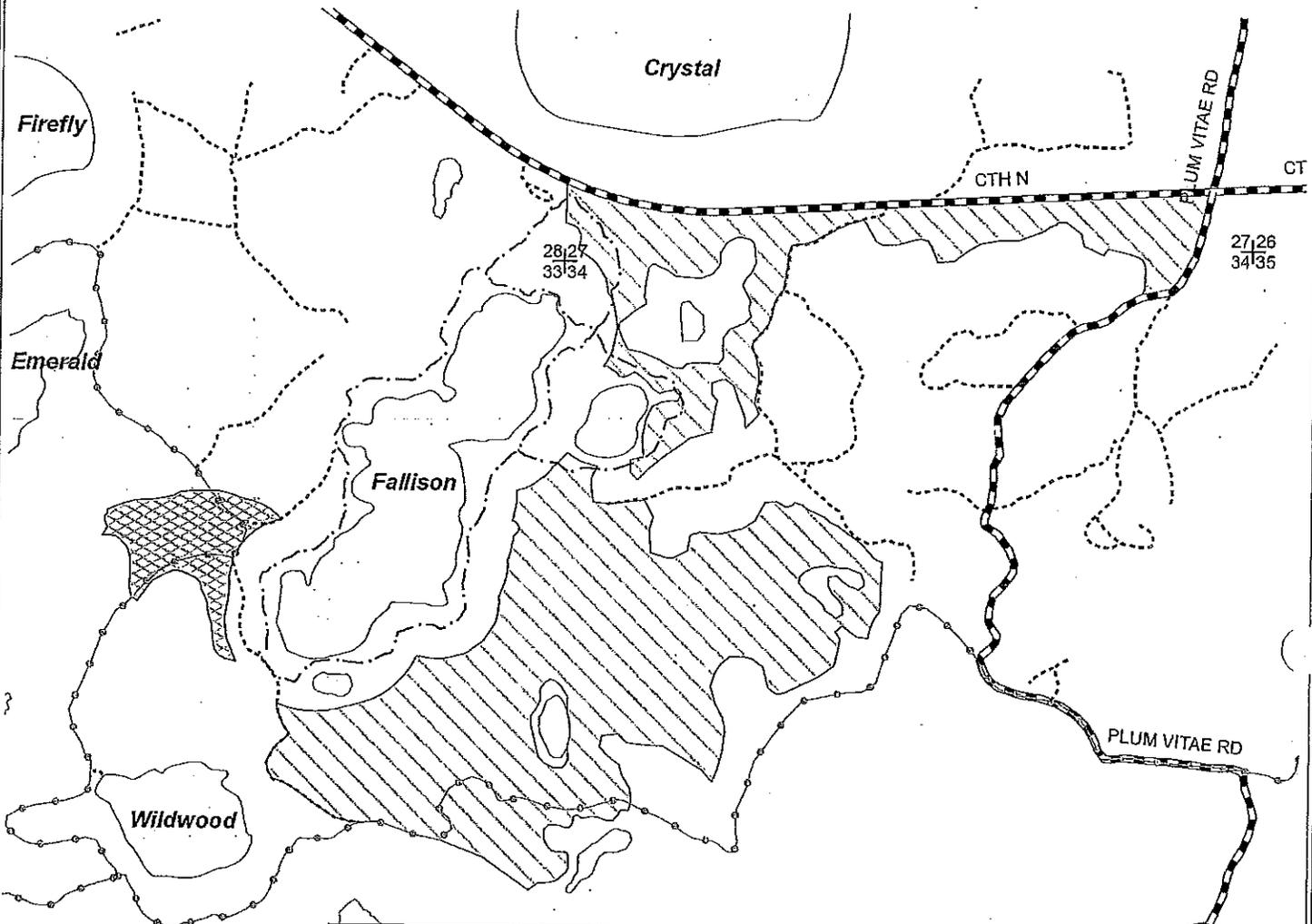


Legend	
+	Section Corner
-----	Woods Roads
-o-	Snowmobile Trails
==	Highways and Town Roads
▨	Gap/Single Tree Proposed Area
▩	Aspen/Red Maple Proposed Area
■	Lakes

Objectives for this zone of Area 8 are to manage for Old-Growth Restoration. This strategy is to manage the landscape for old-growth components yet still contain early and mid successional parts. Ongoing old-growth research will help develop active management guidelines. Adapt prescriptions for each stand to create, enhance and maintain old growth red oak and mixed hardwood stands. Aspen and white birch stands will be maintained with active management. This sale area is west of the Lake Laura Old-Growth Research area. It will incorporate the management design of the research area of gaps and thinning. Consultation with the DNR Science Research Group has been done and updates will be made to them as we progress.

In the Gap/Single Tree Area, stand 3 is over 100 years old and has been managed with single tree selection in the 1950s and the 1970s. Harvest goals are to select cut northern hardwoods and red oak to promote natural regeneration of these species and encourage the oak and northern hardwoods into an old growth character. Many large, old trees, snags and den trees will be left to contribute to the old growth structure. Stand 4, red maple and white birch, will be thinned to promote the health and old growth character of northern hardwoods with some early successional patches. This stand is 90 years old. In the Aspen/Red Maple Area, stand 5 is aspen and red maple, and is 90 years old also. Harvest is to cut aspen and red maple to release white spruce and white pine components, moving this stand toward that timber type along with aspen and maple regeneration. Access is good to all stands with existing roads off the end of Lake Laura Road. The snowmobile trail along the west side of the area will be used for access and hauling. There is a network of old woods roads throughout the sale area. Biomass harvesting is not allowed in old growth management stands.

Northern Highland – American Legion State Forest
C114H Stands 4, 6 and 14, C136H Stands 4 and 6
Fallison Old Growth Sale – 192 Acres
Town of Boulder Junction and Plum Lake, Vilas County, T41N-R7E, Sections 33 and 34
NHAL Master Plan: Area 20 – Crystal Lake Recreation Management Area



33|33
05|04

27|26
34|35

Objectives for Area 20 are to maintain the area for recreational use as well as an actively managed area to maintain a mixed forest dominated by red and white pines with aspen, red oak, white birch and jack pine as important secondary species with the addition to maintain red oak on suitable sites. Adapt prescriptions for each stand to create, enhance and maintain old growth red oak and mixed hardwood stands.

The Red Oak Area is 97 years old and has not been managed prior. Harvest goals are to select cut northern hardwoods and red oak to promote natural regeneration of these species and encourage the oak and pine into an old growth character. Harvest will also select cut aspen, white birch and balsam fir. Many large, old trees, snags and den trees will be left to contribute to the old growth structure.

The Red Pine Area will be thinned to promote the health and old growth character of the red pine. This stand was thinned 22 years ago.

Fallison Lake is Scenic Lake Designation. Some thinning will be done in the 400 feet distance from shore with aesthetic priority to promote large, long-lived diversity of tree species. There will be no cutting up to the hiking trail. Aesthetics will be a concern for the Fallison hike trail and surrounding undeveloped lakes. Large trees and setbacks will be left to reduce to visual effects of the harvesting.

Access is good to all stands with existing roads off CHY N and Plum Vitae Road. Seasonal restrictions will be put on sale to avoid harvesting noise to trail users. The snowmobile trail through the south end of the area may be used but most access will be off CHY N or Plum Vitae Road.

Biomass harvesting is not allowed in old growth management stands.

N

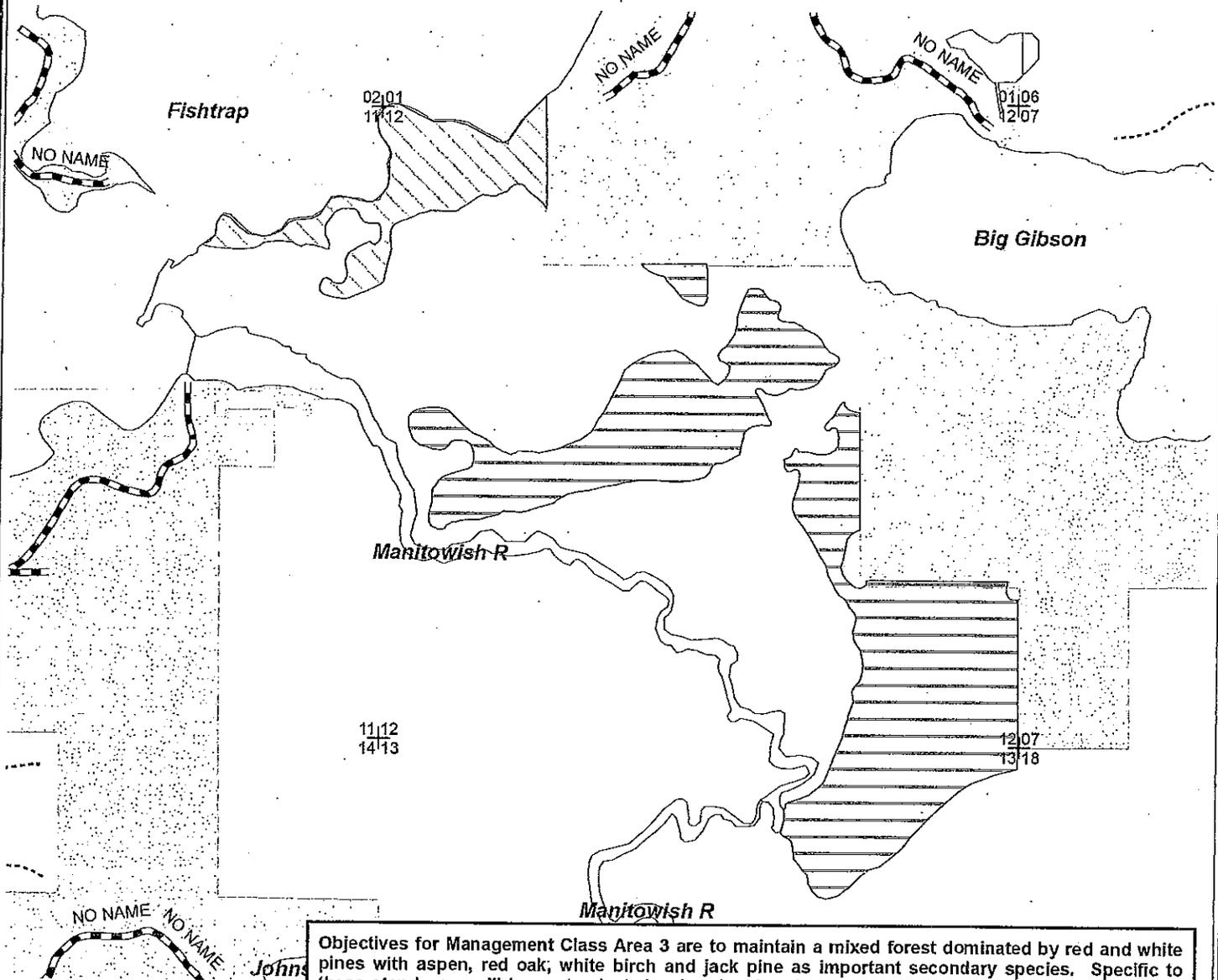
Scale: 4" = 1 Mile
1:15,840

Map produced by
Jeffrey Olsen &
Paul Schultz, 6/12

Legend

- + Section Corner
- Fallison Nature Trail
- Woods Roads
- Snowmobile Trails
- == Highways and Town Roads
- ▨ Red Oak Proposed Area
- ▩ Red Pine Proposed Area
- Lakes

Northern Highland – American Legion State Forest
 C89H Stands 1, 2 and 3
 Big Gibson Lake Sale – 172 Acres
 Town of Boulder Junction, Vilas County, T42N-R7E, Sections 11, 12 and 13
 NHAL Master Plan: Area 3 – Vilas Sandy Plains North – Forest Production



Scale: 4" = 1 Mile
 1:15,840

Map produced by
 Jeffrey Olsen &
 Paul Schultz, 6/12

Legend

- + Section Corner
- Woods Roads
- Snowmobile Trails
- == Highways and Town Roads
- ▨ Pine/Birch Proposed Area
- ▧ White Birch Proposed Area
- Lakes
- ▤ Private Lands

Objectives for Management Class Area 3 are to maintain a mixed forest dominated by red and white pines with aspen, red oak, white birch and jack pine as important secondary species. Specific to these stands, we will harvest selected red and white pines, most aspen, balsam fir and white birch while retaining some old jack pines for a seed source.

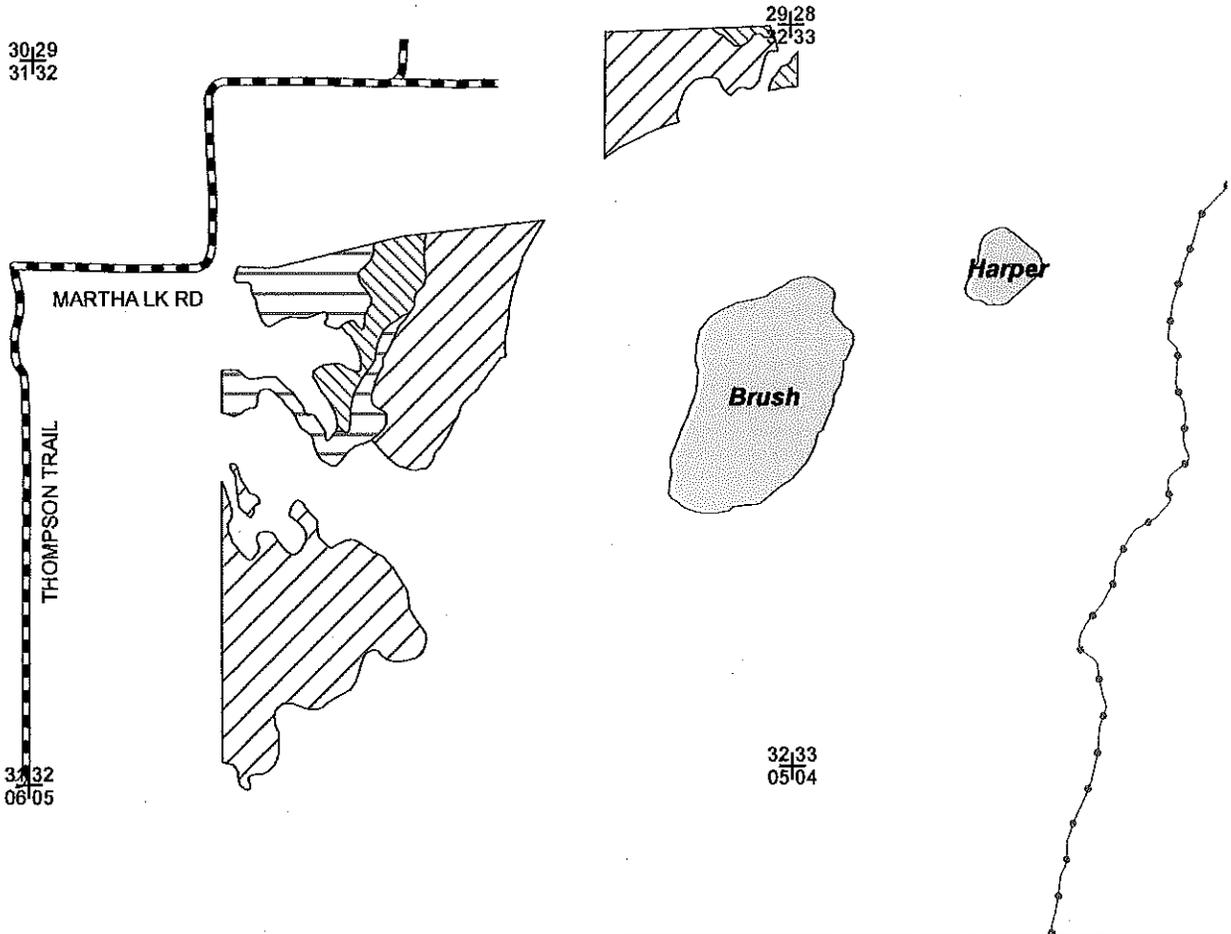
All stands in this presale are approaching 100 years old. They have not been managed prior to this entry. The Pine/Birch Area will be thinned to favor the red and white pines. Harvest will cut the aspen, white birch, balsam fir and some maple to promote natural regeneration of these species and encourage the pine to an older stand age.

The White Birch Area will be cut to promote regeneration of aspen, birch, maple and pines. Also favored to remain are the large red oak and pine trees.

Stands along the waters edge will be cut no closer than 100 feet distance from lakeshore as aesthetic priority to promote the large, long-lived diversity of tree species. This should address aesthetics for the Manitowish River, Johnson Creek and Fishtrap Lake. Seasonal restrictions will be put on sale to avoid adjacent landowner conflicts. Access is an issue as these stands are remote and landlocked. Contact and agreement to cross private property must be secured to set up this sale and operate the harvest plan.

Biomass harvest is not allowed on the sale areas.

Northern Highland – American Legion State Forest
C293H Stands 2, 3, 5, 10 and 11 Thompson Trail 97 acres
Town of Mercer, Iron County, T43N R4E Sec. 32
NHAL – SF Master Plan: Mgmt. Area 2 – Manitowish Peatlands – Forest Production




 Scale: 4" = 1 Mile
 1:15,840

 Map produced by
 Jeffrey Olsen &
 Paul Schultz, 2/13

Legend	
+	Section Corner
----	Woods Roads
●-●	Snowmobile Trails
---	Highways and Town Roads
///	Select Harvest Proposed Area
---	Designated Proposed Area
	Seed Tree Proposed Area
■	Lakes

Goals for these Management Classes are to maintain a diversity of forested and unforested wetlands. The upland areas would maintain a variety of successional stages. Early successional types like white birch and balsam fir would be managed at economic maturity. Hemlock-hardwoods and northern hardwood would be managed to their biological maturity. Another goal for the hemlock component is to expand their ages and numbers in these stands.

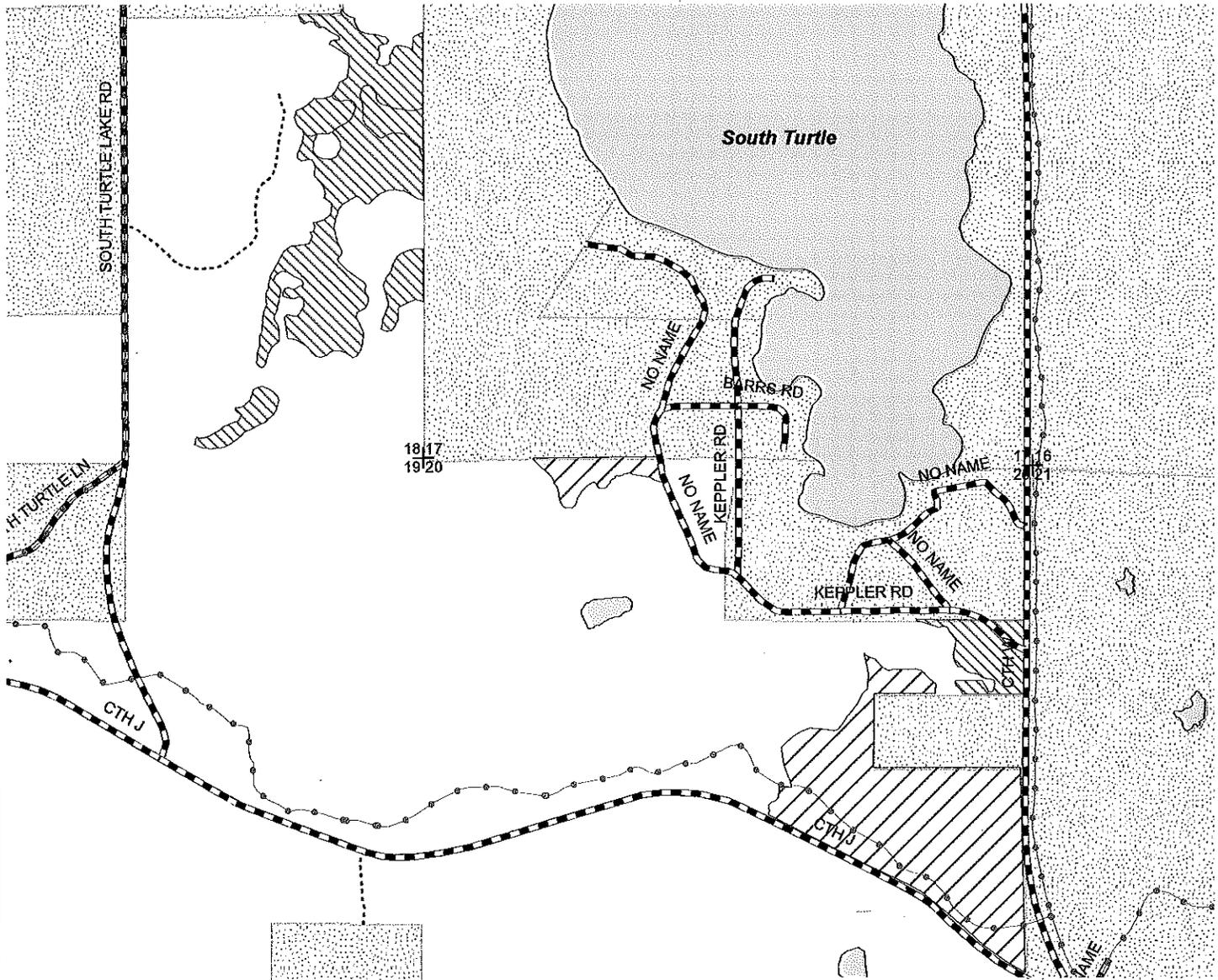
In the Seed Tree Area, small areas of forested wetland, stand 2, may be harvested for access to adjacent stands and for age diversity.

In the Select Harvest Area, stands 3, 5 and 10 are 80 year old hardwoods and white birch with scattered old hemlock trees. Harvest prescriptions are cut the aspen, white birch, balsam fir and select maple for natural regeneration. Hemlock will not be cut and will add to the natural regeneration of these stands.

In the Designated Area, stand 11 is 70 year old balsam fir. This stand will be clearcut for natural regeneration of hardwoods and balsam fir. There will be residual of pines and other hardwoods. There is evidence of some pine plantings.

Brush Lake is a Wilderness Lake designation. There is a one quarter mile no management zone around it. Biomass harvest is approved for stands as soils are appropriate on upland stands.

**Northern Highland – American Legion State Forest
 C250H Stands 3, 4 and 16 Turtle Lake/Keppler Road 130 acres
 Town of Winchester, Vilas County, T43N R5E Sec. 18 & 20
 NHAL – SF Master Plan: Area 1 – Winegar Moraines – Forest Production**



1:17,000



Map produced by
 Jeffrey Olsen &
 Paul Schultz, 2/13

Legend

- Section Corner
- Woods Roads
- Snowmobile Trails
- Highways and Town Roads
- Selection Proposed Area
- Regeneration Proposed Area
- Lakes
- Private Lands

Objectives for this zone of Area 1 are to manage to maintain and enhance existing stands of northern hardwood to increase age diversity and maintain stand vigor and health. Also to maintain areas of early successional forest in mixed forest stands. Management will retain and encourage yellow birch, hemlock, white pines as well as a diversity of hardwood tree types on aspen dominated harvest sites.

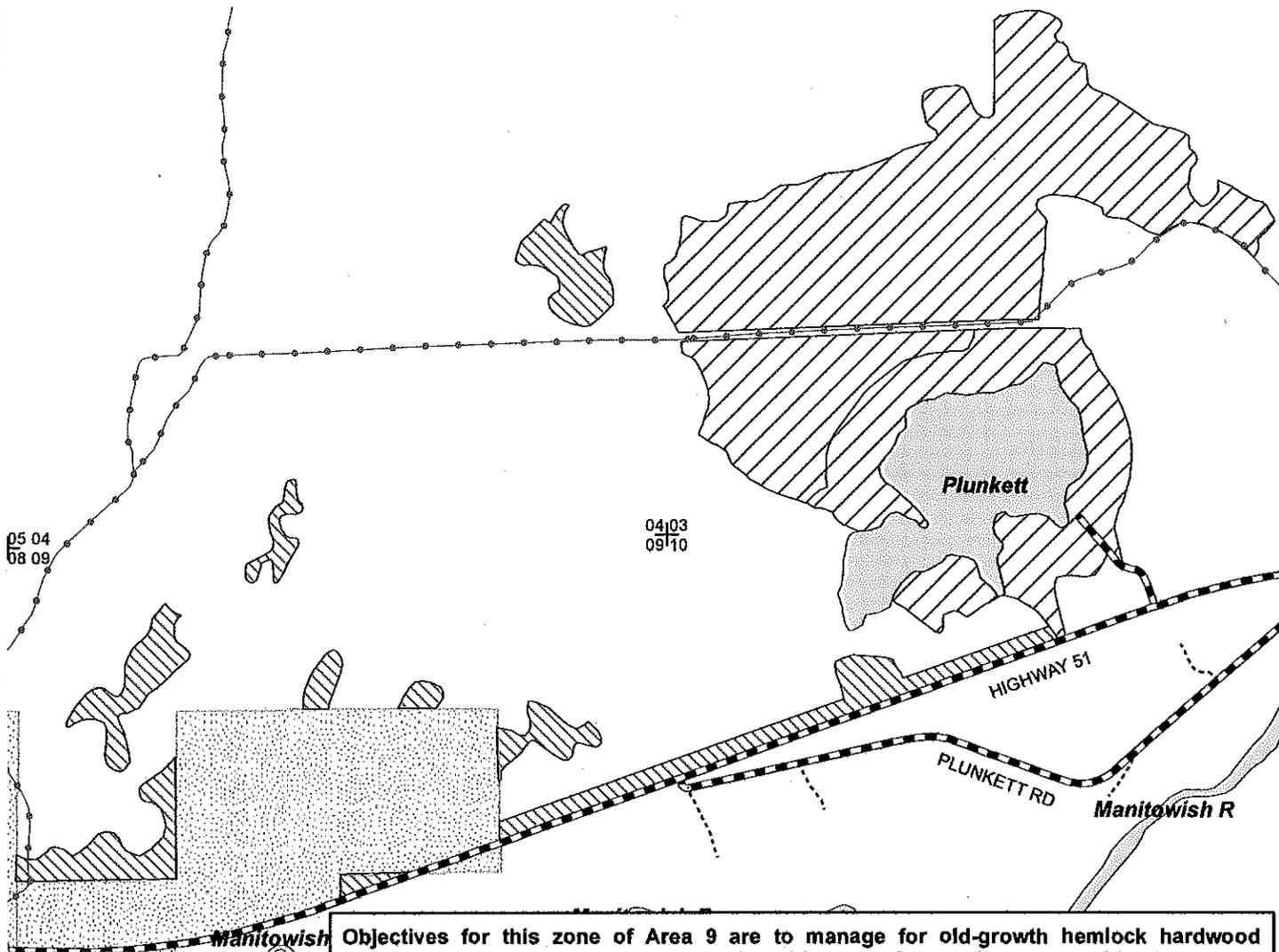
In the Regeneration Area, stands 4 and 16 are 58 and 64 years old. Harvest goals now are to conduct a regeneration harvest for these stands to promote aspen and a small component of hardwoods and retain any pine and hemlock individuals.

In the Selection Area, stand 3 is northern hardwood type with a previous thinning harvest in 1998. This selective harvest will also promote large hardwoods, salvage storm damaged trees and promote hardwood regeneration.

Access is good to all stands with existing roads. The snowmobile trail in stand 3 of the area will be used for access and hauling. There is a network of old woods roads throughout the sale areas.

Biomass harvesting is allowed in all stands.

**Northern Highland – American Legion State Forest
 C284H Stands 5 and 6 C285H Stands 2, 10 and 14 Plunkett Lake 2 276 acres
 Town of Mercer, Iron County, T42N R4E Sec. 3, 4, 9, 10
 NHAL – SF Master Plan: Mgmt. Area 9 – Hemlock Hardwoods
 and a small part of Area 2 – Manitowish Peatlands – Native Community**



Objectives for this zone of Area 9 are to manage for old-growth hemlock hardwood communities. This strategy is to develop old growth forest. Short term objectives are to increase age diversity, composition and patch size of stands, emphasizing hemlock, white pine, sugar maple, yellow birch and basswood. White birch stands will be managed to remove early successional species and move the stands to hemlock and northern hardwood species. Aspen and white pine stands in the Manitowish Peatlands will be managed to promote pine and aspen regeneration, leaving most large white pines and other long lived species.

In the Hardwood Area, stands 5 and 6 are over 100 years old and stand 5 has been managed with aspen, white birch and balsam fir cut in 1995. Harvest goals now are to select cut northern hardwoods to promote natural regeneration of these species and encourage the hemlock and northern hardwoods into an old growth character. Many large, old trees, snags and den trees will be left to contribute to the old growth structure. Post-harvest scarification will be incorporated to prepare a seed bed suited to hemlock, yellow birch and white pine regeneration.

In the White Pine Area, stands 2, 10 and 14 are white pine, aspen and white birch; they will be thinned to promote the health and old growth character of white pine and northern hardwoods with some early successional patches from the aspen and birch removal. This harvest of the scattered patches will also promote large pines and some aspen regeneration.

Access is good to all stands with existing roads off of highway 51. The snowmobile trail along the ROW of the area will be used for access and hauling. There is a network of old woods roads throughout the sale area. Biomass harvesting is not allowed in old growth management stands.



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Jeffrey Olsen &
 Paul Schultz, 2/13

Legend

- ⊕ Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ White Pine Proposed Area
- ▧ Hardwood Proposed Area
- ▩ Lakes
- ▤ Private Lands

Northern Highland American Legion State Forest

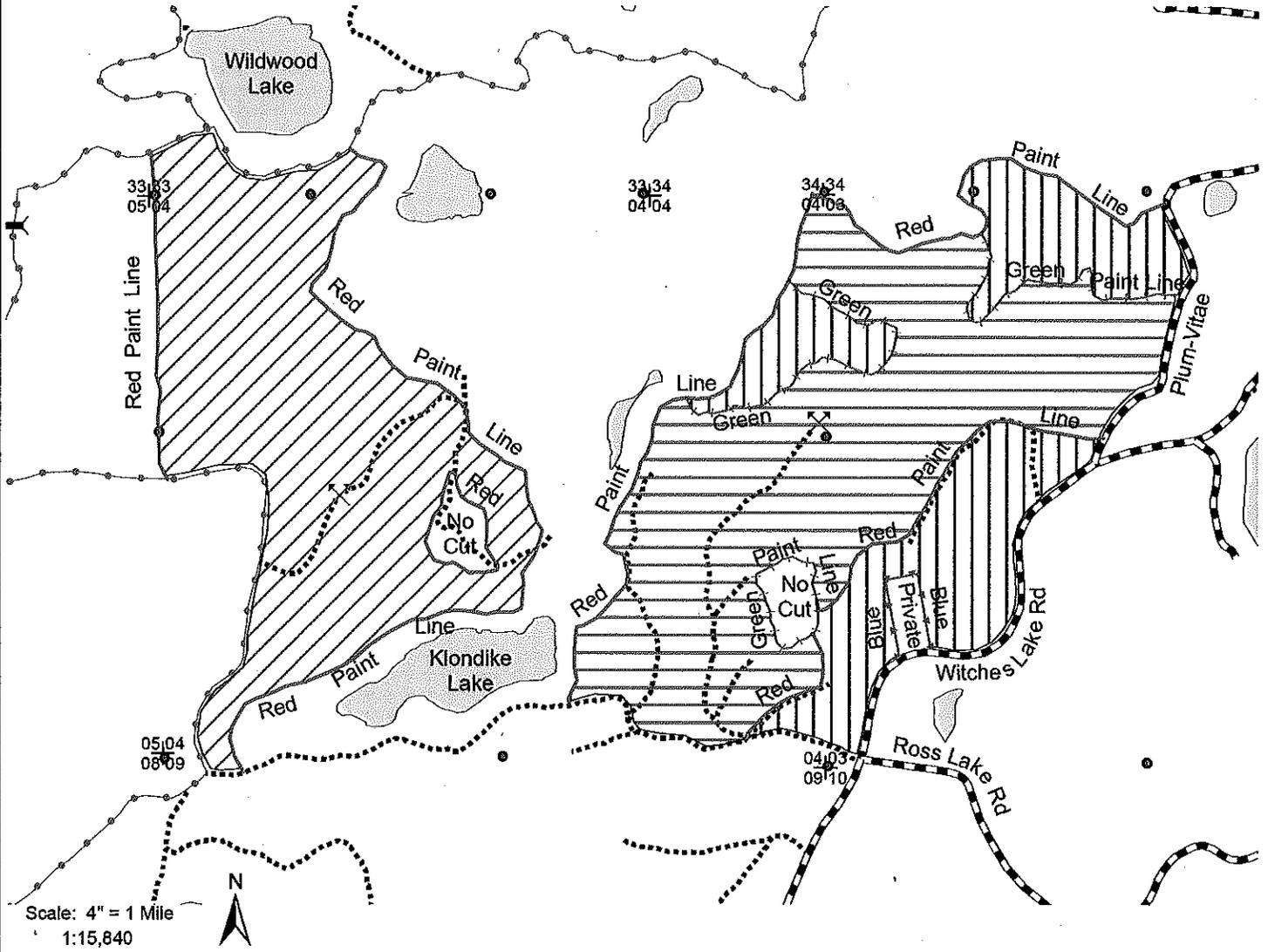
Klondike Lake Marking Map -- 457 Acres

Compartment 113H

Town of Arbor Vitae, Vilas County, T40N-R7E, Sections 3 & 4

Master Plan: Management Area 4 -- Vilas Sandy Plains Central -- Forest Production

Master Plan: Management Area 12 -- Mixed Forest -- Native Community



Scale: 4" = 1 Mile
1:15,840



Legend	
	Blue Paint Lines Klondike
	Green Paint Lines Klondike
	Red Paint Lines Klondike
	Oak NCA
	Oak FP Klondike
	NH Oak NCA
	Vilas GPS Corners
	comp113hwoodsrd
	Section Corner
	Highways and Town Roads
	Snowmobile Trails
	Woods Roads
	Lakes
	Berms

Oak/Aspen Forest Production (99 Acres): Designated Cut Species: A, BW, Maple, F. Marked Species: Oak, PW, PR. Intermediate thin for most areas, shelterwood densities where regen is established. Areas dominated by aspen managed for aspen. Some green tree retention of designated cut species for wildlife.

Oak NCA (189 Acres): Designated Cut Species: A, BW, F. Marked Species: Oak, Hardwood, Pine. Intermediate thin for most areas, shelterwood densities if advanced regen is present. Some green tree retention of designated cut species.

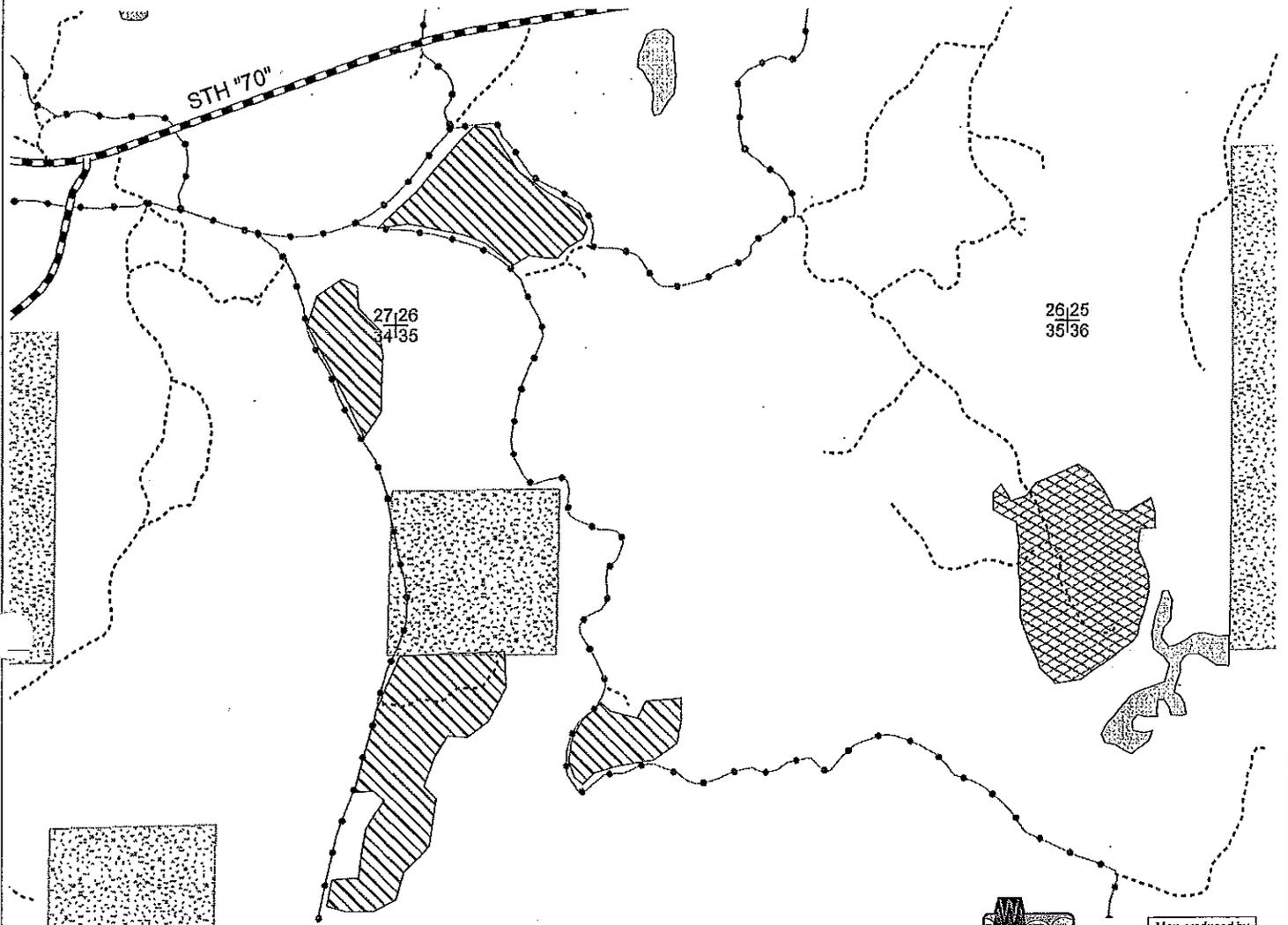
NH/Oak NCA (169 Acres): Designated Cut Species: A, BW, F. Marked Species Oak, Hardwood, Pine. Uneven-Aged Mgt with canopy gaps. Some green tree retention of designated cut species.

Map produced by
Craig Dalton, 6/12



**Northern Highland American Legion State Forest
 BORDER CREEK SPRINGS -- 98 Acres
 Compartment 107H**

**Towns of St. Germain and Arbor Vitae, Vilas County, T40N-R7E, Sections 26, 27, 34, 35, & 36
 Master Plan: Management Area 5 -- Big Arbor Vitae Loamy Hills -- Forest Production
 Master Plan: Management Area 11 -- Red and White Pine -- Native Community**



Scale: 4" = 1 Mile
 1:15,840



Legend

- Natural Pine
- Aspen
- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Lakes
- Private Lands



Map produced by
 Craig Dalton, 8/12

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, early successional forest types are to be maintained. A goal for the Native Community Pine is to develop sites that have open woodland structure.

The Natural Pine site will be thinned removing roughly one-third to one-half of the trees. This thinning operation will maintain the growth and vigor of the pine stand. Hardwood saplings growing in the understory will be treated to develop a more open woods.

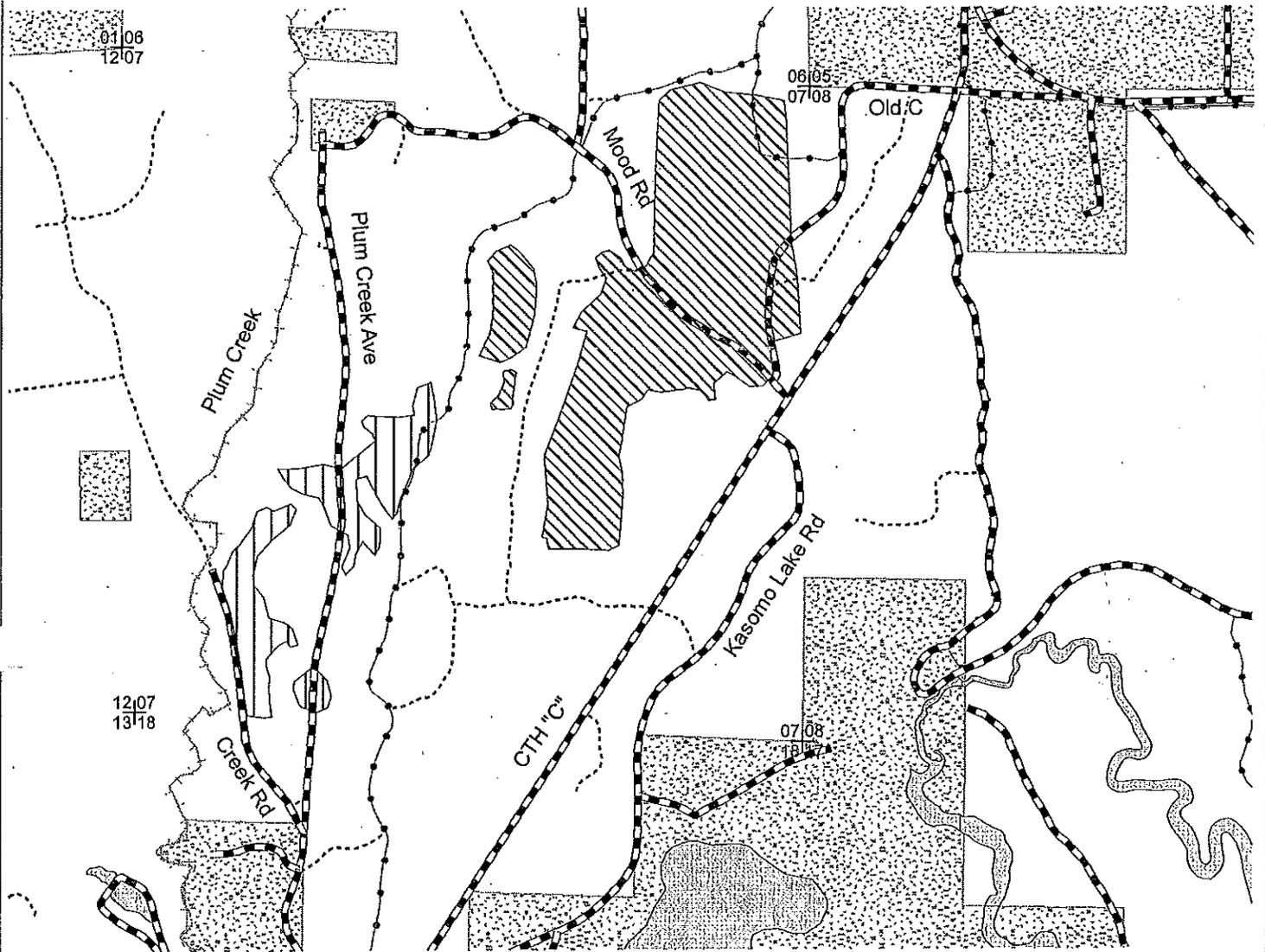
The Aspen Areas will be regenerated through harvesting the majority of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. The area contains a large acreage of this type and age but only a portion is being regenerated at this time to diversity the age classes.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Northern Highland American Legion State Forest
 MOOD ROAD RED PINE -- 122 Acres
 Compartment 73H

Town of St. Germain, Vilas County, T40N-R8E, Section 7

Master Plan: Management Area 4 -- Vilas Sandy Plains Central -- Forest Production



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Craig Dallan, 5/12

Legend

- Red Pine Plantations
- Pine Mix
- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Rivers and Streams
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, early successional forest types are to be maintained.

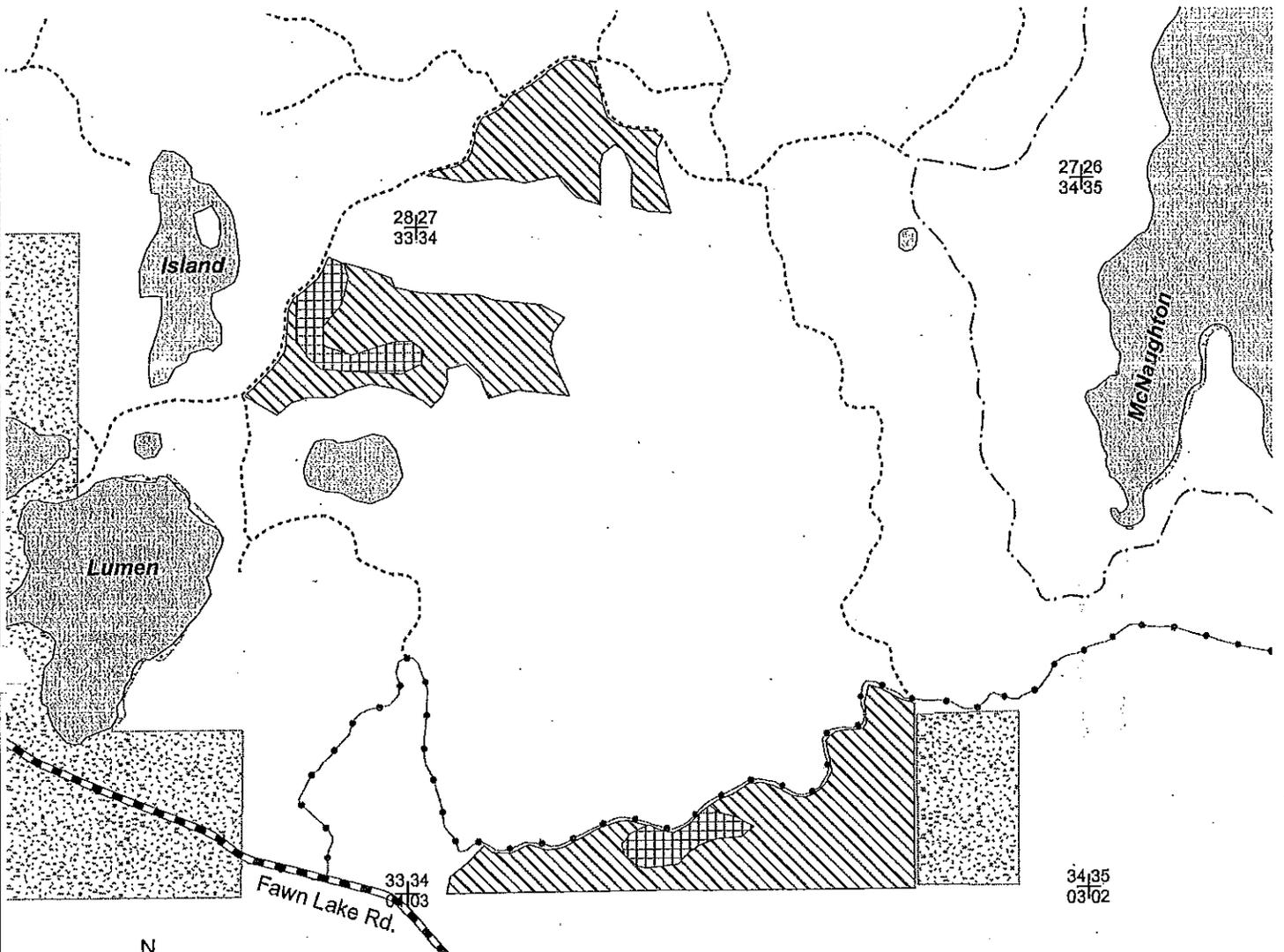
The Red Pine Plantations will be thinned removing roughly one-third of the trees. This thinning operation will maintain the growth and vigor of the pine stand and provide access to equipment throughout the stand.

The Pine Mix area will have the early successional short-lived species harvested along with the remaining red pine and white pine thinned.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Northern Highland American Legion State Forest
 LUMEN LAKE ASPEN -- 121 Acres
 Compartment 41A

Town of Lake Tomahawk, Oneida County, T38N-R7E, Section 27, 33 & 34
 Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
 1:15,840

Legend

-  Aspen Mix
-  Hardwood Mix
-  Section Corner
-  Highways and Town Roads
-  Woods Roads
-  Snowmobile Trails
-  McNaughton Ski Trail
-  Lakes
-  Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape.

The Aspen Mix will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. This area contains additional acreage of this age and type but only a portion is being regenerated at this time to diversify the age classes.

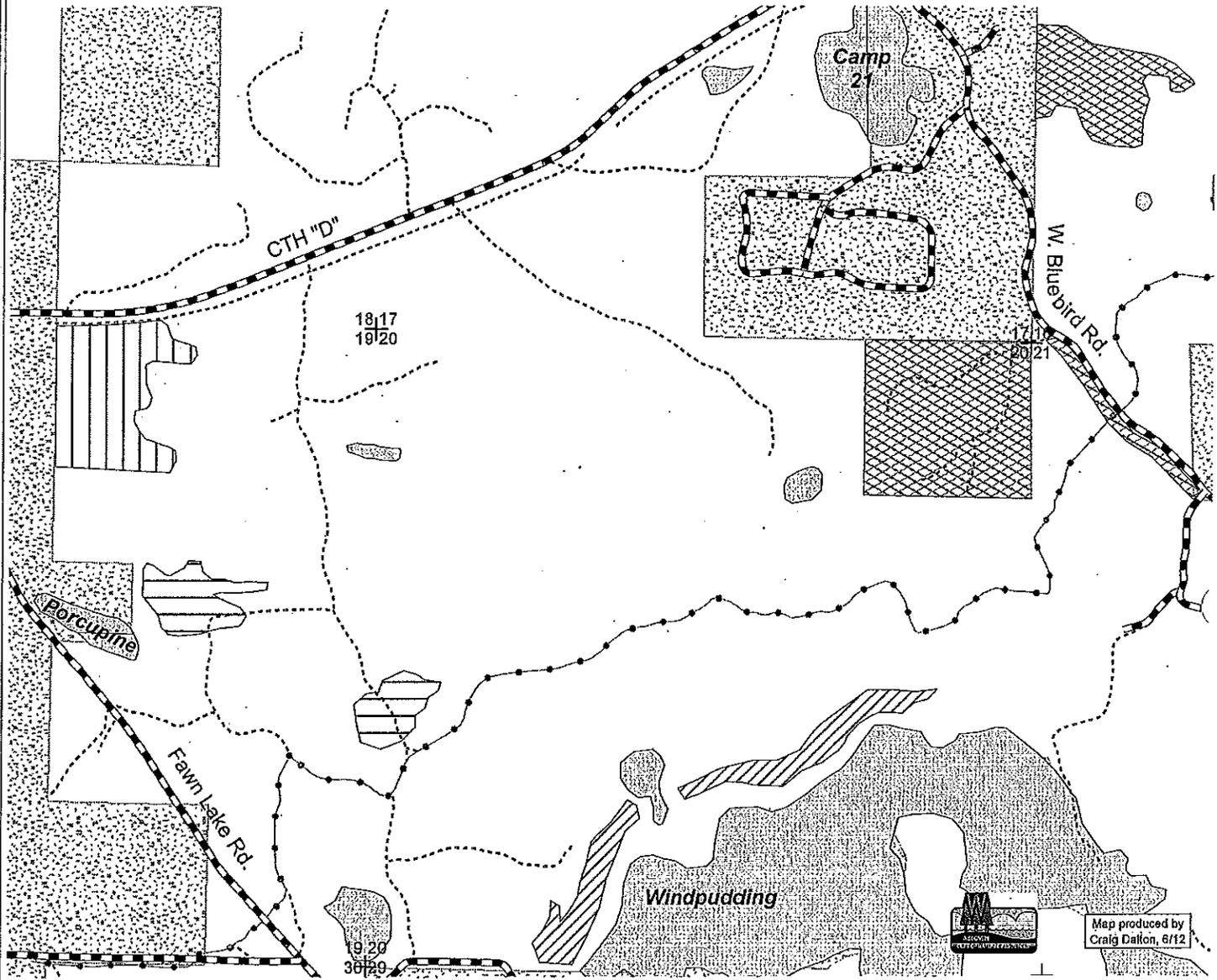
The Hardwood Mix will have the early successional species removed and the remaining maple and oak thinned. Low quality portions of this type will be converted to aspen type.

No seasonal restrictions will be imposed and biomass harvesting will be allowed.



**Northern Highland American Legion State Forest
 CTH D/BLUEBIRD -- 116 Acres
 Compartment 34A & 38A**

**Town of Lake Tomahawk, Oneida County, T38N-R7E, Section 17, 18, 19, & 20
 Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production
 Master Plan: Management Area 13 -- Special Aquatic -- Native Community**



Map produced by
 Craig Dalton, 6/12

Scale: 4" = 1 Mile
 1:15,840



Legend	
	Natural Area
	Oak
	Natural Pine
	Aspen
	Section Corner
	Highways and Town Roads
	Woods Roads
	Snowmobile Trails
	Lakes
	Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape. The uplands of the Native Community Area area to be managed for longer-lived oak and pine.

The Aspen Area will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape.

The Natural Pine Areas will undergo a thinning where roughly one-third of the trees will be removed. This thinning operation will maintain the growth and vigor of the pine stands.

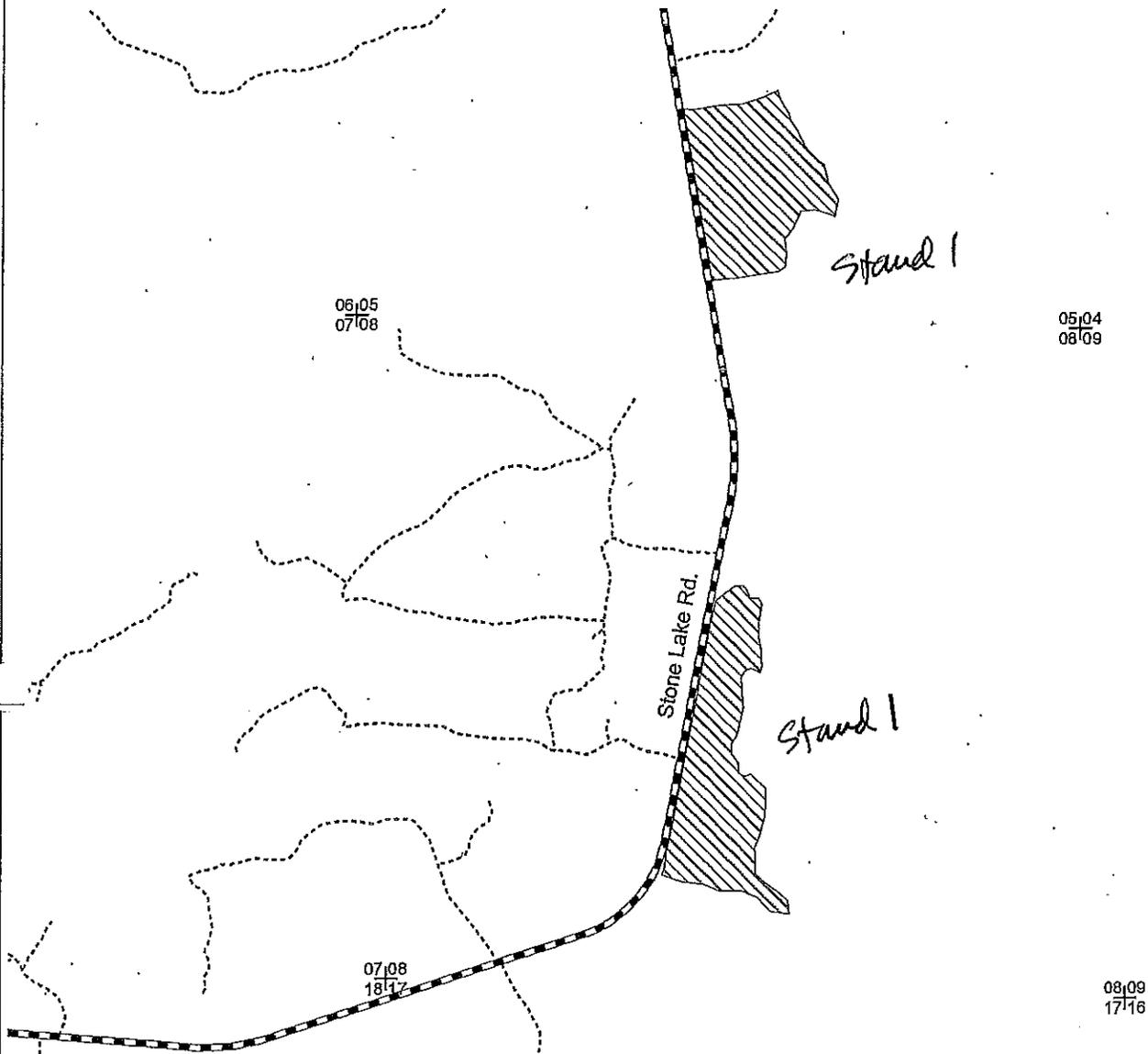
The Natural Area will have the shorter-lived species (Aspen, White Birch, Maple, and Balsam Fir) removed and allow for the longer-lived oak and pine to develop and dominant.

The Oak Areas will undergo a thinning to prepare the stand for future regeneration efforts. This will require the majority of the shorter-lived species to be removed and the remaining oak and pine to be lightly thinned.

Seasonal oak wilt restrictions will be imposed where no cutting will be allowed between April 15 and July 15. Biomass harvesting will not be allowed.

Northern Highland American Legion State Forest
STONE LAKE ROAD ASPEN -- 56 Acres
 Compartment 78A

Town of Sugar Camp, Oneida County, T38N-R9E, Sections 5 & 8
Master Plan: Management Area 7 -- Ruffed Grouse Demonstration -- Habitat Management



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Craig Dalton, 6/12



Legend

- Aspen
- Section Corner
- Highways and Town Roads
- Woods Roads
- Snowmobile Trails
- Lakes
- Private Lands

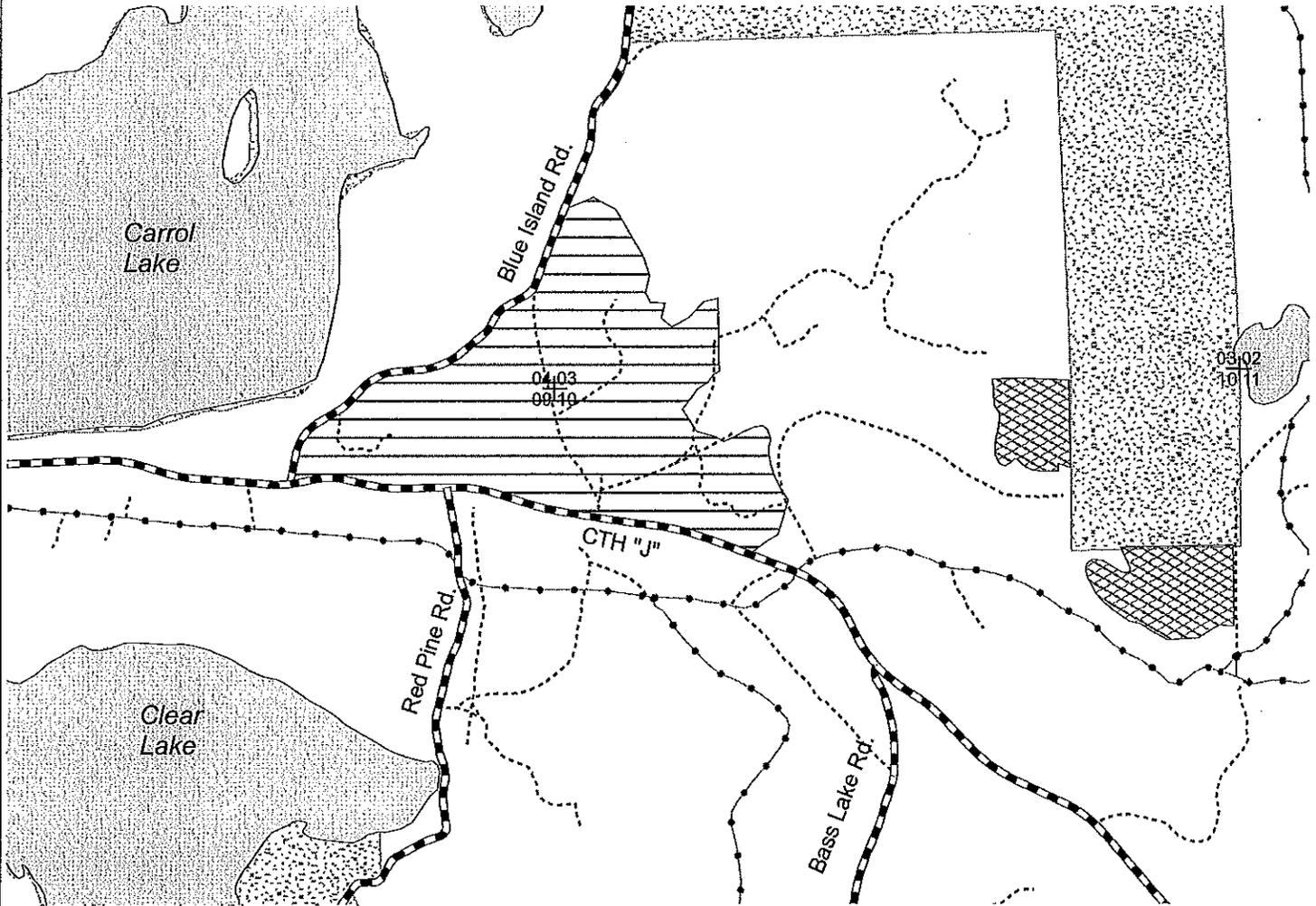
The objectives for this part of the Forest are to maintain aspen dominance and increase age-class diversity for ruffed grouse habitat.

The Aspen Areas will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. This area contains additional acreage of this age and type but only a portion is being regenerated at this time to diversify the age classes.

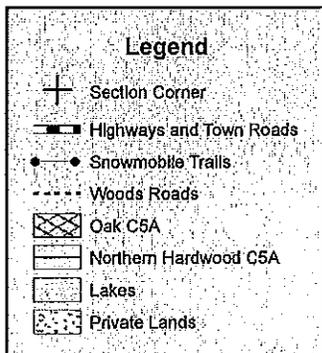
No seasonal restrictions will be applied and biomass harvesting will be allowed.

Northern Highland American Legion State Forest
BLUE ISLAND HARDWOOD -- 135 Acres
 Compartment 5A

Town of Woodruff, Oneida County; T39N-R7E, Sections 3, 4, 9, & 10
Master Plan: Management Area 5 -- Big Arbor Vitae Loamy Hills -- Forest Production



Scale: 4" = 1 Mile
 1:15,840



The objectives for the this part of the Forest are to increase the pine component in areas not dominated by pine. Additionally, the white birch and red oak types are to be maintained and expanded. Also, the maintenance of mixed forests dominated by older trees including northern hardwoods is a long-term goal.

The Oak areas will undergo an intermediate thin. Short-lived species will be harvested along with selected marked oak and pine.

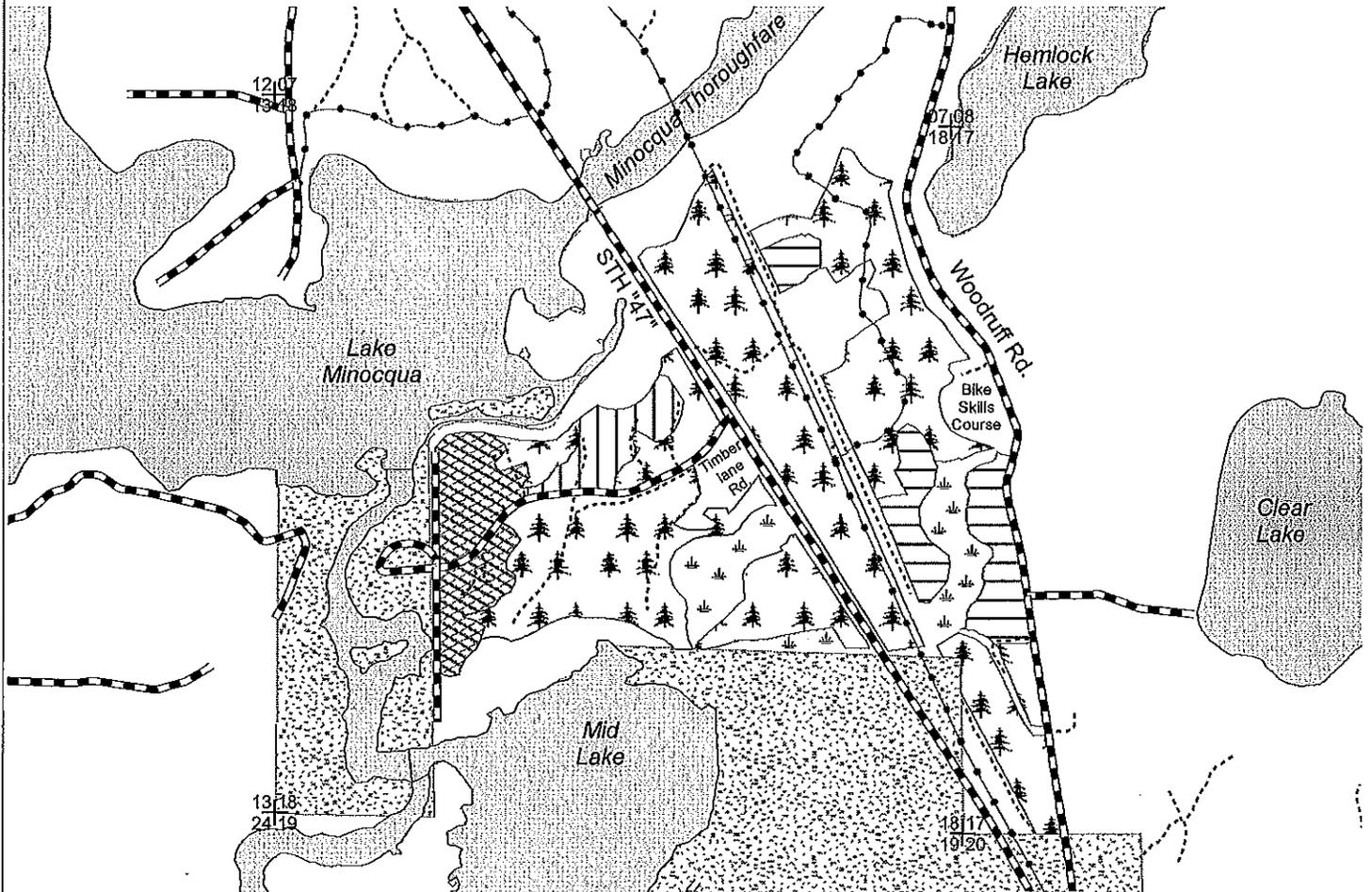
The Northern Hardwood block with undergo an all-aged selective harvest. Roughly one-third of the trees will be harvested overall. Canopy gaps will be used to some degree to help move the stand to a more all-aged composition and structure.

Seasonal oak wilt restrictions will be implemented and biomass harvesting wil not be allowed as parts of the sale area have nutrient poor soils.



Map produced by
 Craig Dalton, 2/13

Northern Highland American Legion State Forest
MINOCQUA THOROUGHFARE -- 201 Acres
Compartment 13A
Town of Woodruff, Oneida County; T39N-R7E, Sections 17 & 18
Master Plan: Management Area 22 -- Clear Lake -- Recreation Management



Map produced by
 Craig Dalton, 2/13

Scale: 4" = 1 Mile
 1:15,840



Legend	
	Keg/Swamp
	Section Corner
	Highways and Town Roads
	Snowmobile Trails
	Woods Roads
	Natural Pine
	Aspen/Birch Mix C13A
	Northern Hardwood C13A
	Oak C13A
	Lakes
	Private Lands

The objectives for this part of the Forest are to develop a complex of hemlock/northern hardwoods, red pine/white pine, & oak forests with an emphasis on old growth characteristics. Recreational activities are to be accounted for in all management proposals.

In the Natural Pine areas a variable density thinning technique will be employed. Some areas will be lightly thinned and other areas with advanced regeneration in the understory will be heavily thinned.

In the Aspen/Birch areas shorter-lived species will be harvested and succession to longer-lived species hastened.

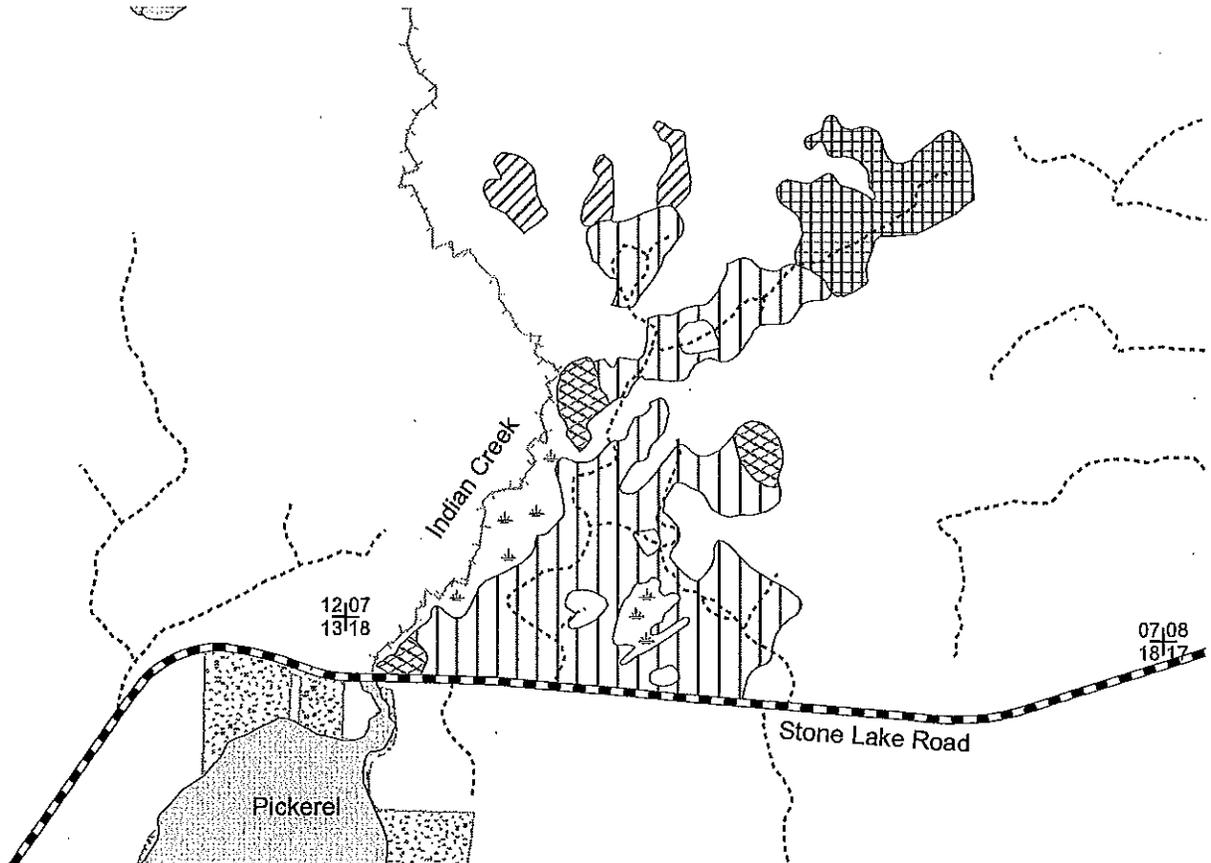
The Northern Hardwood areas will undergo an all-aged selective harvest. Roughly one-third of the trees will be harvested overall. Canopy gaps will be incorporated into the marking regime when opportunities arise to move the stand to a more typical all-aged composition and structure.

The Oak areas will undergo a harvest ranging from an intermediate thin to the first stage of a shelterwood harvest. This area is suited to the oak type and it will be maintained.

Seasonal oak wilt restrictions will be implemented for the oak areas and biomass harvesting will not be allowed due to nutrient poor soils and master plan designation.

**Northern Highland American Legion State Forest
INDIAN CREEK ASPEN -- 110 Acres
Compartment 80A**

**Town of Sugar Camp, Oneida County; T38N-R9E, Sections 7 & 18
Master Plan: Management Area 7 -- Ruffed Grouse Demonstration -- Habitat Management
Master Plan: Management Area 10 -- Peatland Wetlands -- Native Community**



Map produced by
Craig Dalton, 2/13

Scale: 4" = 1 Mile
1:15,840



Legend

- Section Corner
- Highways and Town Roads
- Woods Roads
- Aspen Mix C80A
- Natural Red Pine Mix C80A
- Jack Pine Salvage C80A
- Hemlock/Hardwood Mix C80A
- Lakes
- Private Lands

The objectives for the Native Community portions of this sale are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen and birch types are to be maintained through active management. The objectives for the Habitat Management portions of this proposed sale are to maintain aspen dominance and increase age-class diversity for ruffed grouse management.

The Natural Red Pine Mix will be thinned removing roughly one-third of the standing trees. This thinning will harvest the shorter-lived species and select marked pine which will help to maintain the growth and vigor of the pine stand.

The Aspen Mix will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. This area contains additional acreage of this age and type but only a portion is being regenerated to diversify the age classes.

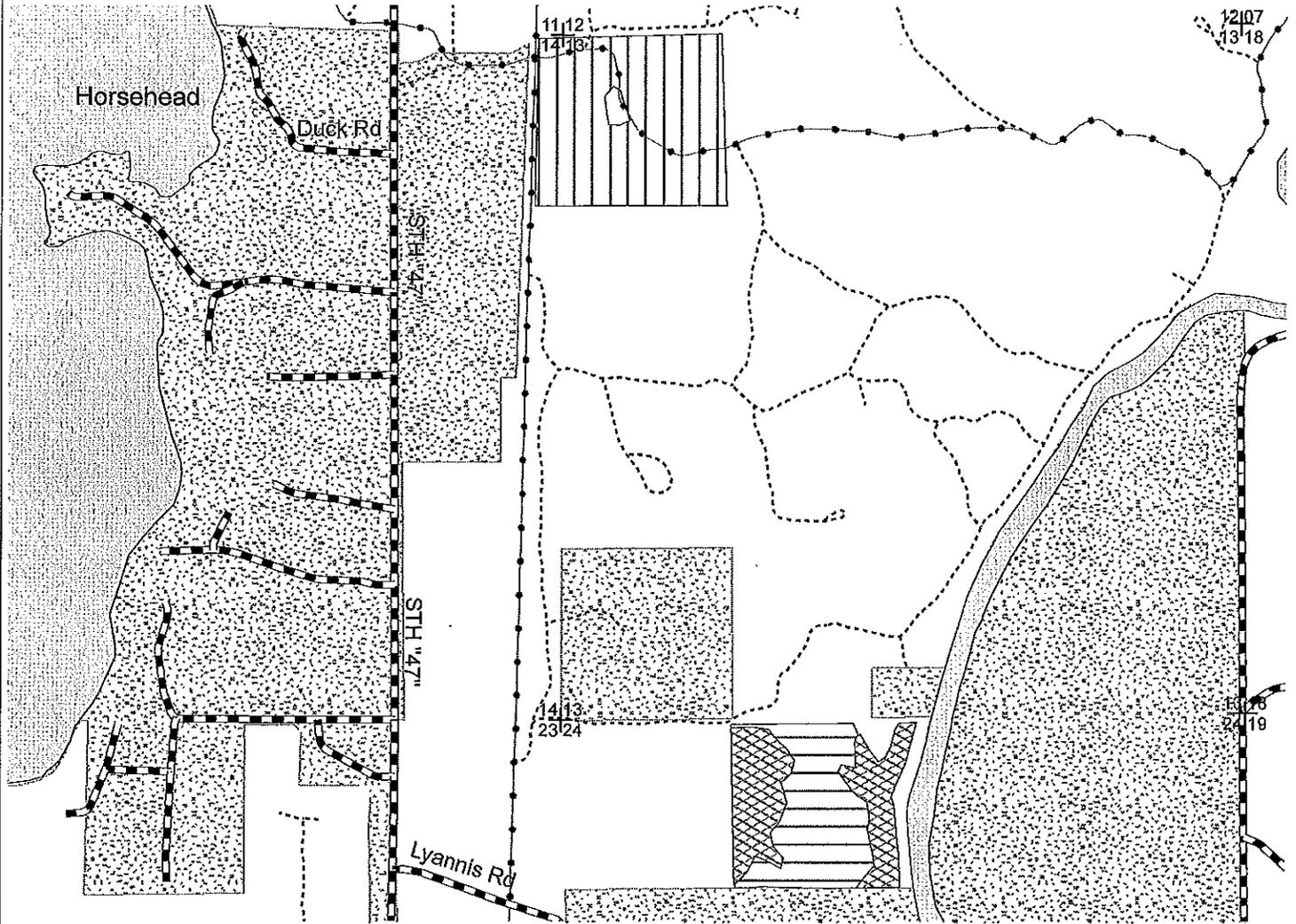
In the Jack Pine Salvage the overmature declining jack pine which remain will be salvaged and the advanced regeneration in the understory released to encourage the development into the next stand.

In the Hemlock/Hardwood Mix a light selectively marked entry into the stand will take place where roughly one-quarter to one-third of the trees will be removed. Hemlock and yellow birch will be favored to dominate the residual stand.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils and master plan classification.

Northern Highland American Legion State Forest
 WISCONSIN RIVER ASPEN -- 79 Acres
 Compartment 30A

Town of Lake Tomahawk, Oneida County, T38N-R7E, Sections 13, 14 & 24
 Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Map produced by
 Craig Dalton, 2/13

Scale: 4" = 1 Mile
 1:15,840



Legend

- ✚ Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- ▭ Plantation
- ▨ Pine Mix C30
- ▩ Aspen Mix C30
- ▧ Lakes
- ▦ Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape.

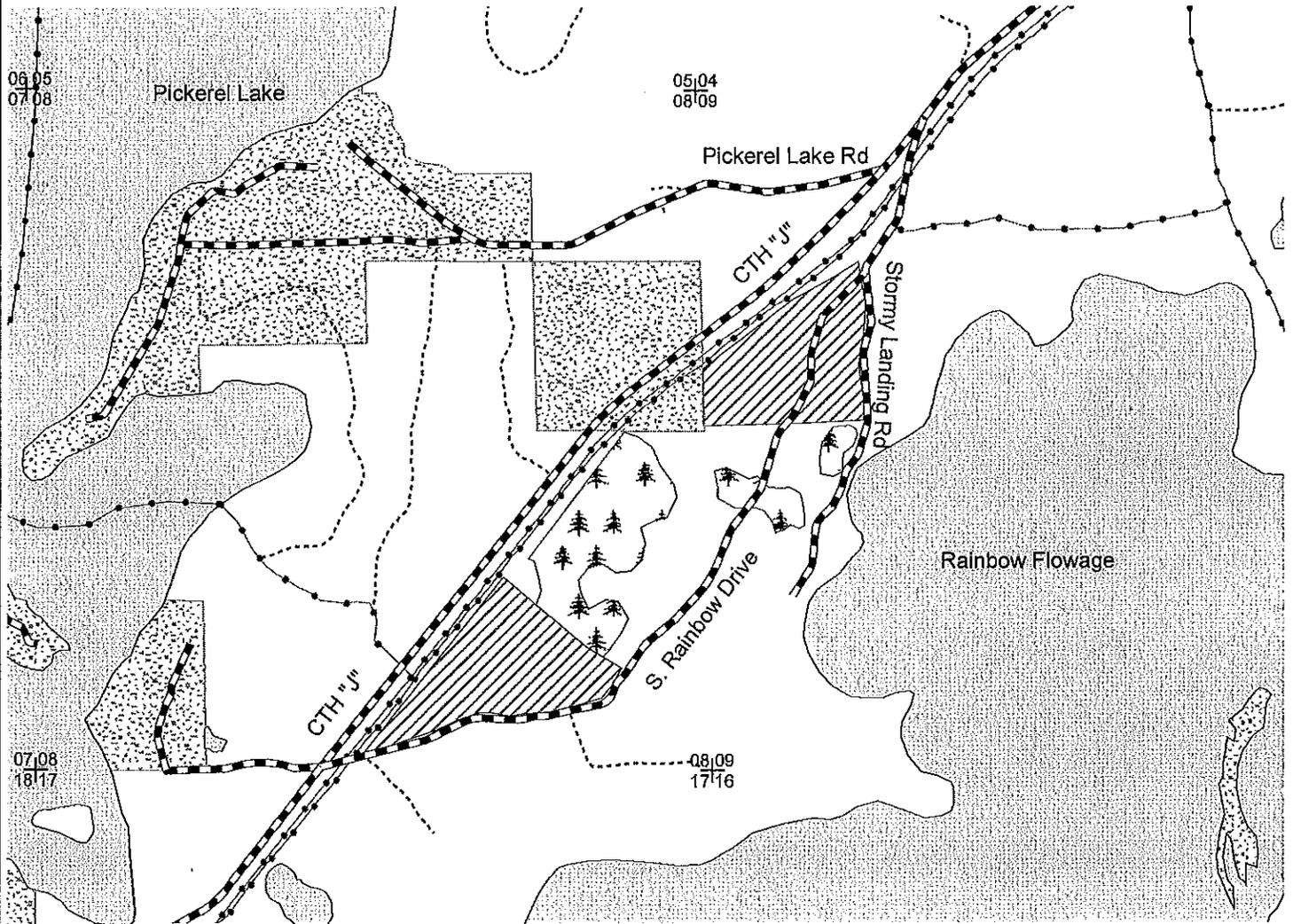
The Plantation will be thinned removing roughly one-third of the standing trees. This thinning operation will help to maintain the growth and vigor of the remaining pine stands.

The Pine Mix or natural pine stand will be thinned removing shorter-lived species and selected individual pine. The thinning will remove roughly one-third of the trees as well and help to maintain the growth and vigor of the remaining stand. An uncut riparian buffer will be left along the river corridor.

The Aspen type will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Northern Highland American Legion State Forest
S. RAINBOW DRIVE PINE -- 79 Acres
Compartment 9A
Town of Newbold, Oneida County, T39N-R8E, Sections 8 & 9
Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
 1:15,840



Legend

- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Row Thin Red Pine C9
- Marked Red Pine C9
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types.

The red pine plantations will be thinned removing roughly one-third of the standing trees. Some areas will be mechanically row thinned while others will have trees marked for removal. These thinnings will help to maintain the growth and vigor of the remaining pine stands.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Map produced by
 Craig Dalton, 2/13



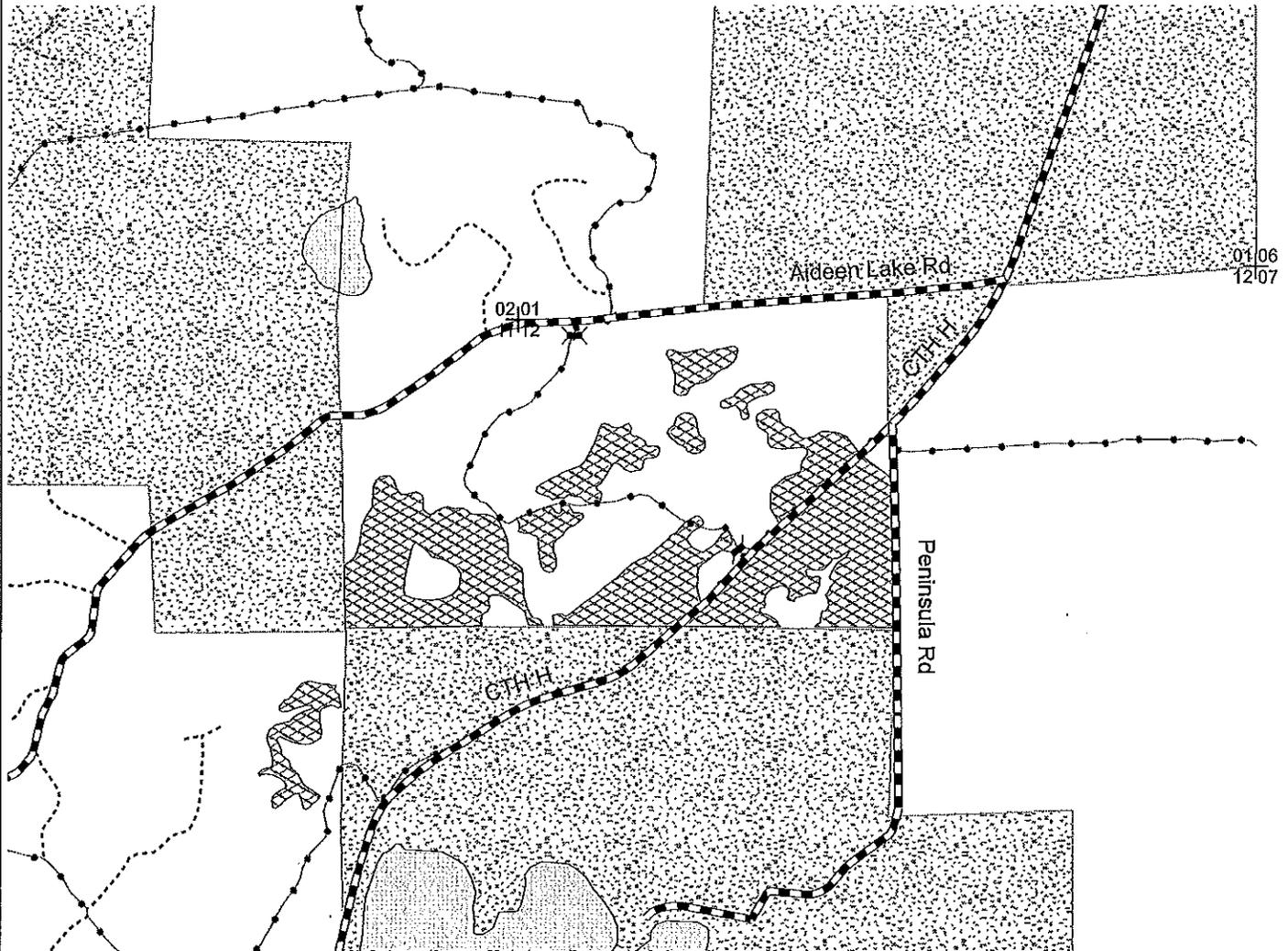
Northern Highland American Legion State Forest

CTH H PINE -- 79 Acres

Compartment 61A

Town of Sugar Camp, Oneida County, T39N-R9E, Sections 11 & 12

Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
1:15,840



Legend

- Gates
- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Red Pine Plantations
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types.

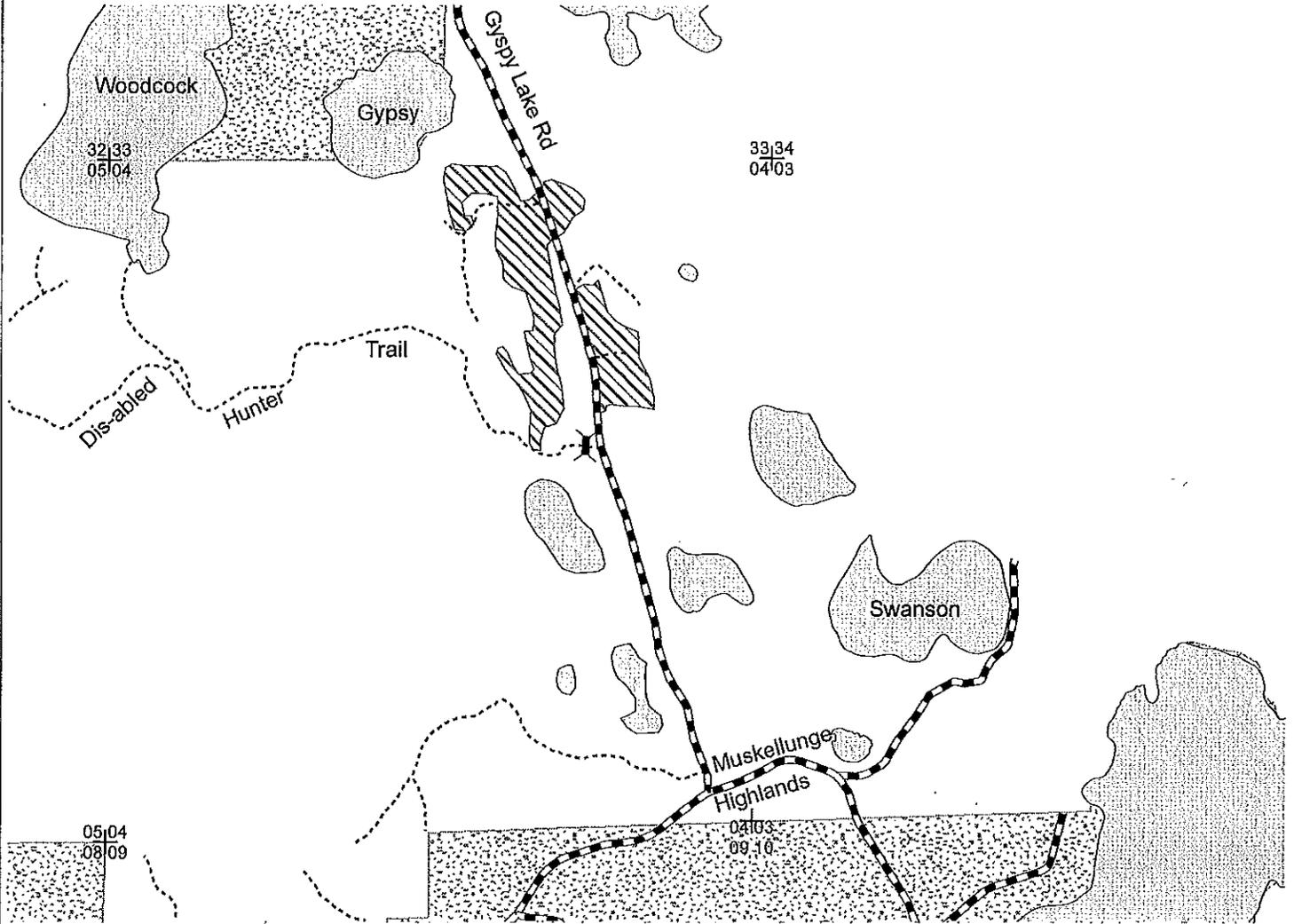
The red pine plantations will be thinned removing roughly one-third of the standing trees. This thinning operation will help to maintain the growth and vigor of the remaining pine stands.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Map produced by
Craig Dalton, 2/13



Northern Highland American Legion State Forest
GYPSY LAKE RD PINE -- 25 Acres
Compartment 72A & 73A
Town of Newbold, Oneida County, T38N-R8E, Section 4
Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
 1:15,840



Legend

- Gates
- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Red Pine Plantations
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types.

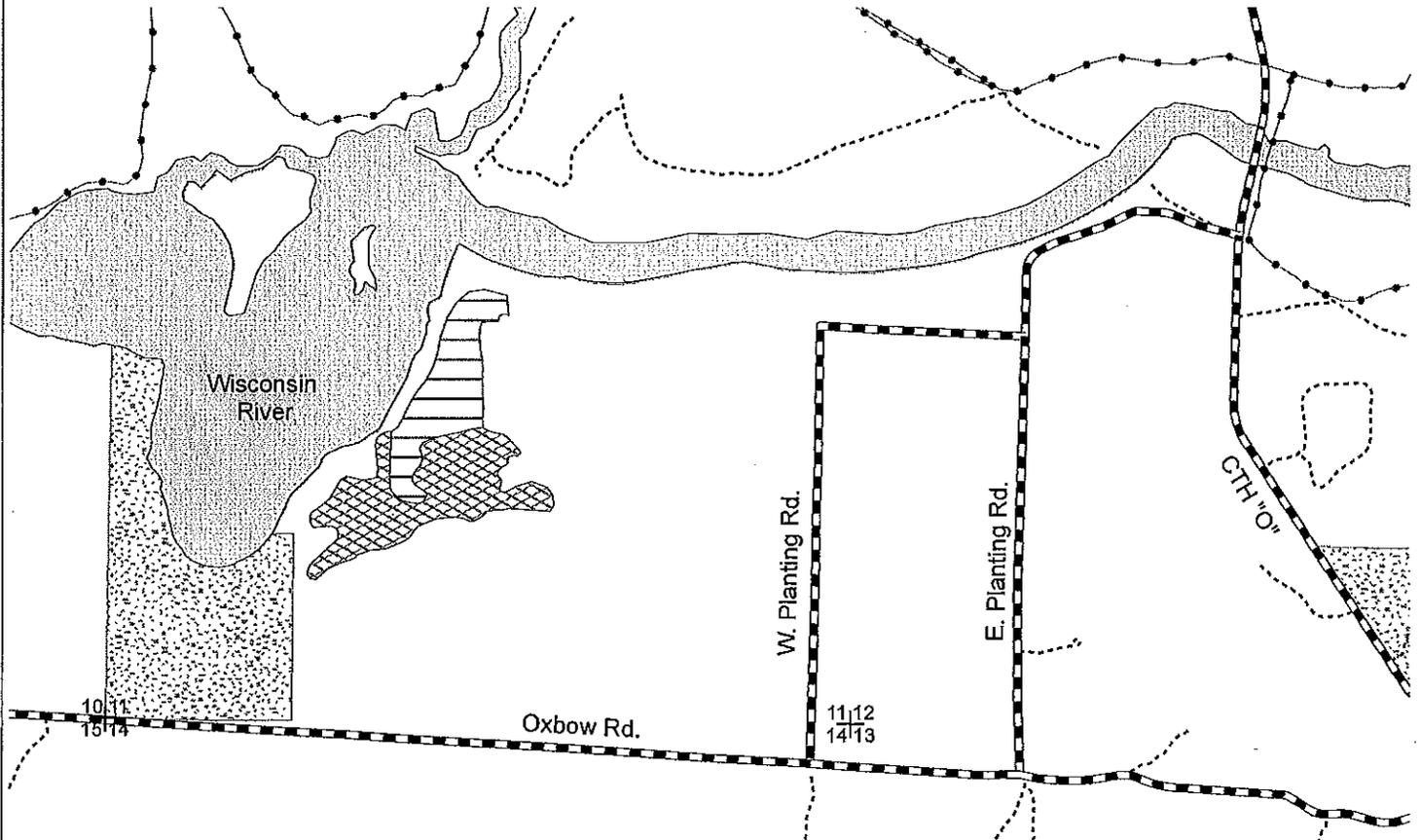
The red pine plantations will be thinned removing roughly one-third of the standing trees. This thinning operation will help to maintain the growth and vigor of the remaining pine stands.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Map produced by
 Craig Dalton, 2/13



Northern Highland American Legion State Forest
WISCONSIN RIVER RED PINE -- 28 Acres
Compartment 53A
Town of Newbold, Oneida County; T39N-R8E, Section 11
Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
 1:15,840



Legend

- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Red Pine Plantation
- Aspen/Jack Pine Mix C53A
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape.

The Red Pine Plantation will be thinned removing roughly one-third of the trees. This thinning will help to maintain the growth and vigor of the remaining pine left in the stand.

The Aspen/Jack Pine Mix will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. An uncut riparian buffer will be left along the river corridor.

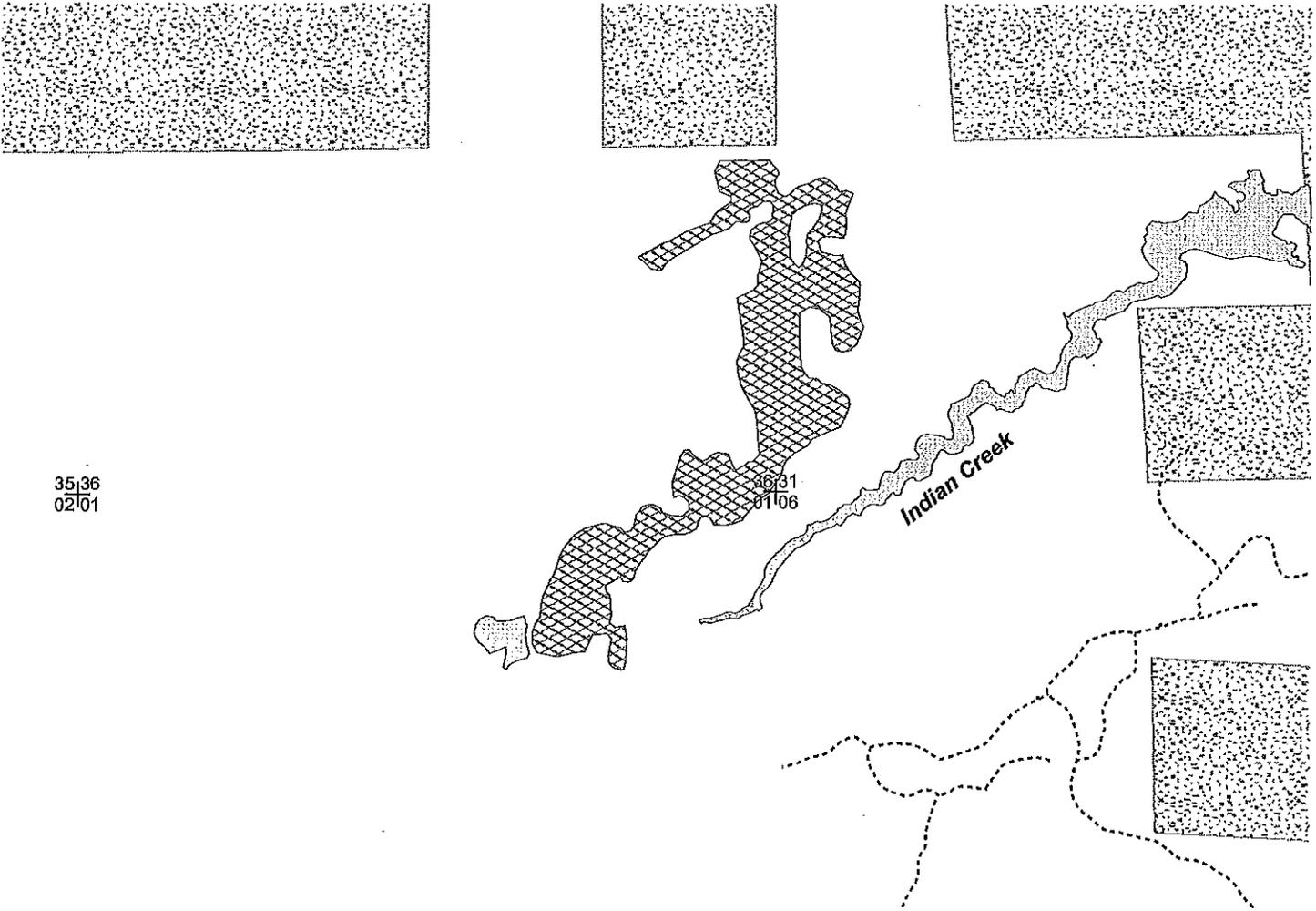
No seasonal restrictions will be imposed and biomass harvesting will be allowed.



Map produced by
 Craig Dalton, 2/13

Northern Highland American Legion State Forest
INDIAN CREEK RED PINE -- 55 Acres
 Compartment 75A

Town of Sugar Camp, Oneida County
 T39N-R8E, Section 36; T39N-R9E, Section 31; T38N-R8E, Section 1
Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production
Master Plan: Management Area 10 -- Peatland Wetlands -- Native Community



35,36
02,01

03,31
01,06

Indian Creek

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types.

The red pine plantations will be thinned removing roughly one-third of the standing trees. This thinning will help to maintain the growth and vigor of the pine stand.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils and master plan classification.

Scale: 4" = 1 Mile
1:15,840



Legend

- Section Corner
- Highways and Town Roads
- Woods Roads
- Red Pine Plantation C75A
- Lakes
- Private Lands

Map produced by
Craig Dalton, 2/13



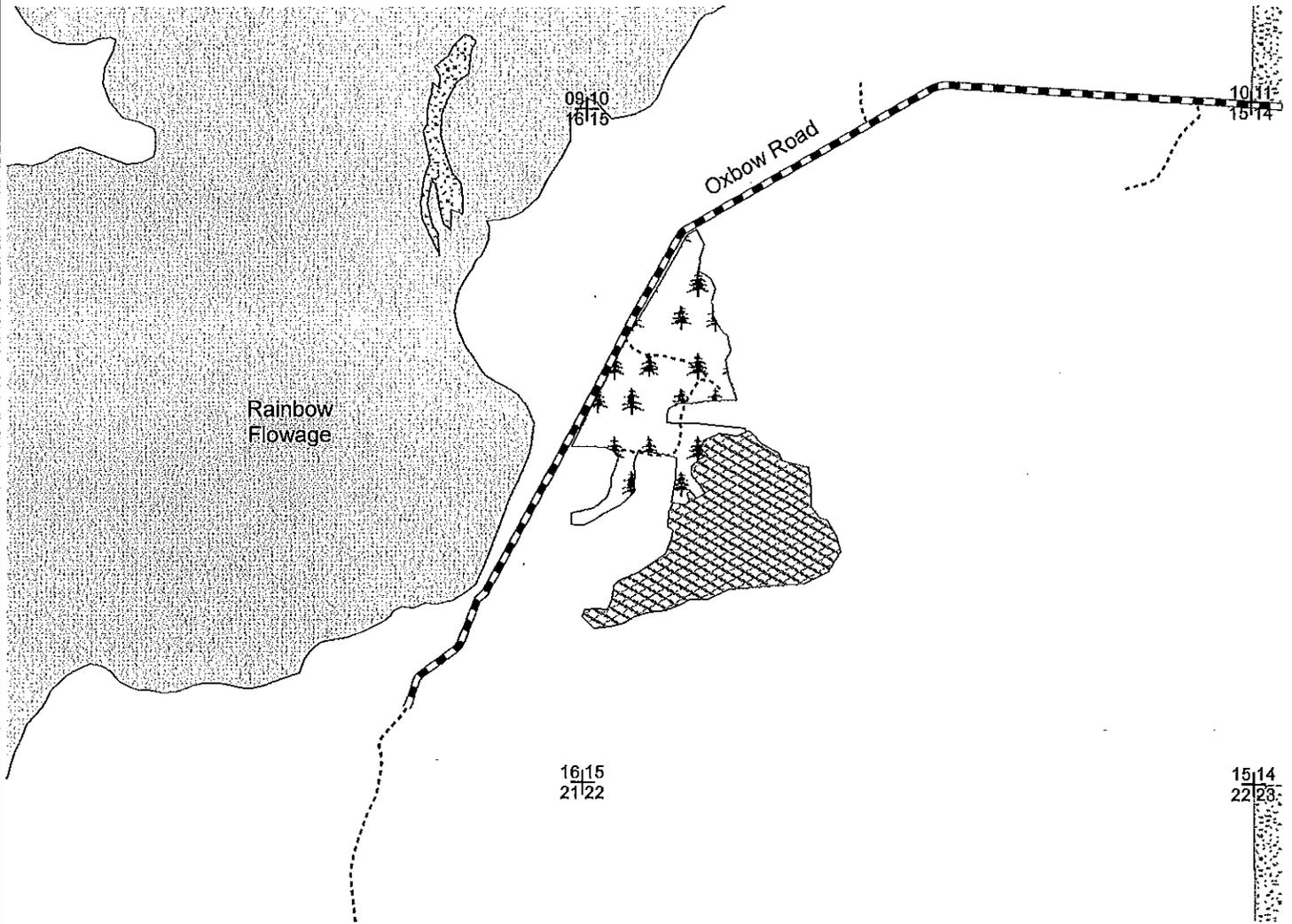
Northern Highland American Legion State Forest

OXBOW ROAD RED PINE -- 63 Acres

Compartment 52A

Town of Sugar Camp, Oneida County, T39N-R8E, Sections 15 & 16

Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Map produced by
Craig Dalton, 2/13

Scale: 4" = 1 Mile
1:15,840



Legend

- Gates
- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Red Pine Plantation
- Aspen Comp 52
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape.

The red pine plantations will be thinned removing roughly one-third of the standing trees. This thinning operation will help to maintain the growth and vigor of the remaining pine stands.

The Aspen type will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. This aspen type covers a significant acreage within this general area. The current cut will harvest and regenerate only a small portion of this aspen type and age for the area.

No seasonal restrictions will be imposed and biomass harvesting will be allowed.

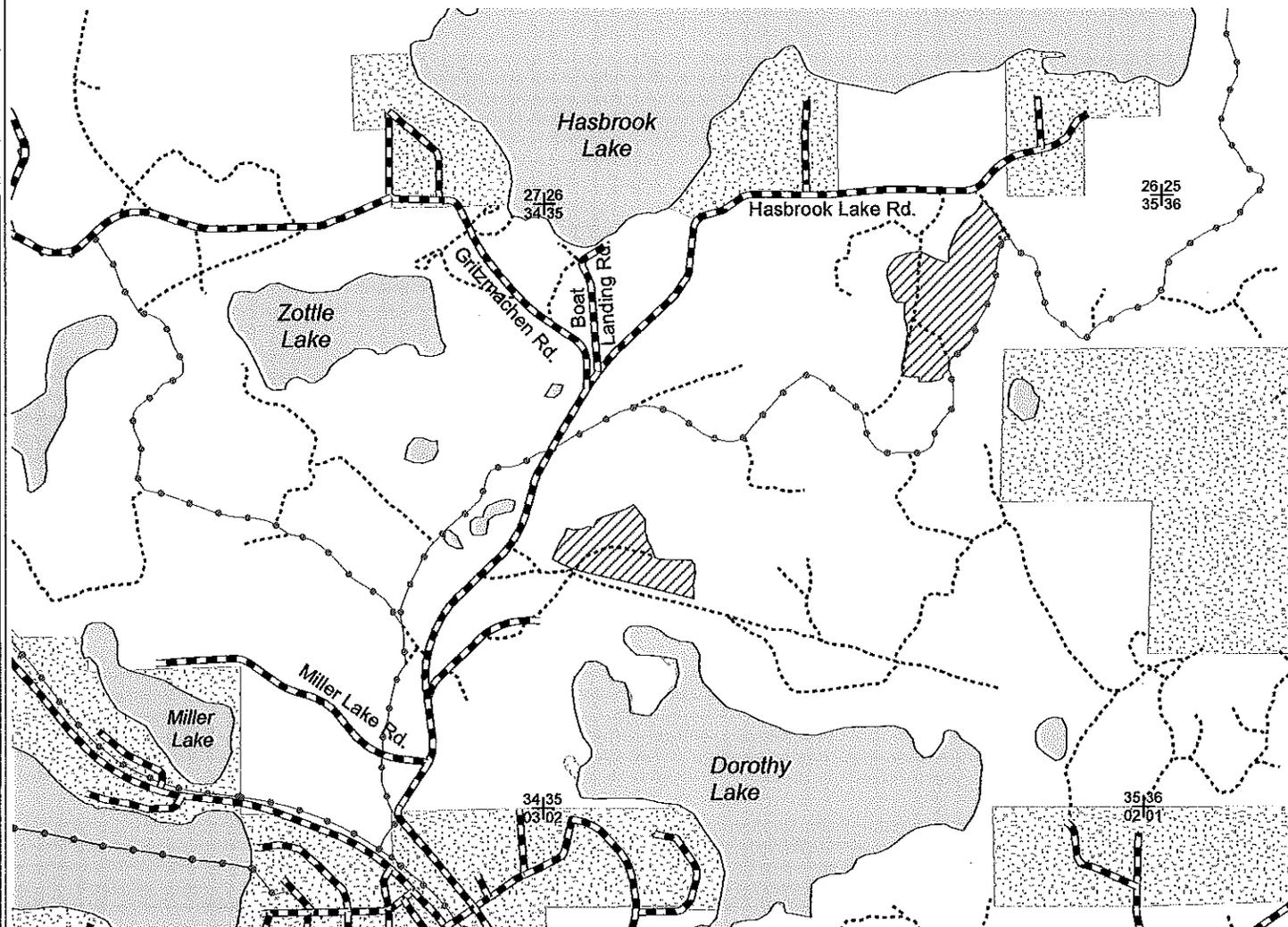
Northern Highland American Legion State Forest

DOROTHY LAKE ASPEN -- 31 Acres

Compartment 22A

Town of Lake Tomahawk, Oneida County, T39N-R7E, Section 35

Master Plan: Management Area 6 -- Oneida Sandy Plains -- Forest Production



Scale: 4" = 1 Mile
1:15,840



Legend

- Section Corner
- Highways and Town Roads
- Snowmobile Trails
- Woods Roads
- Aspen
- Lakes
- Private Lands

The objectives for this part of the Forest are to increase the presence and age of red pine and white pine in all timber types. Additionally, the aspen component is to be maintained as a dominant community on the landscape.

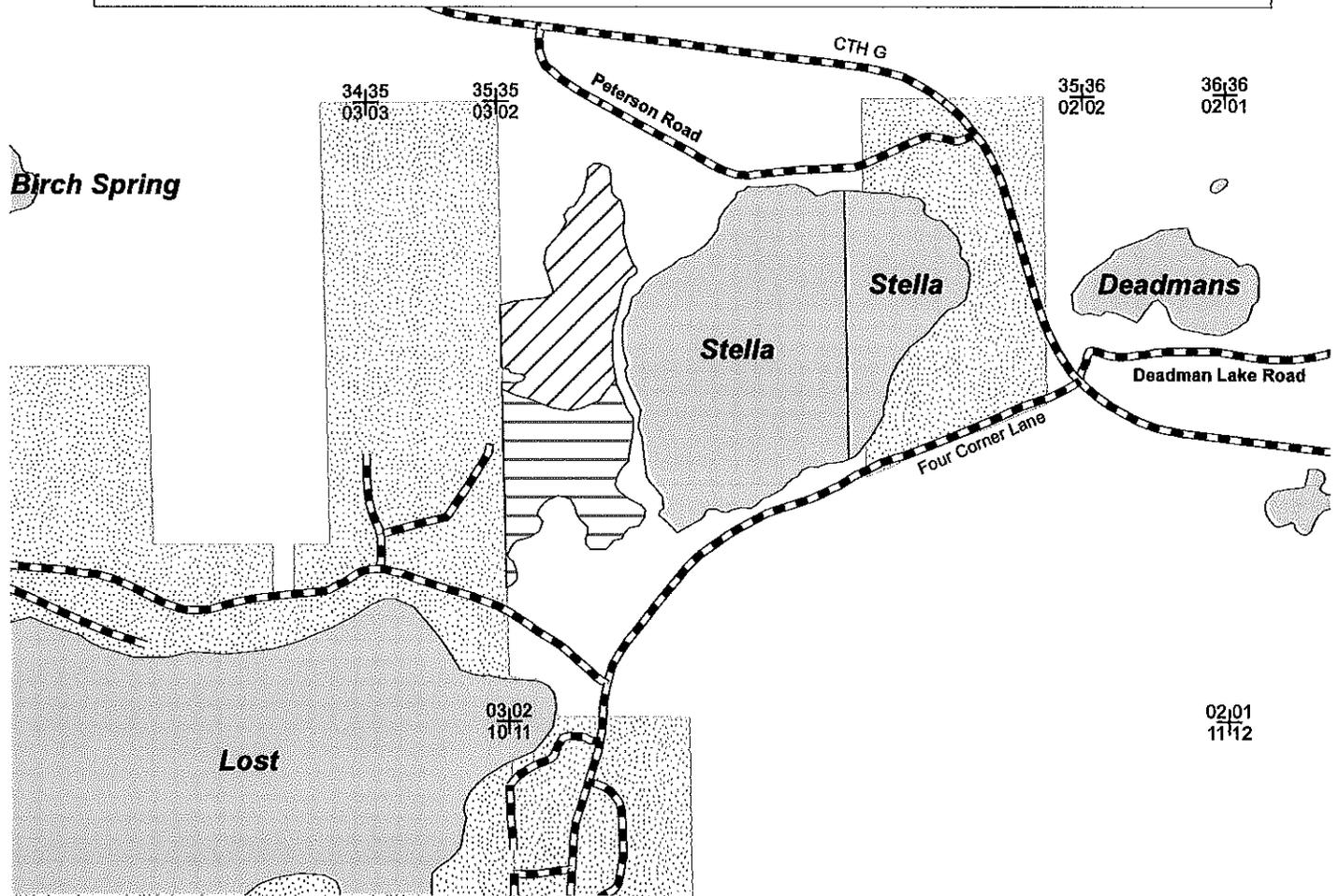
The Aspen type will be regenerated through harvesting most of the trees. This cut will mimic a natural disturbance and allow the early successional aspen type to be maintained on the landscape. This area contains additional acreage of this age and type but only a portion is being regenerated under this proposal to diversify the age-classes.

No seasonal restrictions will be imposed and biomass harvesting will not be allowed due to nutrient poor soils.

Map produced by
Craig Dalton, 2/13



**Northern Highland - American Legion State Forest
 Compartment 18H - Stella Lake - 55 Acres
 Town of St. Germain, Vilas County, T40N-R8E Sec. 2
 Master Plan: Management Area 4 - Vilas Sandy Plains Central -
 Forest Production Management Area**



Legend

- + Section Corner
- Highways and Town Roads
- ▨ Swamp Conifer Area
- ▤ White Birch/Aspen Area
- Lakes
- ▧ Private Lands



Scale: 4" = 1 Mile

1:15,840



Map produced by
 Jim Wetterau, 2/13

The objectives for this Vilas Sandy Plains Central Forest Production Area are to maintain sites with early successional forest types such as aspen and white birch and maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack.

The White Birch and aspen Area is dominated by these mature species which will be harvested to naturally regenerate these species through stump and root sprouting. The associated oak and pine will be maintained for diversity and wildlife values.

The Swamp Conifer Area consists of primarily Black Spruce and Tamarack which will be cut, except for leave tree groups scattered throughout the area to provide a seed source to naturally regenerate the area.

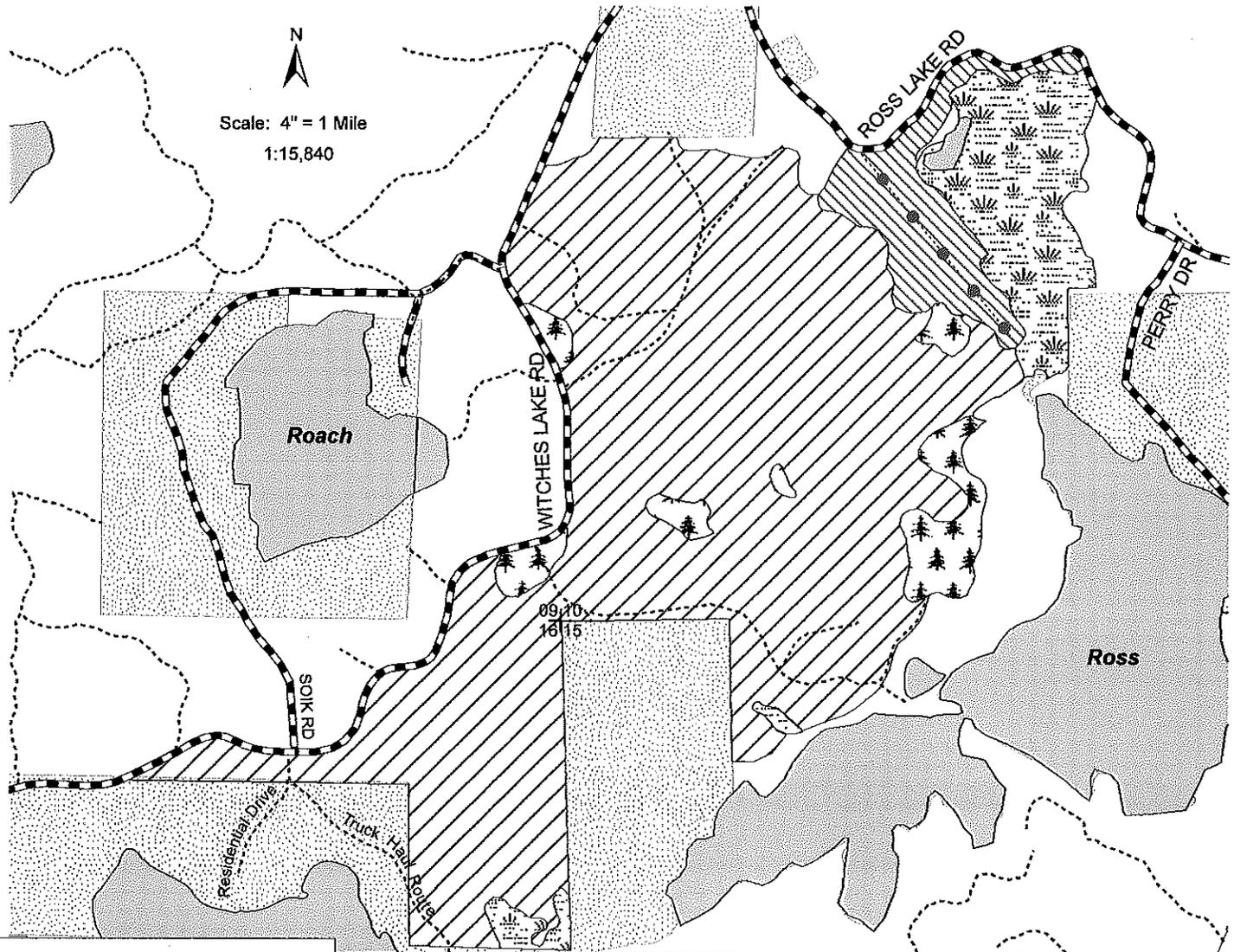
Stands near Stella Lake will have a setback from the waters edge to provide for the lakeside aesthetics.

Access will be the development of a woods road, off of the County Hwy, to access the sale area.

Low ground areas will require frozen ground conditions for harvest activities. Biomass harvesting is not allowed on this sale area.

**Northern Highland - American Legion State Forest
 Compartment 112H - Ross Lake Area Sale - 398 Acres
 Town of Arbor Vitae, Vilas County, T40N-R7E Sec. 9,10,15 &16
 Master Plan: Management Area 4 - Vilas Sandy Plains Central
 Forest Production Area and Management Area 12
 - Mixed Forest - Native Community Mgt. Area**

N
 Scale: 4" = 1 Mile
 1:15,840



Legend

- ⊕ Section Corner
- Powerline
- Woods Roads
- Snowmobile Trails
- Hemlock Reserve Areas
- Aspen/Birch Management Area
- Northern Hardwood Management Area
- Lakes
- Marsh Grass
- Private Lands

The objectives for the Mixed Forest Area are to maintain sites with old-growth pine, oak and mixed northern hardwood stands consisting of short-lived and long-lived species characteristics. This includes leaving coarse woody debris, leaving large cull trees and increased snag tree densities. The objectives in the Vilas Sandy Plains Central Area are to maintain sites with early successional forest types such as aspen, jack pine, and white birch while increasing the presence and age of red and white pine.

The Northern Hardwood Area is the same age and has no history of any management. It will be selectively marked with a variable residual basal area to promote and enhance the development of a mixed forest dominated by old trees, numerous standing snags, large amounts of coarse woody debris, and an age diversity of trees. Canopy gaps will provide opportunities for yellow birch, basswood and oak regeneration.

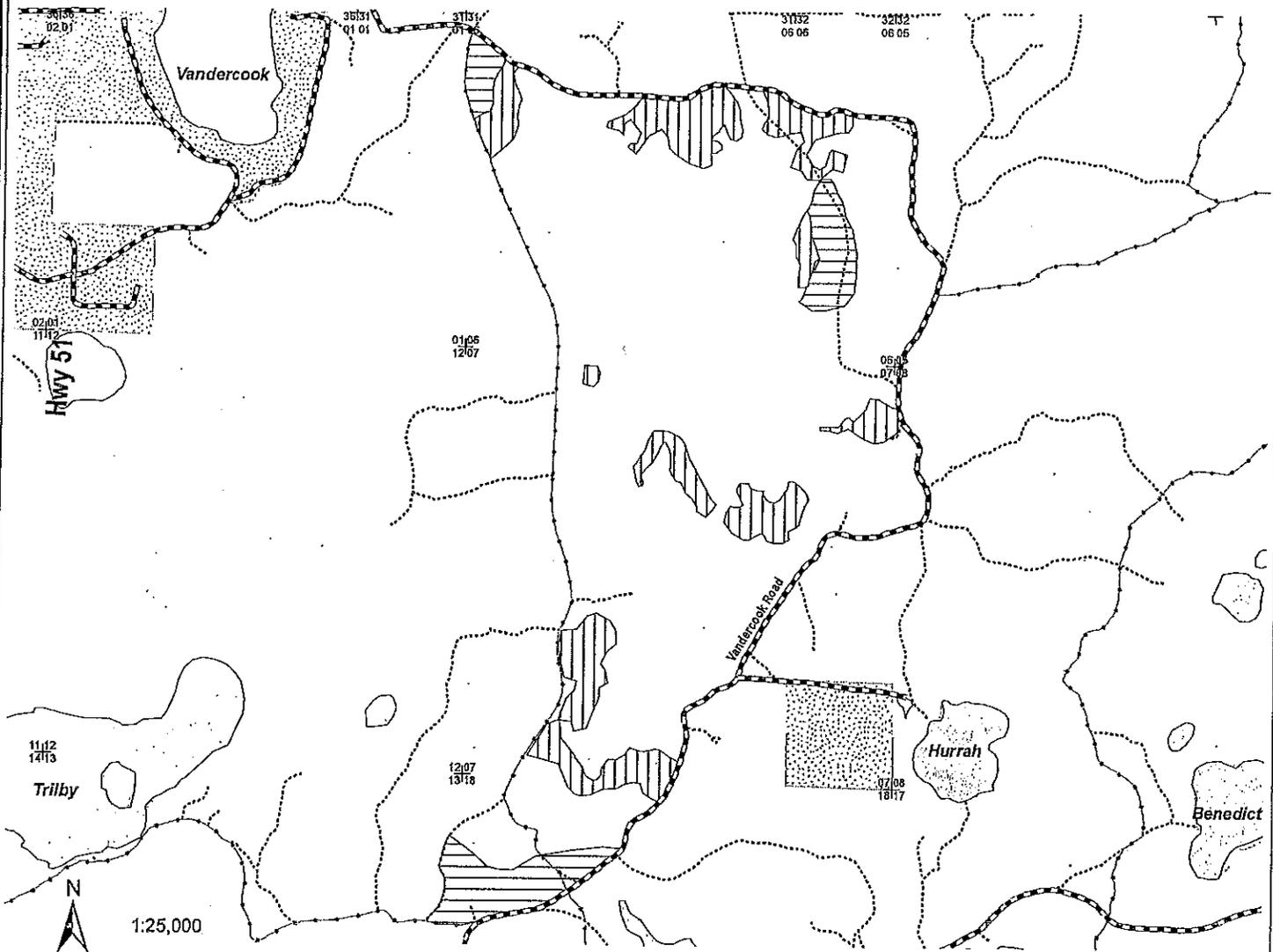
The Aspen/Birch Area is comprised of over mature trees. This area will be harvested to naturally regenerate the current trees, in the forest production area. Most mature trees, primarily aspen and white birch, will be harvested at this time.

The stands near an unammed lake and Ross Lake will be maintained with a higher stocking of trees with a no-cut 50+ foot buffer established for aesthetics.



Map produced by
 Jim Wetterau, 2/13

Northern Highland - American Legion State Forest
Compartment 164H - Vandercook Road West - 160 Acres
Town of Arbor Vitae, Vilas County, T40N-R6E Sec. 13
Town of Arbor Vitae, Vilas County, T40N-R7E Sec. 6, 7, 8, 18
Master Plan: Management Area 5-Big Arbor Vitae Loamy Hills-Forest Production Area
Management Area 12 - Mixed Forest - Native Community Area



Legend

- ⊕ Section Corner
- ▬▬▬ Highways and Town Roads
- ▭ Aspen Area
- ▭▭▭ Red & White Pine Area
- ⋯ Woods Roads
- ⊙-⊙ Snowmobile Trails
- Lakes
- ▨ Private Lands

The goal for the Mixed Forest Area is to maintain sites with old growth pine, oak, and mixed northern hardwood stands consisting of short-lived and long-lived species characteristics. The goal for the Big Arbor Vitae Loamy Hills Area is to maintain a mixed forest dominated by older red and white pine and northern hardwoods with aspen, oak, white birch, and jack pine as important secondary species.

The area contains several red and white pine stands that are overstocked for optimal growth. The thinning will harvest about one third of the pines leaving the largest pines behind with an emphasis on increasing tree diameters and developing managed old-growth characteristics within the pine type.

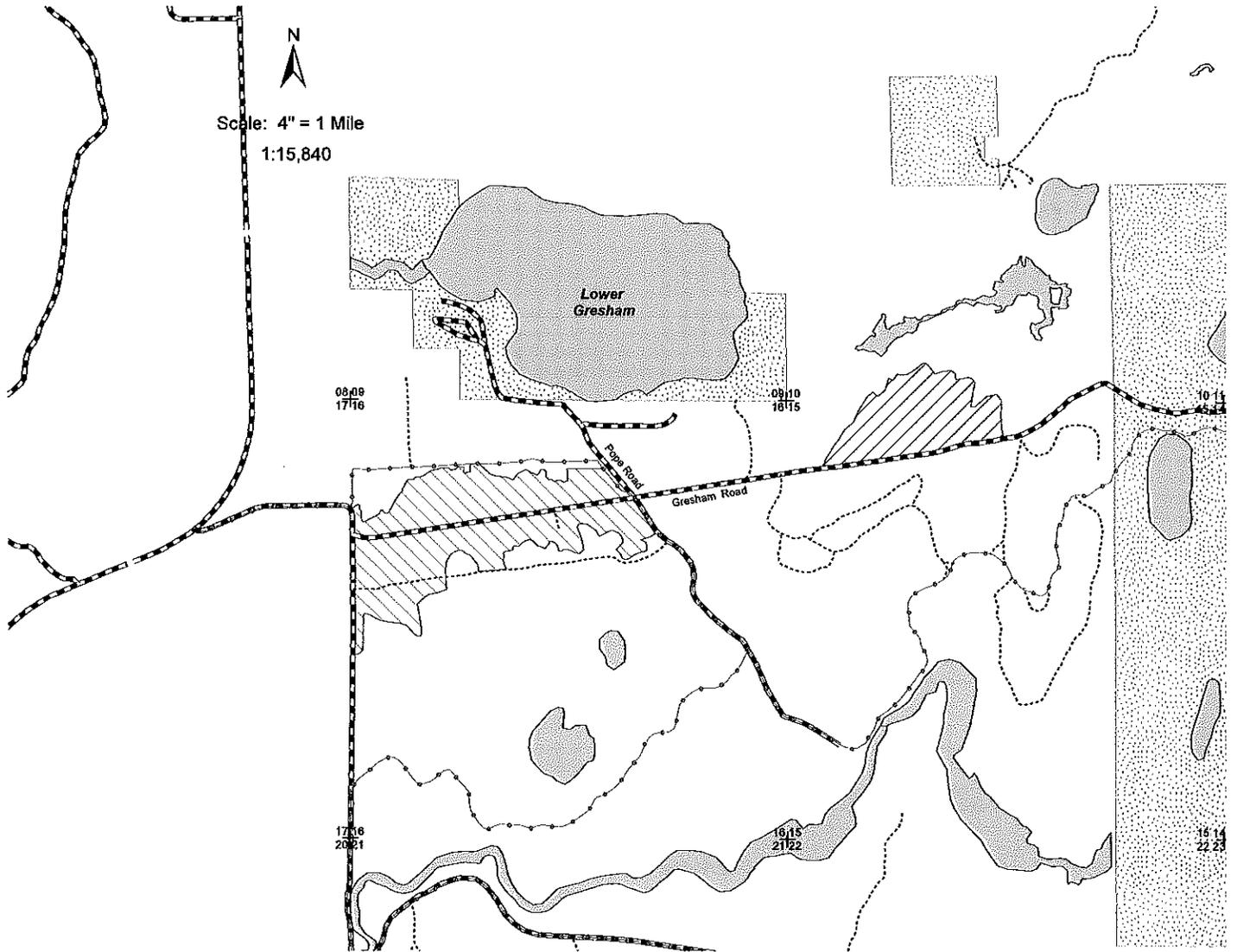
The aspen area will be cut to promote early successional forests and create some age class diversity in a large block of similar aged aspen. These sun loving trees will rapidly grow from the root system after the harvest. This harvest will also create a vegetative screen along Vandercook Road for future cutting.

A snowmobile trail is located within the proposed sale area. The snowmobile club will be contacted for signage as necessary.



Map produced by
Jim Wetterau, 6/12

**Northern Highland - American Legion State Forest
 Compartment 210H & 211H - Gresham Road - 122 Acres
 Town of Arbor Vitae, Vilas County, T41N-R6E Sec. 16
 Master Plan: Management Area 3 - Vilas Sandy Plains North -
 Forest Production Area**



Legend

- + Section Corner
- Woods Roads
- Snowmobile Trails
- Red Pine Area
- Oak Area
- Lakes
- Private Lands

The objectives for the Vilas Sandy Plains North Forest Production Area are to increase red and white pine as a dominant community type and manage for current levels of oak, assuring natural regeneration through harvest and site disturbance.

The 87 acres of red pine plantation have never been thinned before and will be row thinned at this time to promote better stand health and vigor with additional light, space, and growing conditions.

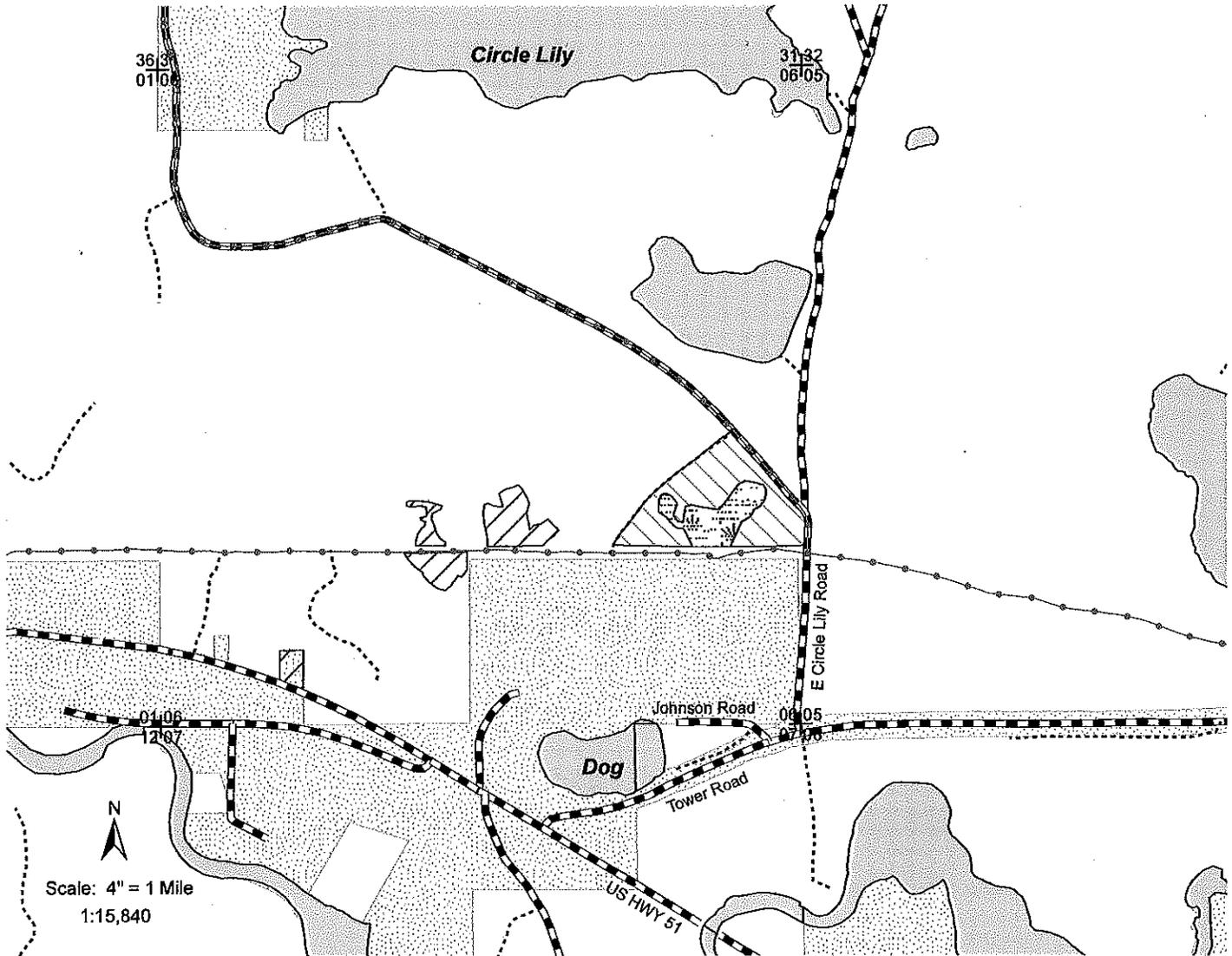
The oak stand was thinned within the past ten years and is now ready to be regenerated through a shelterwood harvest. This area will be harvested leaving approximately 50% crown canopy of the best quality oak to serve as a seed source. This process produces the best conditions for natural oak regeneration by acorn production.

Access is directly off a Town Road. A snowmobile trail is located within the sale area. The snowmobile trail will be maintained in a rideable fashion, if logged in the winter, and signed appropriately for user safety. Aesthetics will be maintained with a residual stocking of red pine. Biomass Harvesting is not allowed on this sale area.



Map produced by
 Jim Wetterau, 2/13

**Northern Highland - American Legion State Forest
 Compartment 260H - Dog Lake Pine - 23 Acres
 Town of Manitowish Waters, Vilas County, T42N-R5E Sec. 6
 Master Plan: Management Area 3 - Vilas Sandy Plains North -
 Forest Production Area**



Legend

- ⊕ Section Corner
- Powerline
- Woods Roads
- Snowmobile Trails
- [Red Pine Area symbol]
- [White Pine Area symbol]
- [Lakes symbol]
- [Marsh Grass symbol]
- [Private Lands symbol]

The objectives for the Vilas Sandy Plains North Forest Production Area are to increase red and white pine as a dominant community type and increase the presence and age of red and white pine on suitable sites across the area.

The 14-acre red pine plantation was thinned 10 years ago and will be thinned again to promote the health and vigor of the stand. The remaining acres consist of older white pine which are overstocked and will also be thinned to increase the diameters and growth rates of selected dominant white pine while harvesting shorter-lived white birch and aspen which are decadent.

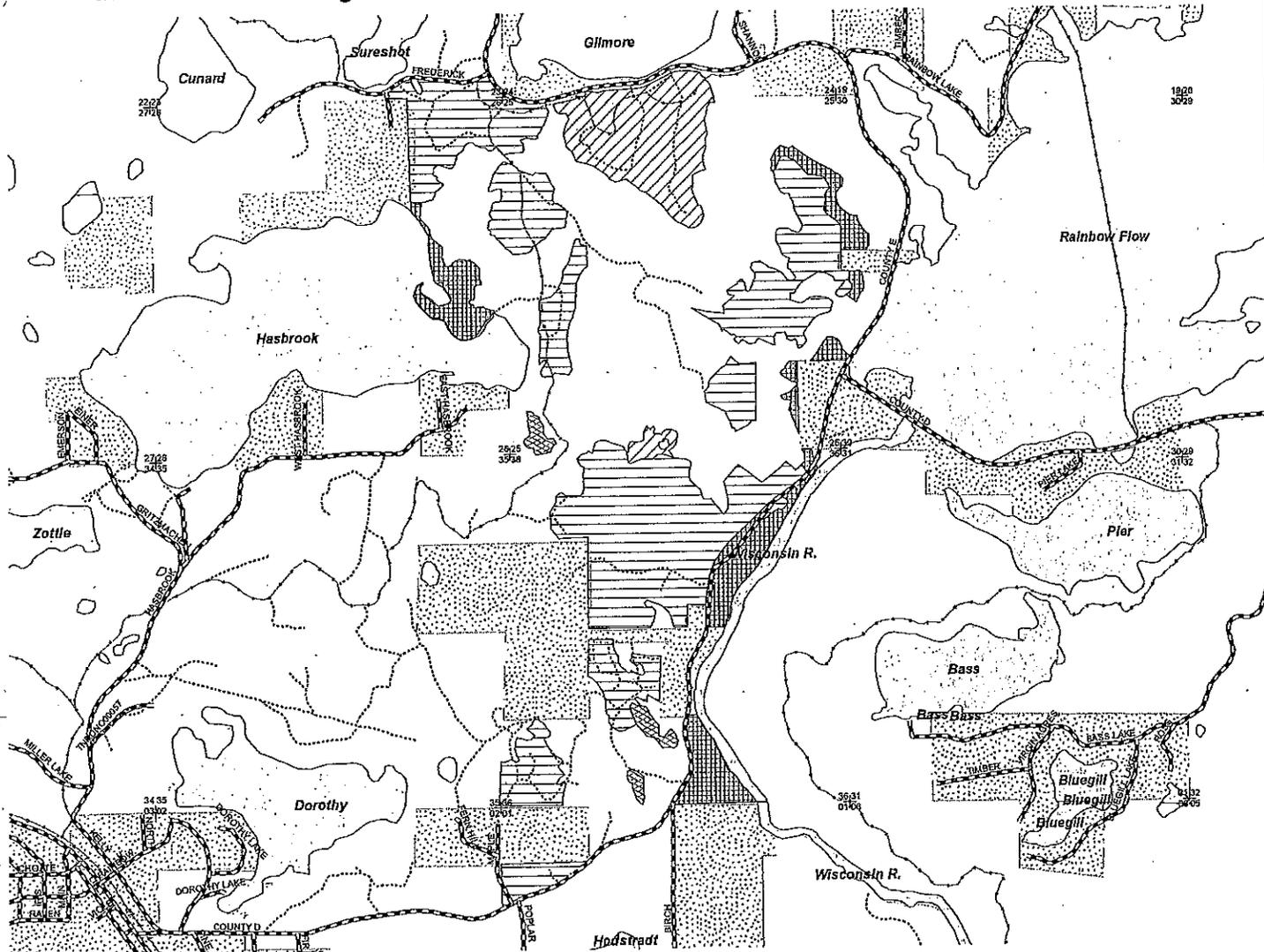
Access is directly off a Town Road and snowmobile trail. The snowmobile trail will be maintained in a rideable fashion, if logged in the winter, and signed appropriately for user safety. Aesthetics will be maintained with a residual stocking of larger dominant pine. Biomass Harvesting is not allowed on this sale area.



Map produced by
 Jim Wetterau, 2/13

Northern Highland - American Legion State Forest
 Compartment 21A - East Hasbrook - 522 Acres

Towns of Woodruff & Newbold, Oneida County, T38N-R7E Sec.1 & T39N-R7E 23,24,25,26,30,36
 Master Plan: Management Area 6 - Oneida Sandy Plains - Forest Production Area



1:28,000

Legend

- + Section Corner
- Woods Roads
- Oneida Co. Hwy and Roads
- Oak Area
- ▨ Aspen/Spruce/ Pine Area
- ▩ Swamp Conifer Area
- ▧ Aesthetic Management Area
- - - Snowmobile Trails
- Lakes
- ▤ Private Lands

The objectives for this area are to maintain a mixed forest dominated by older red and white pine with aspen, red oak, white birch, and jack pine as important secondary species. Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack.

In the aspen-spruce-pine areas the mature aspen, white birch, jack pine, fir and select spruce, oak, red and white pine will be harvested. These areas will regenerate naturally to aspen with reserve spruce, oak, and red & white pine scattered throughout. In the jack pine area the stand will be cut and planted.

In the swamp conifer area, groups of tamarack and black spruce will be cut to prepare a seed bed and the adjacent seed trees will naturally seed in that area after the harvest. This harvest area will require frozen ground conditions.

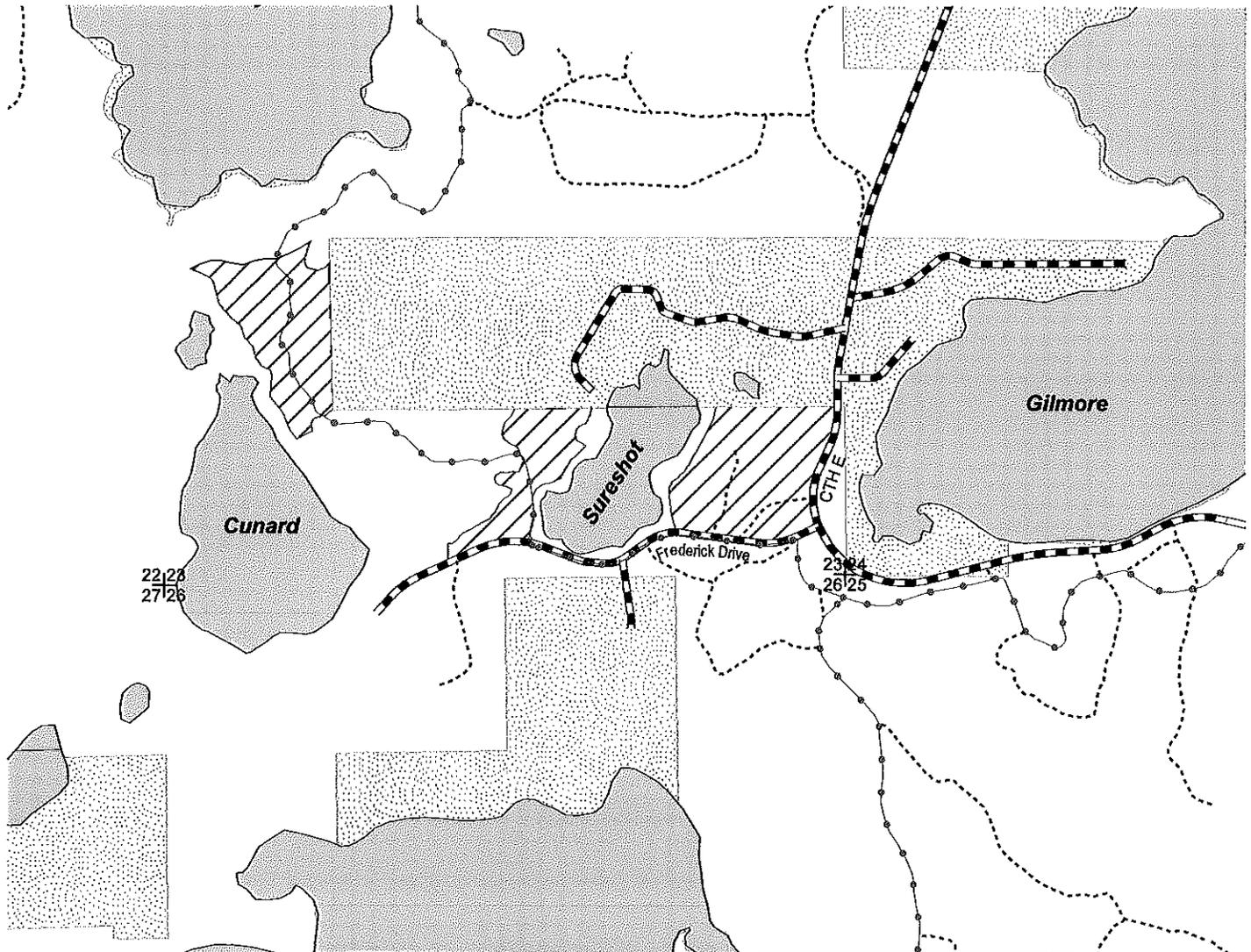
In the oak areas a shelterwood harvest will take place in which half of the trees will be harvested leaving about 40% of the original crown cover. This type of harvest will help to maintain oak on the landscape as it stump sprouts back or seeds in from the larger oak trees left behind.

In the aesthetic management area shorter-lived species such as aspen and white birch will be cut while oak and pine will be thinned to promote larger oak and pine as the best formed and largest trees remaining. The aesthetic integrity along the roads and watersheds will be maintained with a fairly uniform residual basal area of 40-60 square feet per acre. A snowmobile trail is located within the proposed timber sale area. The snowmobile club will be contacted for signage as necessary.



Map produced by
 Jim Wetterau, 6/12

**Northern Highland - American Legion State Forest
 Compartment 18A - Sureshot Oak - 57 Acres
 Town of Woodruff, Oneida County, T39N-R7E Sec. 23
 Master Plan: Management Area 5 -
 Big Arbor Vitae Loamy Hills Forest Production Area**



Legend

- ✚ Section Corner
-  Cunard Lake Campground
- Woods Roads
- Snowmobile Trails
- == Highway and Town Roads
-  Lakes
-  Private Lands
-  Oak Regeneration Area

The goal for the Big Arbor Vitae Loamy Hills Forest Production Area is to maintain and increase the red oak component of this area and assure natural regeneration through harvest and site disturbance.

The oak in this area was last thinned in 2002 to develop the crowns of the most dominant oak. This area is now ready for an initial shelterwood harvest in which 40-50% of the residual crown canopy will be retained. This harvest will leave the best formed oak as a seed source for future regeneration. This process produces acorns and allows additional sunlight to the forest floor while disturbing the soil surface for acorns to fall into and eventual produce young seedlings.

Oak stands near Cunard Lake Campground and the area lakes will have setbacks and a higher stocking of trees to provide for the aesthetic values associated with them. A snowmobile trail is located within the proposed timber sale area. This trail will be maintained in a safe rideable manner and signed for user safety if harvesting takes place in the winter.

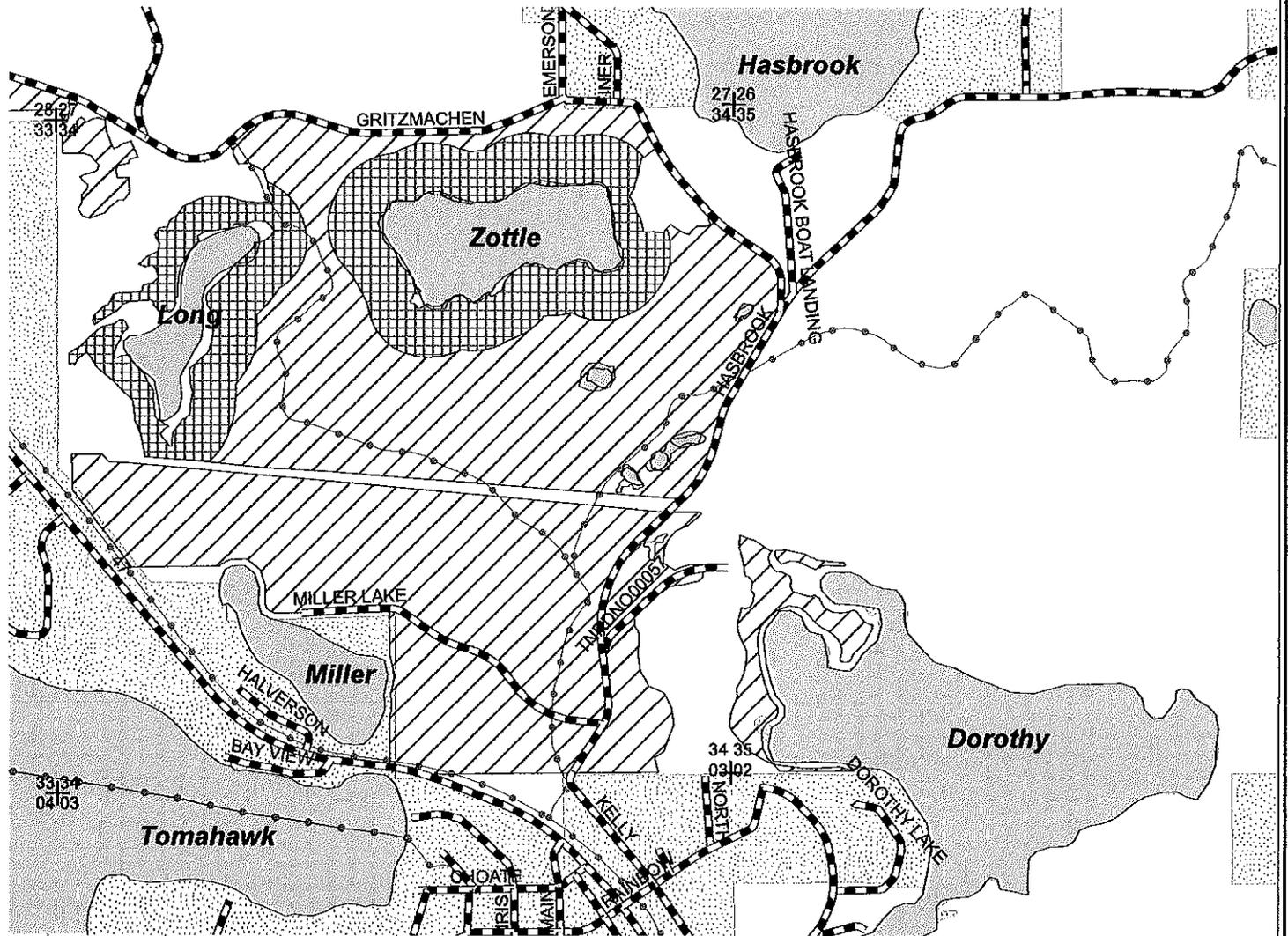
Biomass harvesting is not allowed on the sale areas.

Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Jim Wetterau, 2/13

**Northern Highland State Forest
 Compartment 26A - Zottle Lake Sale - 415 Acres
 T38N-R7E Sec.2 & T39N-R7E Sec. 28,34,35
 NHALSF Master Plan: Management Area 6-Oneida Sandy Plains-Forest Production Area**



Scale: 4" = 1 Mile
 1:15,840

Legend

- ⊕ Section Corner
- ▬ Oneida Co. Hwy and Roads
- ▨ Oak/Aspen/Pine Area
- ▩ Scenic Area
- ⋯ Snowmobile Trails
- Lakes
- ▤ Private Lands

The goal for Oneida Sandy Plains Forest Production Area is to maintain aspen, increase the presence and age of red pine and white pine, and to maintain and expand red oak.

The oak area has been thinned in the past and is now scheduled for an initial shelterwood harvest, in which 50% of the crown canopy will be harvested. This harvest will leave the best formed oak and allow for the proper growing conditions to regenerate oak. This process produces acorns and the soil disturbance and light conditions most favorable to producing young oak seedlings. Eventually, after those seedlings are established, the older oaks will be harvested.

Some of the pine stands in this sale area have been thinned before and others have not. At this time the pine will be thinned and mature species such as aspen and white birch will be harvested to keep the stands healthy and vigorously growing.

Some mature aspen and white birch areas of under 20 acres will be clearcut to regenerate these shorter-lived species.

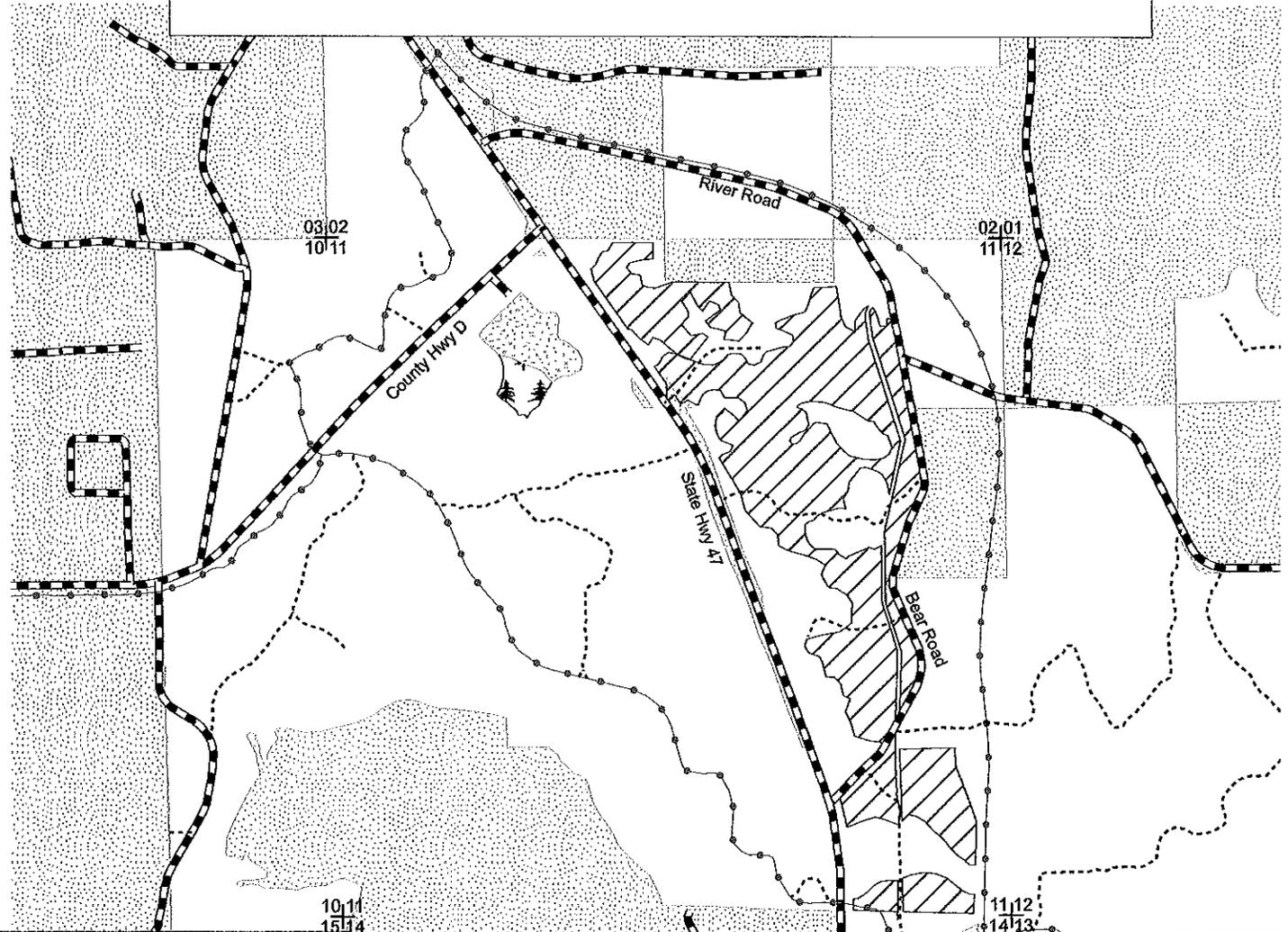
Zottle and Long (Ranger) Lakes are identified as scenic lakes in the masterplan and within 400 feet of the lakeshore the stands will be thinned to promote long-lived white pine while maintaining the aesthetic characteristics of these water bodies. The timber stands near Dorothy and Miller Lakes will be thinned to promote long-lived species and a denser stocking of trees will be present within 100 feet of these lakes.

Biomass harvesting (removing the tops from the site) is not allowed due to the poor soil. The snowmobile club will be contacted for signage as necessary.



Map produced by
 Jim Welterau, 2/13

**Northern Highland - American Legion State Forest
 Compartment 31A - Bear Road Oak- 93 Acres
 Town of Lake Tomahawk, Oneida County, T38N-R7E Sec.11
 Master Plan: Management Area 6 - Oneida Sandy Plains -
 Forest Production Area**



Legend

- + Section Corner
- Woods Roads
- Snowmobile Trails
- ▬ Highways and Town Roads
- ▨ Oak Area
- ▤ Lake Tomahawk Balldiamond
- ▥ Private Lands
- ▧ Red Pine Plantation



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Jim Welterau, 2/13

The goal for the Oneida Sandy Plains Forest Production Area is to maintain a mixed forest dominated by older red and white pine and to manage for current levels of oak and look for opportunities to expand the red oak type with active management on suitable soils.

The red pine plantation has never been thinned before and will be row thinned at this time to improve the growth and vigor of this 31 year old stand.

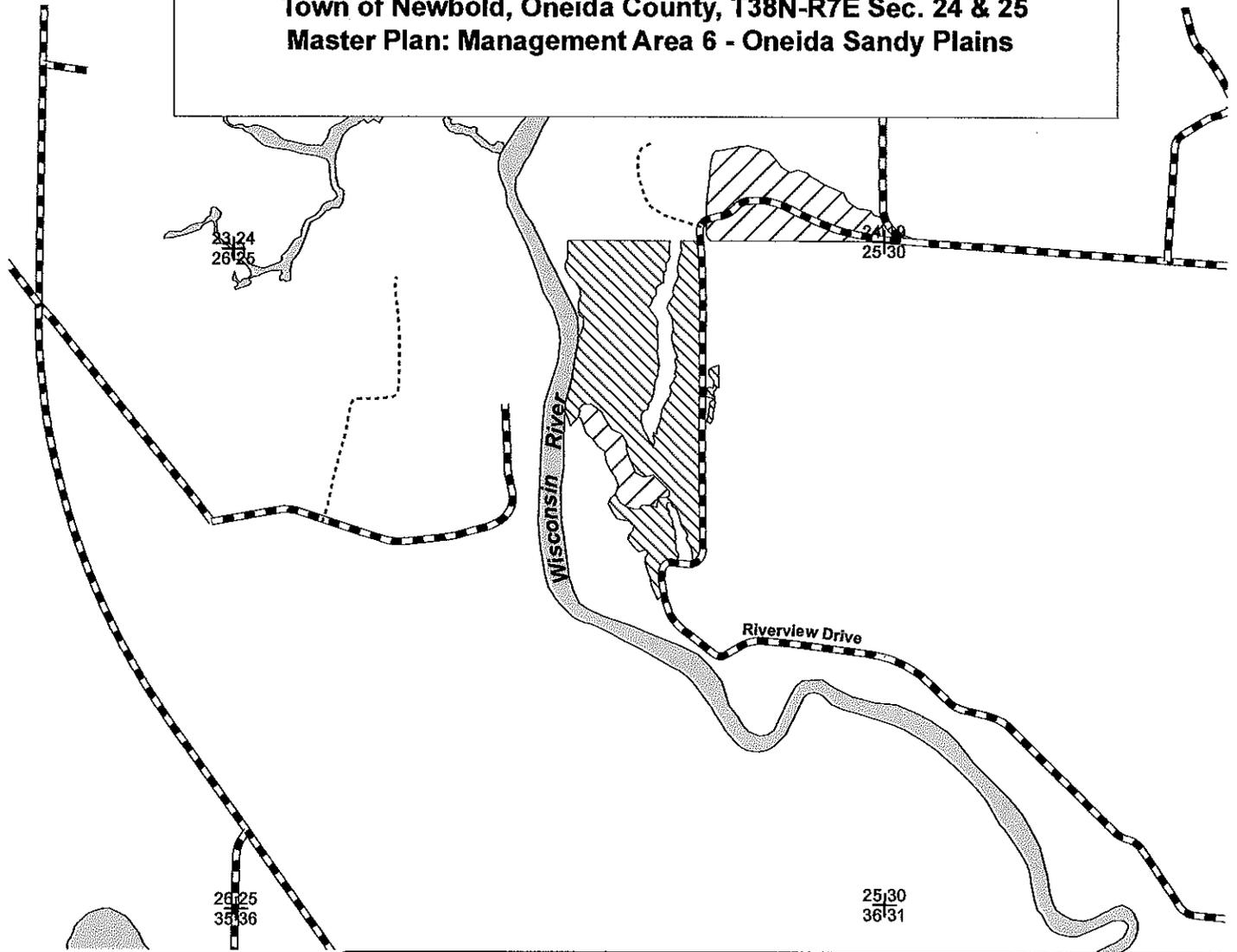
The oak area was last thinned in 2000 and is ready to be regenerated with an initial shelterwood harvest in which 40-50% of the canopy will be harvested. Some portions of this area with advanced white pine and oak regeneration will be further opened up to allow this regeneration full release to the sunlight.

The snowmobile trail will be maintained and signed for user safety if harvesting takes place during the winter.

Aesthetics are a concern along the Town Roads and Highways. The retention of residual oak, red pine, and white pine will help lessen the visual impacts along these roads. A seasonal cutting restriction will be implemented in the red pine stand, adjacent to the Lake Tomahawk baseball diamond, during the summer months.

Biomass Harvesting is not allowed on the sale areas.

**Northern Highland - American Legion State Forest
 Compartment 46A - Riverview Drive - 69 Acres
 Town of Newbold, Oneida County, T38N-R7E Sec. 24 & 25
 Master Plan: Management Area 6 - Oneida Sandy Plains**



Legend

- + Section Corner
- Woods Roads
- == Highways and Town Roads
- ▨ Aspen/Jack Pine Management Area
- ▧ Red & White Pine Thinning
- ☉ Lakes



Scale: 4" = 1 Mile
 1:15,840



Map produced by
 Jim Weiterau, 2/13

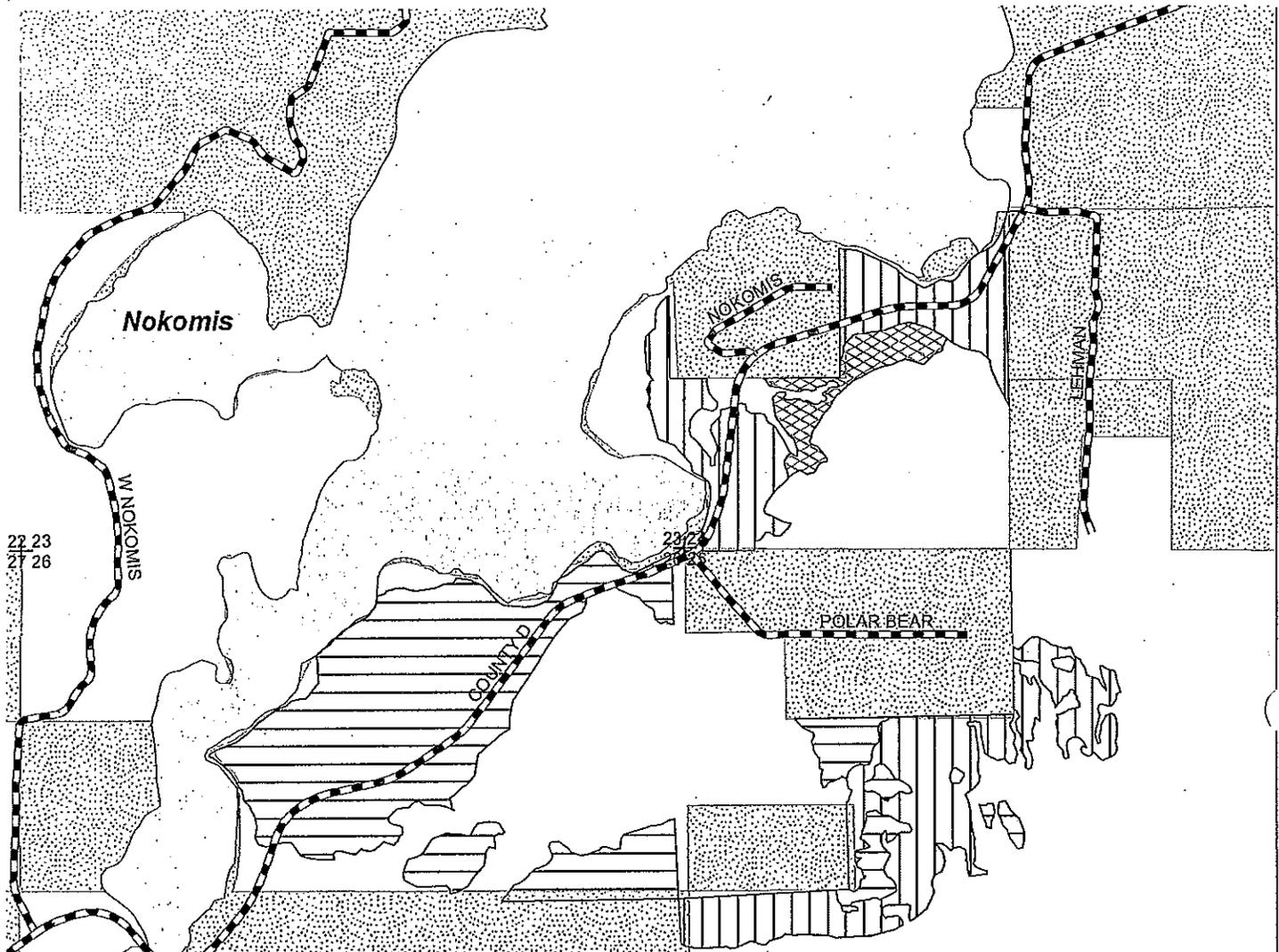
The goal for the Oneida Sandy Plains Forest Production Area is to maintain aspen and jack pine and increase the presence and age of the red and white pine.

The red pine plantation has been thinned in the past and will be thinned again at this time to improve the growth and vigor of this stand. The white pine stand with mature aspen and white birch will be thinned at this time by removing the mature aspen and birch and thinning the pine to maintain the stand health and vigor.

The aspen and jack pine areas are part of a new acquisition and no previous forest management has taken place in 70 plus years. The objectives are to regenerate the aspen by cutting most of the area except maintaining oak and the majority of the red and white pine. The 1 acre stand of jack pine will be cut as well.

Aesthetics are a concern along the Wisconsin River and the Town Road. Due to safety concerns, along Riverview Drive, the Town of Newbold will be contacted to harvest the decadent aspen and provide for motorist safety. The retention of oak, red pine, and white pine will help lessen the visual impacts along both the Wisconsin River and Town Road.

**Northern Highland - American Legion State Forest
 Compartment 70A - North Nokomis Lake Sale - 210 Acres
 Town of Newbold, Oneida County, T39N-R8E Sec.23,24,25, 26
 Master Plan: Management Area 6-Oneida Sandy Plains-Forest Production Area**



Scale: 4" = 1 Mile
 1:15,840

Legend

- + Section Corner
- Oneida Co. Hwy and Roads
- Aspen/White Birch Area
- ▨ Pine Thinning Area
- ▩ Swamp Conifer Area
- Powerline
- Snowmobile Trails
- Lakes
- ▤ Private Lands

The goal for this area is to maintain aspen and white birch, increase the presence and age of red pine and white pine, and to maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack.

The pine stands in this area have been thinned before and have re-grown to a point that they are now overstocked for optimal growth. This thinning will harvest about one third of the pines and reduce the basal area to a fairly uniform 110 - 120 square feet per acre. The best formed and largest pine will remain.

The white birch and aspen are mature and will be clearcut to regenerate these species back naturally through stump and root sprouting. During this regeneration harvest some oak and pine will be thinned as well leaving the best quality oak and pine as residuals for mast and seed.

In the swamp conifer area 100 foot wide strips will be clearcut to naturally regenerate the black spruce and tamarack from adjacent residual seed trees. This harvest area will require frozen ground conditions.

The stands adjacent to North Nokomis Lake will be maintained with a higher stocking level of 60 square feet of residual basal area within 100 feet of the lake. This area will be managed for longer-lived tree species and for lakeshore aesthetics.

Biomass harvesting (removing the tops from the site) is not allowed due to the poor soil.

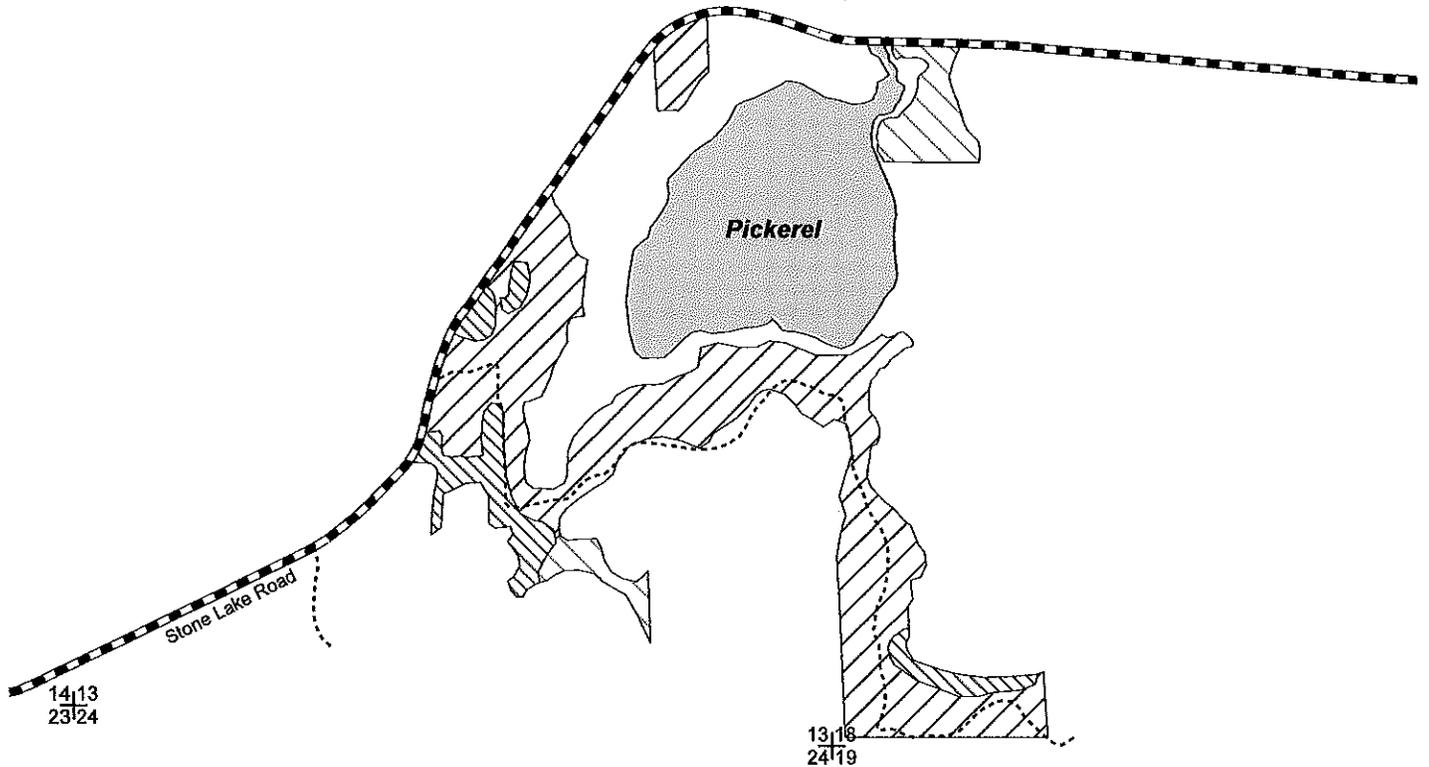


Map produced by
 Jim Wellerau, 5/12

**Northern Highland - American Legion State Forest
 Compartment 87A - Pickerel Lake Pine & Popple - 103 Acres
 Town of Newbold, Oneida County, T38N-R8E Sec. 13 &
 Town of Sugar Camp, Oneida County, T38N-R9E Sec. 18
 Master Plan: Management Area 6 - Oneida Sandy Plains -
 Forest Production Area**

11|12
14|13

12|07
13|18



Scale: 4" = 1 Mile
1:15,840

Legend

- + Section Corner
- Woods Roads
- == Highway and Town Roads
- Black Spruce Area
- White Birch/Aspen Area
- Red and White Pine Area
- Lakes

The objectives for the Oneida Sandy Plains Area are to maintain aspen and white birch, increase the presence and age of red and white pine, and maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack.

The Aspen and White birch Area is dominated by these mature species which will be harvested to naturally regenerate them by stump and root sprouting. The associated oak and pine will be maintained for diversity and wildlife values.

The Red and White Pine Areas will be thinned to promote the overall stand health and vigor. Shorter-lived species such as aspen, white birch, and jack pine will also be harvested within this area.

The Black Spruce area is mature and these stands will be strip cut or entirely cut except for groups of residual seed trees which will be retained to seed in the harvested areas.

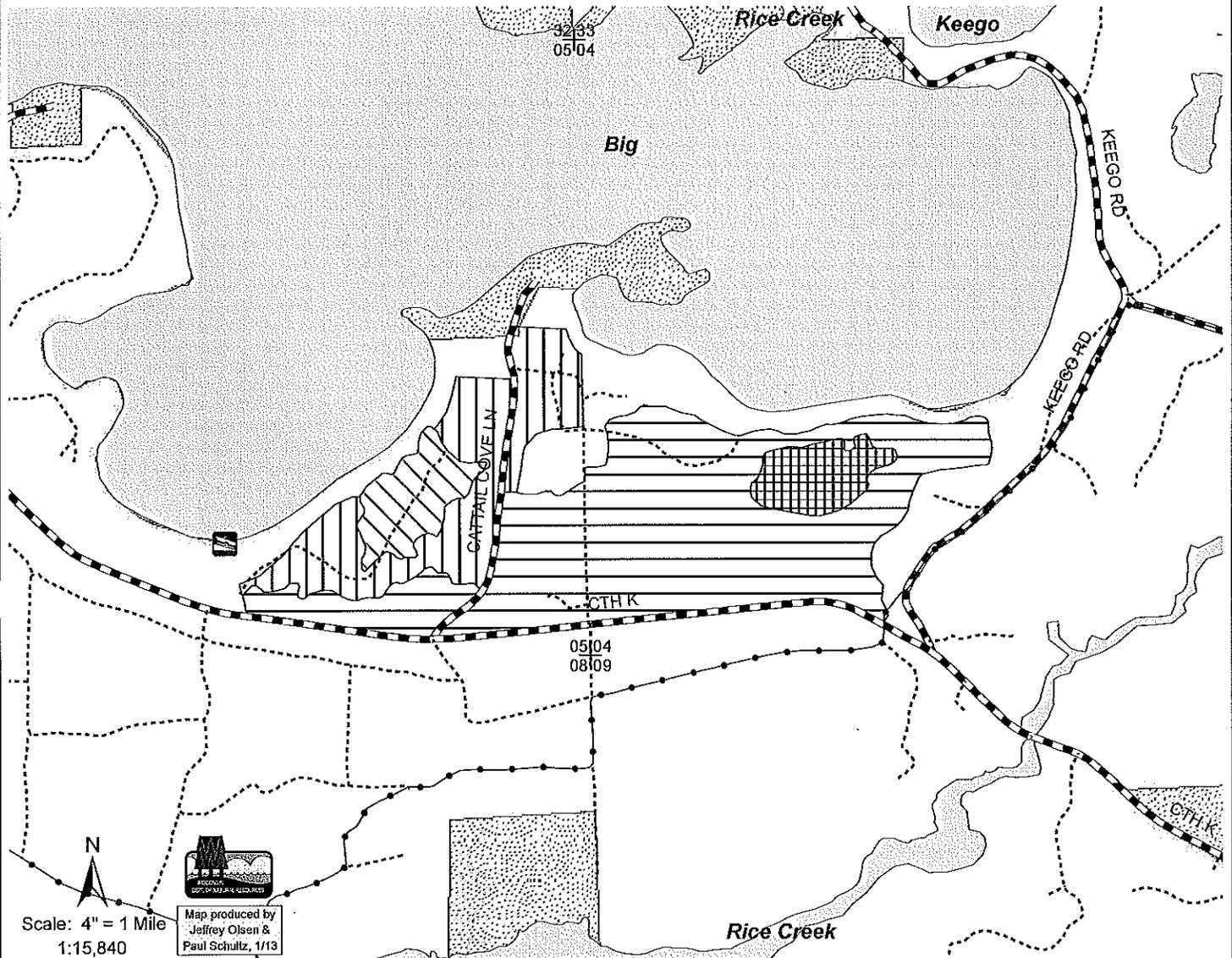
Stands near Pickerel Lake will be maintained with vegetative screens and higher stocking levels of trees for aesthetic and water quality considerations.

Access is off the Town Road and existing woods trails. Low ground areas will require frozen or dry ground conditions for logging operations. Biomass harvesting is not allowed on this sale area.



Map produced by
Jim Wetterau, 2/13

**Northern Highland – American Legion State Forest
 C202H Stands 1, 2, 3, 4 and 8
 Cattail Cove Sale – 188 Acres
 Town of Boulder Junction, Vilas County, T42N-R6E, Sections 4 and 5
 NHAL Master Plan: Area 3 – Vilas Sandy Plains North – Forest Production**



Legend

- ✚ Section Corner
- 🚤 Boat Landing
- Woods Roads
- ⋯ Snowmobile Trails
- == Highways and Town Roads
- ▨ Red Pine Proposed Area
- ▧ White Pine Proposed Area
- ▩ Oak Proposed Area
- ▤ White Birch Proposed Area
- 🌊 Lakes
- 🏠 Private Lands

Objectives for Management Class Area 3 are to maintain a mixed forest dominated by red and white pines with aspen, red oak, white birch and jack pine as important secondary species. Specific to these stands, we will harvest selected plantation red pine and natural white pines, merchantable aspen, and white birch will be harvested also. The red oak stand will be released to advance regeneration from a previous thinning.

The red pine plantation is 62 years old and will be thinned for the third time. Stand 2 is typed as white pine and is over 100 years old and will be managed for old forest characteristics. The oak stands are 90 years old and have been thinned to regenerate oaks. The white birch stand is 90 years old also and will be harvested to regenerate aspen, white birch and red maple.

Stands along the waters edge will be cut no closer than 100 feet distance from lakeshore as aesthetic priority to promote the large, long-lived diversity of tree species. This should address aesthetics for Big Lake property owners and lake recreationists.

Biomass harvest is allowed on the sale areas.