

# Appendix A

# Treatment Unit Descriptions

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## Treatment Unit Descriptions

The following section describes and displays the treatment units proposed in all action alternatives. These descriptions show the major attributes of each treatment unit and considerations used during unit design. The ID Team identified individual treatment units and recommended specific vegetative treatments to achieve the objective of the project. The development of this project used the best available science in planning, designing, and mitigating effects of the proposed activities. Unit descriptions show the major resource concerns associated with each treatment unit. Mitigations included in the unit descriptions identify actions either to be taken by the ID Team or actions to be taken during implementation.

The Marilla Too Project proposes the following activities on National Forest System lands within the Marilla Too Project Area (Project Area): wildlife habitat improvement projects, including upland opening maintenance and snag creation; aspen and red pine timber harvest treatments; white pine planting; non-native invasive plant species control; road activities; and LSC changes. The proposed activities vary by alternative. Table 2-1 on page 2-10 of Chapter 2 displays a summary comparison of alternatives by issue and proposed actions. Figures 1-4 at the end of Chapter 2 display activities proposed in Alternatives 1-4.

All of the proposed regeneration treatments, either in individual stands, combined stands, or combined regeneration treatments, would not exceed the 40 acre temporary opening limit.

Non-native Invasive Plant (NNIP) Control Prescriptions are described in the following treatment units. In addition to control of these invasive species, additional invasive species are of concern in the Project Area, but occupy too large of a general area, and treatment is not considered cost-effective to achieve eradication or control. Equipment cleaning may be required before equipment is moved between different harvest units depending on NNIP species present. Equipment cleaning consists of removing seeds, soil, vegetative matter, and other debris that could contain or hold seeds. This information can be found in the Planning Record.

The vegetative treatment locations and acreages and road and trail locations and mileages under each alternative were estimated using Geographic Information System (GIS). The Forest Service uses the most current and complete data available. They may be: developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. The Forest Service will not be liable for any activity involving this information. Providers of other data should be consulted regarding the accuracy and scale of their data. For more information contact: GIS Coordinator; Huron-Manistee NF; 1755 S. Mitchell Street; Cadillac, MI 49601; (231)775-2421.

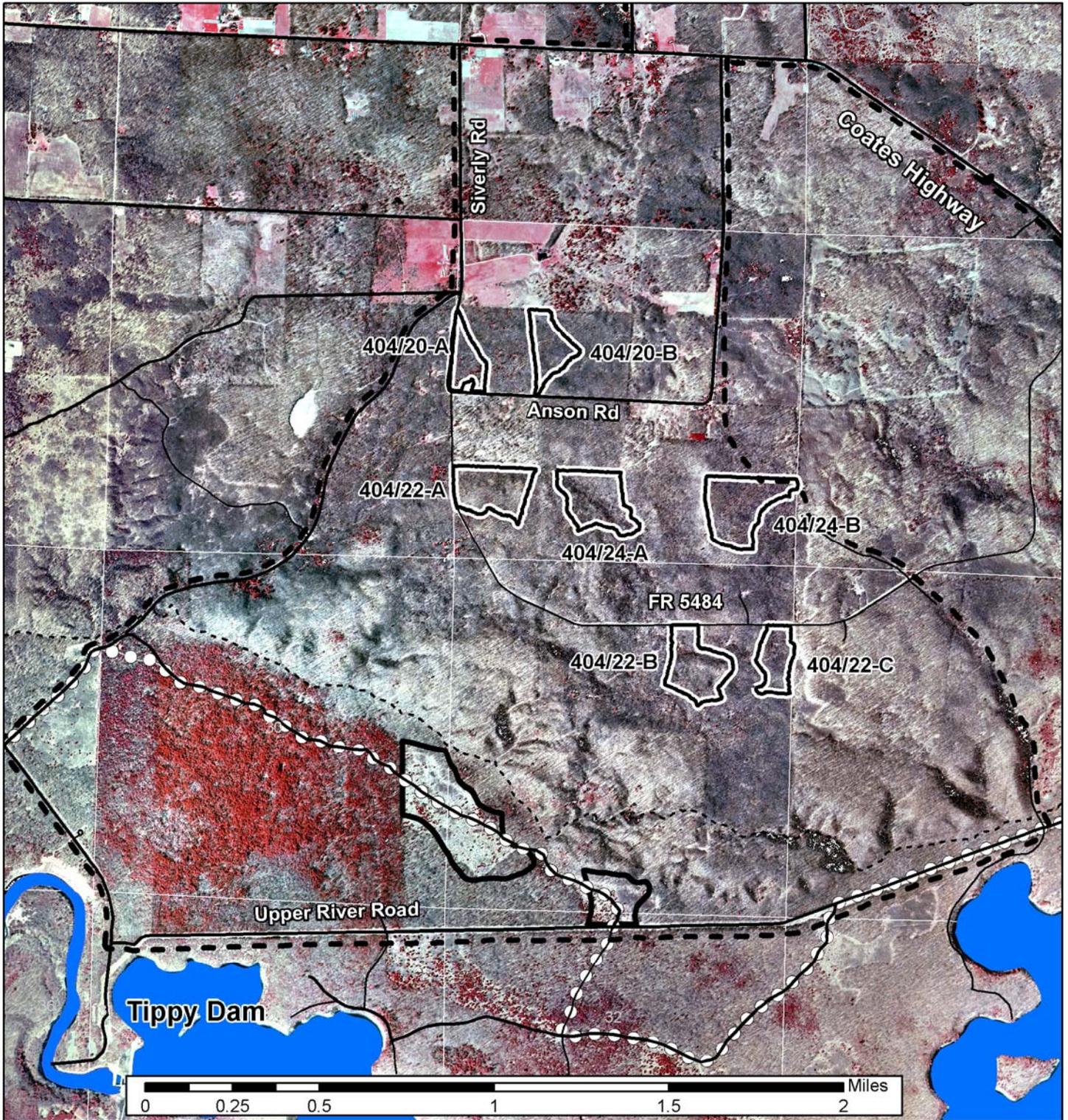
Treatment unit boundaries, road locations, and the proposed activities are based on the most current information available through field investigations, GIS information, maps and aerial photo review, and existing resource inventories. Prior to implementation, additional field inventories will be completed. Minor changes or modifications to the treatment units and landing sites are anticipated prior to or during implementation to address actual field conditions. These changes will be documented and filed in the Planning Record.

# Marilla Too Project

## Clearcut - Aspen

Treatment Units:		404 / 22-C
404 / 20-A	404 / 22-A	404 / 24-A
404 / 20-B	404 / 22-B	404 / 24-B

# Alternative 2



Legend			
	Project Area Boundary		Open Public Road
	Aspen Clear Cut		Hiking Trails
	Other Treatments		Snowmobile Trails
	Sections		Streams
			Lakes & Rivers

<b>Marilla Too Project</b>	<b>Treatment Type: Aspen Clearcut</b>			<b>Alternative 2 Only</b>	
Treatment Unit: 404/20-A	Acres: 9	Alternative: 2	LSC: 500	ELTP: 237	
Treatment Unit: 404/20-B	Acres: 12	Alternative: 2	LSC: 500	ELTP: 237	
Treatment Unit: 404/22-A	Acres: 18	Alternative: 2	LSC: 500	ELTP: 235/37	
Treatment Unit: 404/22-B	Acres: 18	Alternative: 2	LSC: 500	ELTP: 235	
Treatment Unit: 404/22-C	Acres: 10	Alternative: 2	LSC: 500	ELTP: 230/35	
Treatment Unit: 404/24-A	Acres: 19	Alternative: 2	LSC: 500	ELTP: 235/37	
Treatment Unit: 404/24-B	Acres: 22	Alternative: 2	LSC: 500	ELTP: 230	

**TREATMENT UNIT DESCRIPTION**

These aspen units have a year of origin of 1970. These aspen units are located in MA 2.1G (Roaded Natural Rolling Plains and Morainal Hills) and within the Marilla Grouse Emphasis Area. These units are located within the Tippy Dam Management Zone (TMZ) area identified for protection of Indiana bat habitat.

**RESOURCE PRESCRIPTION AND FACTS CODE(S) 2510, 4113, 4493, 4341, 4381, 6423**

**Silvicultural Prescription:** Harvest and regenerate mature and over/mature aspen using the even/aged clearcut method. Retain topwood less than 4” in diameter to maintain soil productivity, reduce soil compaction, and retain organic matter. Retain all snags over 5” dbh unless they are a safety hazard. Retain or create an average of 9 suitable roost trees per acre if available in clumps. Retain native, mast/producing shrubs where possible. Prohibit clearcutting between April 1 and October 20 in order to promote regeneration, retain site nutrients, and protect bats.

**Reforestation:** These units would be treated using site preparation for natural regeneration, felling all stems between 1-5” dbh. If the regeneration is less than 60 percent of full stocking levels after three growing seasons of the completed harvest, the unit would be evaluated for reforestation needs. Only native species will be used in planting.

A temporary specified road would be constructed to access Units 404/24-B and closed after harvest activities are completed.

**Invasive Plant Control Prescription:** Thistle species in Unit 404/20-A, 404/22-A, B, C, 404/24-A, B; Common burdock in Unit 404/20A; Wild parsley in Unit 404/22B: Treat with glyphosate.

**RESOURCE CONCERNS AND MITIGATION**

**Concern:** Protection of potential Indiana bats present during the swarming and breeding season within the TMZ and potential roosting habitat.

**Mitigation:** Harvesting would be prohibited from May 1 to October 20 to eliminate the possibility of impacting individual bats in roosts. Standing snags over 5” dbh would not be cut and/or removed unless considered a safety hazard. Retain or create an average of 9 suitable roost trees per acre if available in clumps.

**Concern:** RFSS (Northern wild comfrey) in Unit 404/24-A and 404/24-B.

**Mitigation:** Maintain a minimum of 60% canopy cover and do not allow mechanical disturbance within approximately 200 feet of occurrence. Hand cut encroaching trees and shrubs to maintain a semi-open canopy and minimize competition with northern wild comfrey.

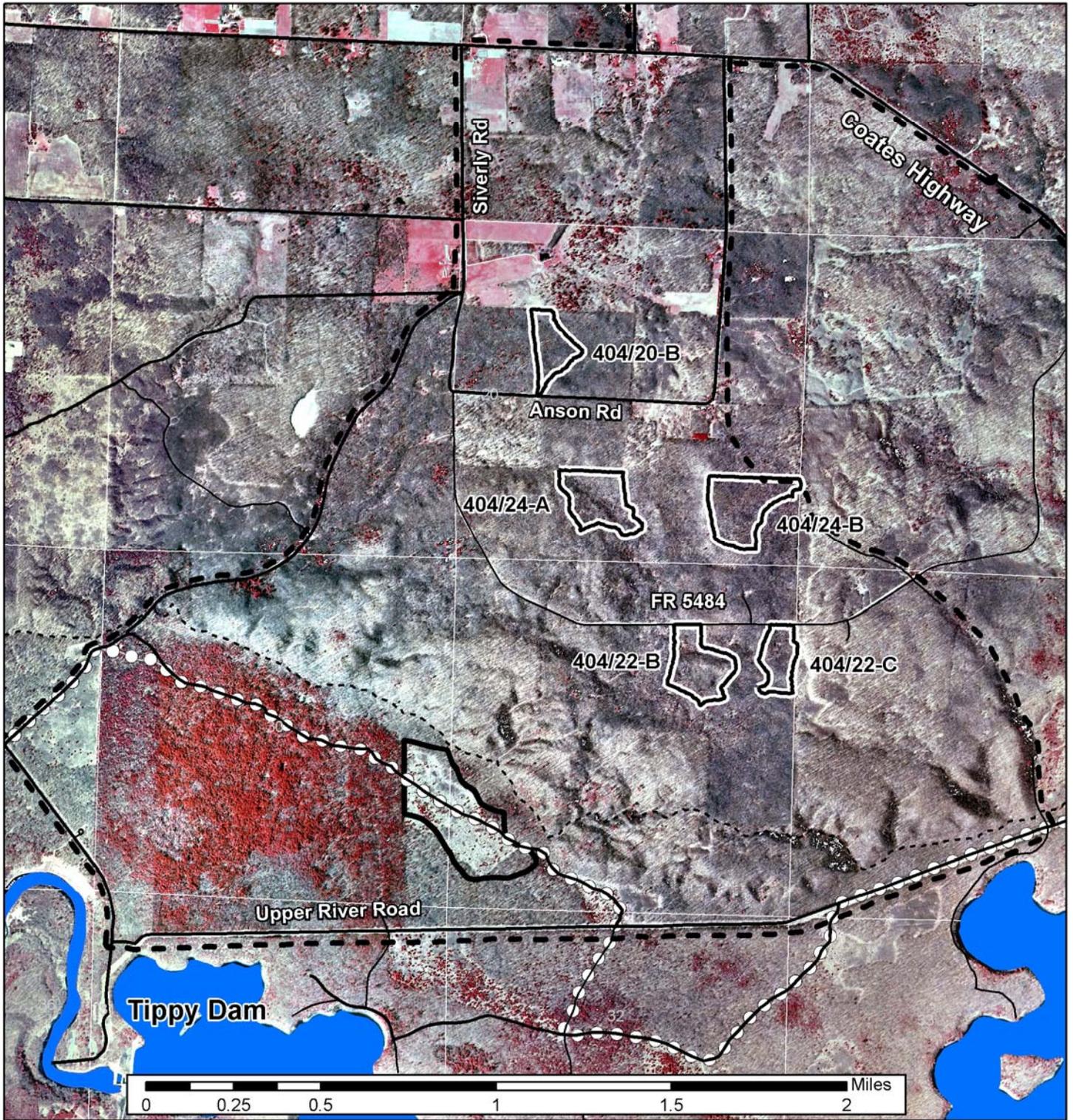
**Concern:** Decreased visuals from timber harvest operation adjacent to roads, trails, and private property.

**Mitigation:** Remove logging slash within the trails and within 25’ of private property and trails to reduce the effects on visual quality and reduce the fire hazard.

**Marilla Too Project**  
Clearcut - Aspen

Treatment Units: 404 / 20-B	404 / 24-A
404 / 22-B	404 / 24-B
404 / 22-C	404 / 24-B

**Alternative 4**



Legend			
	Project Area Boundary		Open Public Road
	Aspen Clear Cut		Hiking Trails
	Other Treatments		Snowmobile Trails
	Sections		Streams
			Lakes & Rivers

<b>Marilla Too Project</b>	<b>Treatment Type: Aspen Clearcut</b>		<b>Alternative 4 Only</b>	
<b>Treatment Unit: 404/20-B</b>	<b>Acres: 12</b>	<b>Alternative: 4</b>	<b>LSC: 500</b>	<b>ELTP: 237</b>
<b>Treatment Unit: 404/22-B</b>	<b>Acres: 18</b>	<b>Alternative: 4</b>	<b>LSC: 500</b>	<b>ELTP: 235</b>
<b>Treatment Unit: 404/22-C</b>	<b>Acres: 10</b>	<b>Alternative: 4</b>	<b>LSC: 500</b>	<b>ELTP: 230/35</b>
<b>Treatment Unit: 404/24-A</b>	<b>Acres: 19</b>	<b>Alternative: 4</b>	<b>LSC: 500</b>	<b>ELTP: 235/37</b>
<b>Treatment Unit: 404/24-B</b>	<b>Acres: 22</b>	<b>Alternative: 4</b>	<b>LSC: 500</b>	<b>ELTP: 230</b>

**TREATMENT UNIT DESCRIPTION**

These aspen units have a year of origin of 1970. These aspen units are located in MA 2.1G (Roaded Natural Rolling Plains and Morainal Hills) and within the Marilla Grouse Emphasis Area. These units are located within the Tippy Dam Management Zone (TMZ) area identified for protection of Indiana bat habitat.

**RESOURCE PRESCRIPTION AND FACTS CODE(S) 2510, 4113, 4493, 4341, 4381, 6423**

**Silvicultural Prescription:** Harvest and regenerate mature and over/mature aspen using the even/aged clearcut method. Retain topwood less than 4” in diameter to maintain soil productivity, reduce soil compaction, and retain organic matter. Retain all snags over 5” dbh unless they are a safety hazard. Retain or create an average of 9 suitable roost trees per acre if available in clumps. Retain native, mast/producing shrubs where possible. Prohibit clearcutting between April 1 and October 20 in order to promote regeneration, retain site nutrients, and protect bats.

A temporary specified road would be constructed to access Units 404/24-B and closed after harvest activities are completed.

**Reforestation:** The unit would be treated using site preparation for natural regeneration, felling all stems between 1-5” dbh. If the regeneration is less than 60 percent of full stocking levels after three growing seasons of the completed harvest, the unit would be evaluated for reforestation needs. Only native species will be used in planting.

**Invasive Plant Control Prescription:** Thistle species in Unit 404/22-B, C, 404/24-A, 404/24-B; Wild parsley in Unit 4 4/22B: Treat with glyphosate.

**RESOURCE CONCERNS AND MITIGATION**

**Concern:** Protection of potential Indiana bats present during the swarming and breeding season within the TMZ and potential roosting habitat.

**Mitigation:** Harvesting would be prohibited from May 1 to October 20 to eliminate the possibility of impacting individual bats in roosts. Standing snags over 5” dbh would not be cut and/or removed unless considered a safety hazard. Retain or create an average of 9 suitable roost trees per acre if available in clumps.

**Concern:** RFSS ((Northern wild comfrey) in Unit 404/24-A and 404/24-B.

**Mitigation:** Establish 66 foot buffers around existing northern wild comfrey plants to protect them. Woody vegetation should be cleared away from the northern wild comfrey, but equipment should not run over it or woody vegetation piled on top of it.

**Concern:** Decreased visuals from timber harvest operation adjacent to roads, trails, and private property.

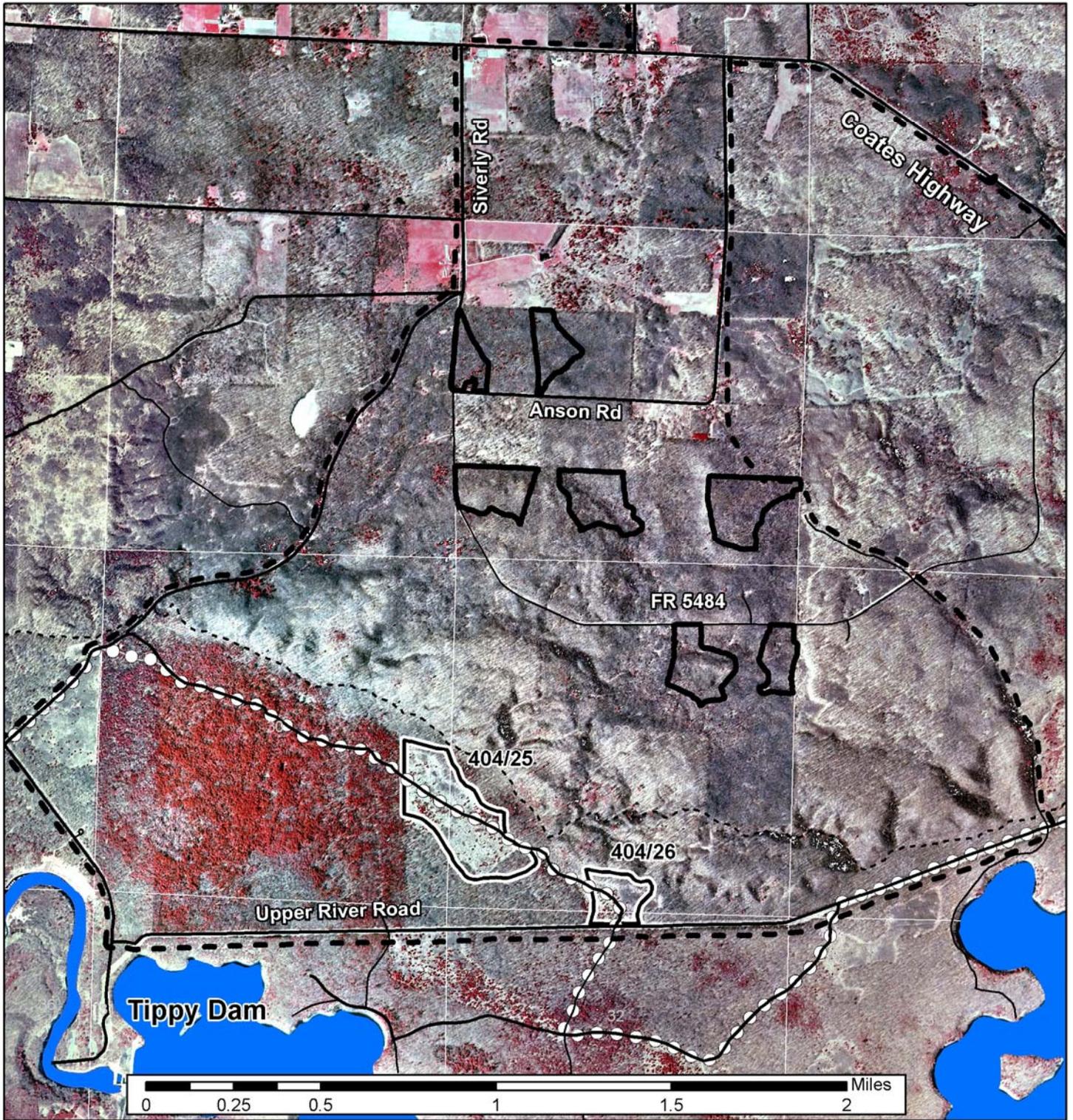
**Mitigation:** Remove logging slash within the trails and within 25’ of private property and trails to reduce the effects on visual quality and reduce the fire hazard.

# Marilla Too Project

## White Pine Planting

Treatment Units:  
404 / 25  
404 / 26

# Alternative 2



### Legend

- |                       |                   |
|-----------------------|-------------------|
| Project Area Boundary | Open Public Road  |
| White Pine Planting   | Hiking Trails     |
| Other Treatments      | Snowmobile Trails |
| Sections              | Streams           |
|                       | Lakes & Rivers    |

**Marilla Too Project      Treatment Type: White Pine Planting      Alternative 2 Only**

<b>Treatment Unit: 404/25</b>	<b>Acres: 47</b>	<b>Alternative: 2</b>	<b>LSC: 500</b>	<b>ELTP: 221</b>
<b>Treatment Unit: 404/26</b>	<b>Acres: 14</b>	<b>Alternative: 2</b>	<b>LSC: 500</b>	<b>ELTP: 223</b>

**TREATMENT UNIT DESCRIPTION**

These two mixed oak/upland hardwood units were harvested in the late 1980. Scattered gaps in the canopy are proposed for underplanting with white pine. These units are located in MA 2.1G (Roaded Natural Rolling Plains and Morainal Hills) and within the Marilla Grouse Emphasis Area. These units are located within the Tippy Dam Management Zone (TMZ) area identified for protection of Indiana bat habitat.

**RESOURCE PRESCRIPTION AND FACTS CODE(S) 2510, 4432, 4342, 4383**

**Reforestation:** These units would be underplanted using hand tools with white pine in canopy breaks at the rate of 100-200 trees per acre. Retain 20% of canopy gaps unplanted.

**Wildlife Prescription:** Create a lined waterhole in a canopy gap.

**Invasive Plant Control Prescription:**

Autumn olive control in Unit 404/25: Stump treat with glyphosate.

**RESOURCE CONCERNS AND MITIGATION**

**Concern:** Presence of known cultural resource site in Unit 404/26.

**Mitigation:** Exclude ground disturbing activities up to a minimum of 30 meter buffer zone from established site boundary. No equipment will be allowed within site boundary. No scattering or piling of slash within site boundary.

