Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 45006
Entry Year 2021
Acreage: 3,095
County Chippewa
Management Area: Drummond Island

Revision Date: 2019-07-26

Stand Examiner: Jeff Wise

Legal Description:

T42N R7E Secs. 7,8, 16-21; Drummond Island, Chippewa County.

Identified Planning Goals:

Compartment 6 is part of the Drummond Island Management Area. Aspen has been harvested in the past primarily for regeneration and wildlife purposes and is ongoing with age diversity as the goal. Small hardwood stands have been harvested for management of Beech Bark Disease and are nearing completion. One large aspen stand is being prescribed for harvest this YOE.

Soil and topography:

Soils consist primarily of Shelter Very Stony Loam under the aspen types and Markey Carbondale mucks under the lowland types. The Shelter soil is slightly rolling with many exposed limestone bedrock outcrops. Boulders are prevalent and road construction difficult. This soil is fertile but shallow and wind throw is common. The mucks are level and very poorly drained. They are located along the east, north and west sides of the compartment, adjacent to the water.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Solid block of state ownership with one inholding of 40 acres of private land in Section 20. Some private holdings border the west side. These private lands are used for dispersed recreation. Both private parcels within and bordering on the compartments are hunting clubs.

Unique Natural Features:

According to the latest Michigan Natural Features Inventory, Loons and Ospreys are the only listed species within this compartment. Other unique features include the Potagannissing River and the many areas of exposed bedrock. Care needs to be taken when doing management in these areas since the possibility exists that they may support unique plants. Karst features are also present within the compartment and are especially evident during spring runoff.

Archeological, Historical, and Cultural Features:

Nothing known at this time.

Special Management Designations or Considerations:

Many areas along Second, Third, and Fourth Lakes and Stevens Lake are quite scenic and provide a rather large isolated block well suited to being left in its natural state.

Watershed and Fisheries Considerations:

This compartment contains First Lake, which is an impoundment of the Potagannissing River, as well as part of the river upstream of the impoundment. First Lake provides important spawning habitat for northern pike, which can access the lake through the rock ramp structure at Potagannissing Dam (which is just downstream of this compartment). Potagannissing River is a warm transitional river. A 100-foot buffer should be maintained next to these waterbodies. Beaver dams on and above the rock ramp structure can limit its effectiveness, so beaver populations should be discouraged in this area and trapping should be promoted.

Wildlife Habitat Considerations:

This compartment is in the Drummond Island MA and featured species include black bear, white-tailed deer, snowshoe hare, ruffed grouse, sharp-tailed grouse, and northern goshawk. The compartment is comprised primarily of lowland cedar and aspen-conifer stand, both upland and lowland. Small hardwood islands occur in several locations. This compartment includes a portion of the Potagannissing Flooding Wildlife Area. First through Fourth Lakes are part of or border the compartment. The east side of the compartment is part of a Dedicated Habitat Area (DHA) for core interior forest species, and generally this area has undergone passive management over the last 10 years or more. Management of aspen types

during this period has resulted in young regenerating stands on the northwest and southwest ends of the compartment. These habitats support ruffed grouse, deer, snowshoe hare, black bear, and numerous bird species. Parts of a mature stand near the middle of the compartment is planned for treatment to maintain the aspen habitat while providing some age class diversity between stands. Some mature trees will remain to provide roosting and budding trees for ruffed grouse and habitat for other species, such as woodpeckers. Wetlands will be protected to maintain habitat for waterfowl and other wetland wildlife. Water levels on the flooding are influenced by a fixed spillway at the outlet of First Lake, although natural water events are likely the primary influence on water levels in much of the system.

Mineral Resource and Development Concerns and/or Restrictions

Little information exists on the surface and bedrock geology for this part of Drummond Island. Active sand/gravel pits are located to the west, near the airport. There may be some sand & gravel potential within the compartment on the upland areas. Dolomite quarries are located on the southwest part of the island and elsewhere in the eastern UP. There is potential that the same bedrock formations occur at or near the surface within the compartment. There is no known history of mineral leasing or exploration in this area. There is no known potential for economic hydrocarbon production in the UP. The state does not own most of the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights. Based on interpretation of Michigan statute, most non-metallic minerals are considered part of the surface estate.

Vehicle Access:

Considering the remoteness of this compartment it has good vehicle access through the central part, it just takes an hour to bounce down the rock strewn road to reach it. No new permanent roads are planned or needed within this compartment.

Survey Needs:

Nothing this YOE.

Recreational Facilities and Opportunities:

Hunting is the main form of recreation. A little snowmobiling takes place also and a few people pick mushrooms in the spring. The annual Jeep Jamboree, an event sponsored by Chrysler/Daimler, passes through the very southern part of this compartment each year. There is an ORV/ATV trial through the compartment as well.

Fire Protection:

Fire protection is extremely difficult within this compartment. Second Lake Road is the only access and it is extremely rough, and takes an hour to traverse its length to the compartment boundary. There is no access to water nearby.

Additional Compartment Information:

Aspen is the primary cover type within this compartment making up about 40% of the area. Cedar makes up another 10%. Upland hardwood makes up about 6% and swamp conifer about 4%. Lowland brush and marsh make up about 30% and water another 9%.

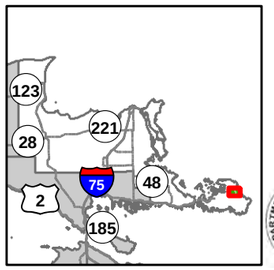
The following reports from the Inventory are attached:

- **Total Acres by Cover Type and Age Class**
- **Cover Type by Harvest Method**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**
- **Stand Details (Forested and Nonforested)**
- **Dedicated and Proposed Special Conservation Areas**
- **Site Condition Details**

The following information is displayed, where pertinent, on the attached compartment maps:

- **Base feature information, stand boundaries, cover types, and numbers**
- **Proposed treatments**
- **Site condition boundaries**
- **Details on the road access system**

Cover Type & Treatments Map



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Compartment: 6
T42N, R07E, Sec: 7, 8, 16-21
T42N, R06E, Sec: 13
County: Chippewa
Unit: Sault Ste. Marie
Mgmt Area: Drummond Island
YOE: 2021
Acres: 3,095 GIS Calculated
Examiner: Jeff Wise
Map Revised: 8/9/2019
Map Phase: Web Post

- Miris Corners
- Remonumented Section Corners
- Field Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Forest Access Route
- Private - Dirt / Gravel Road
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Designated ATV
- Designated ORV Route
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- Structures
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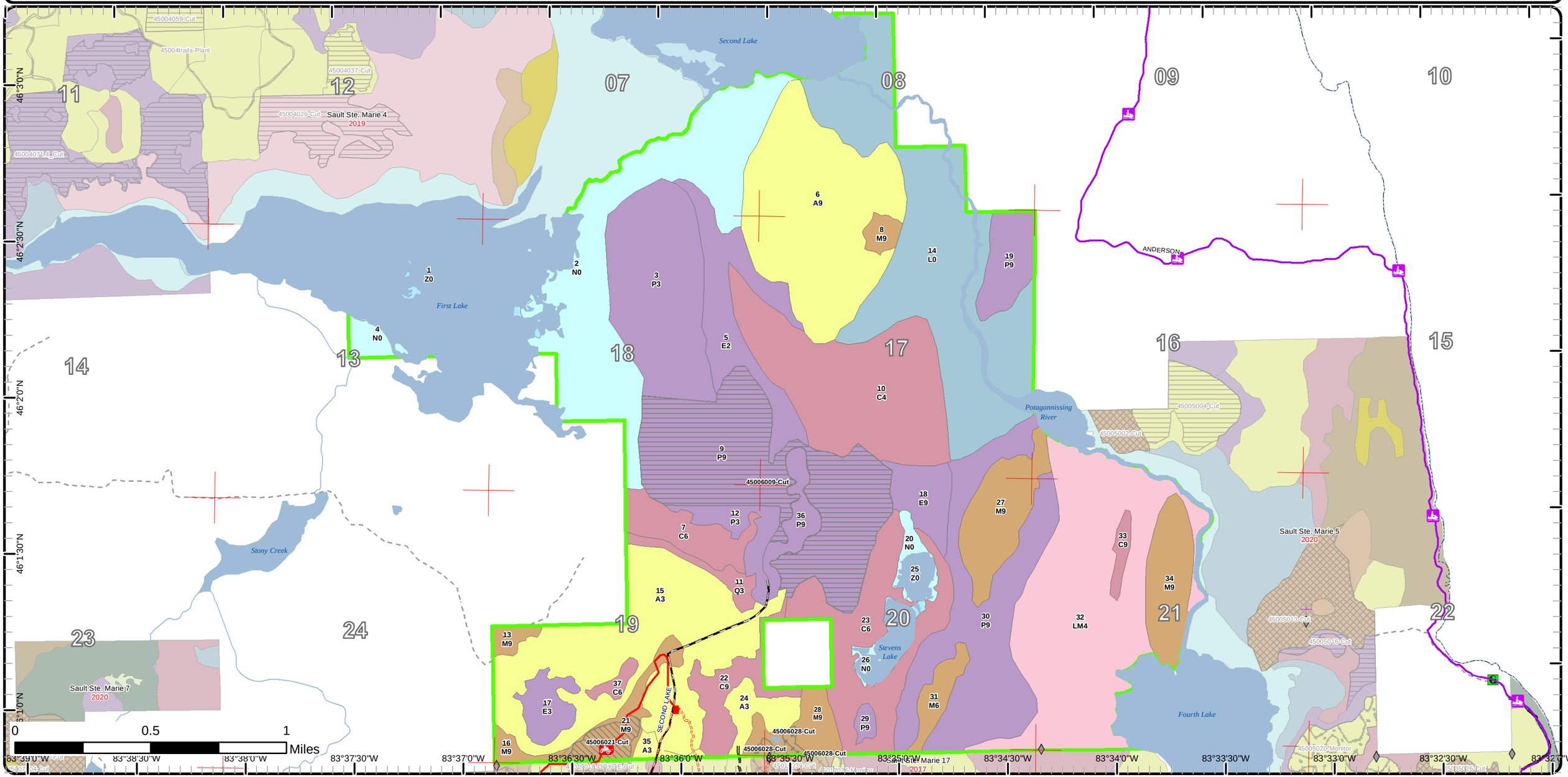
- Lake/Pond
- Perennial River
- Shoreline
- Lakes and Rivers All
- Compartment Boundary
- Other Harvest - See Comments
- Clearcut (w/Reserves)
- Salvage
- 411 - Northern Hardwood
- 413 - Aspen
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes



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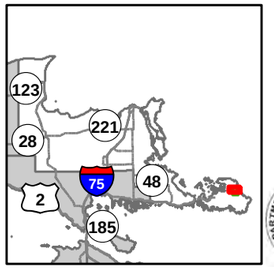

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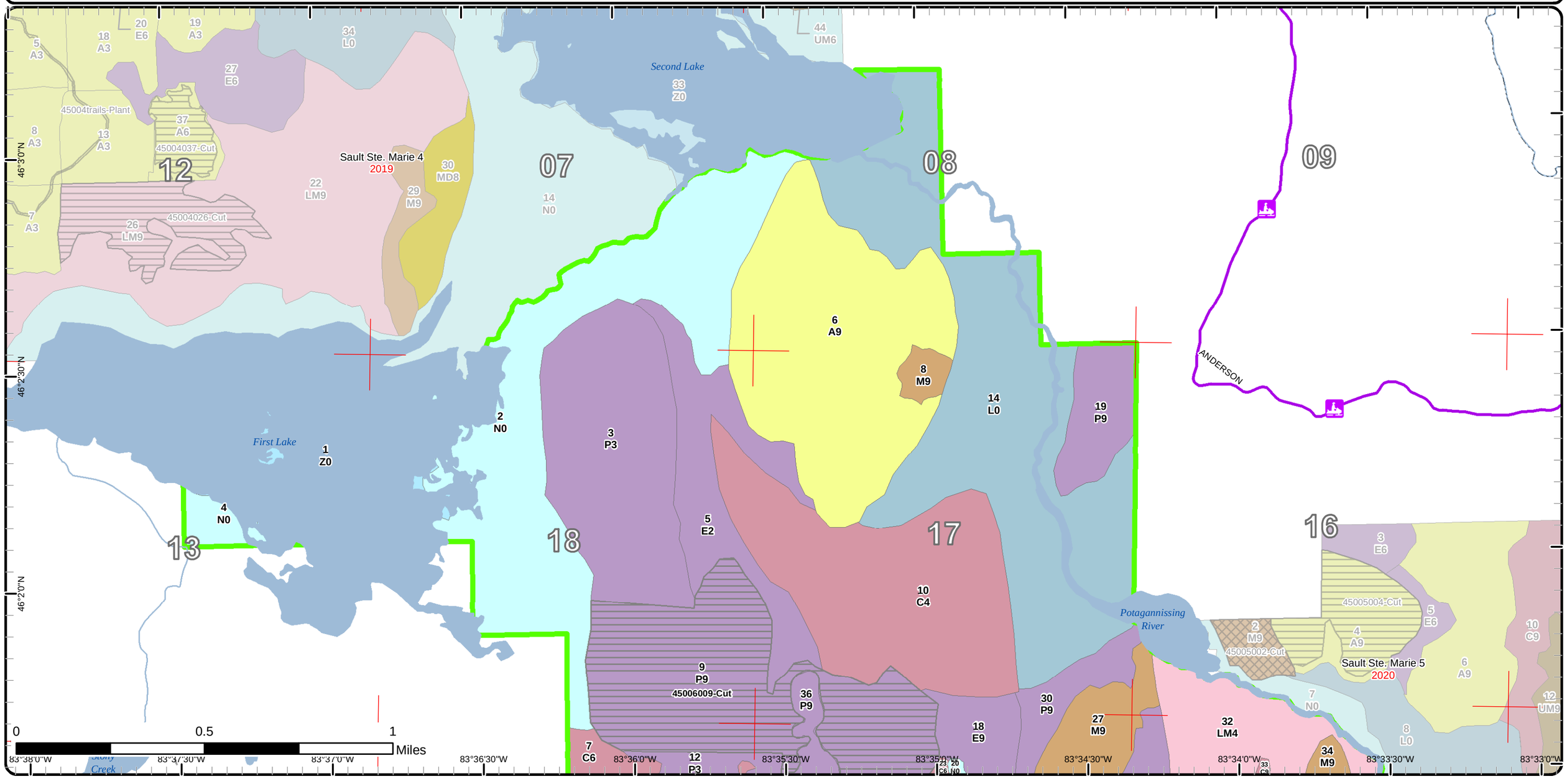

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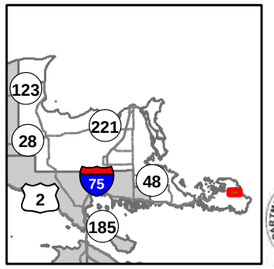

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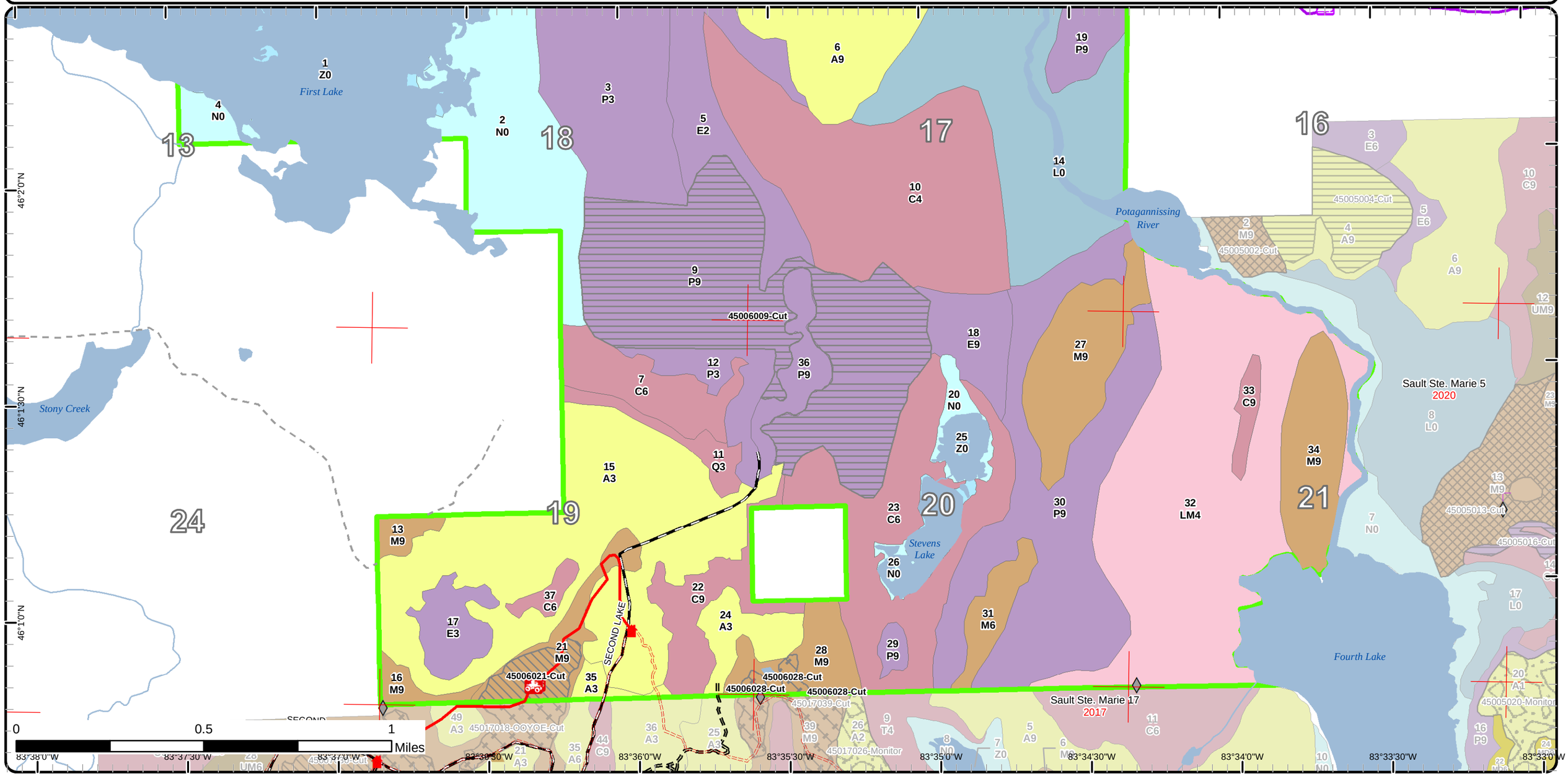
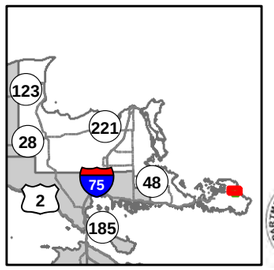


Stand Boundary Map



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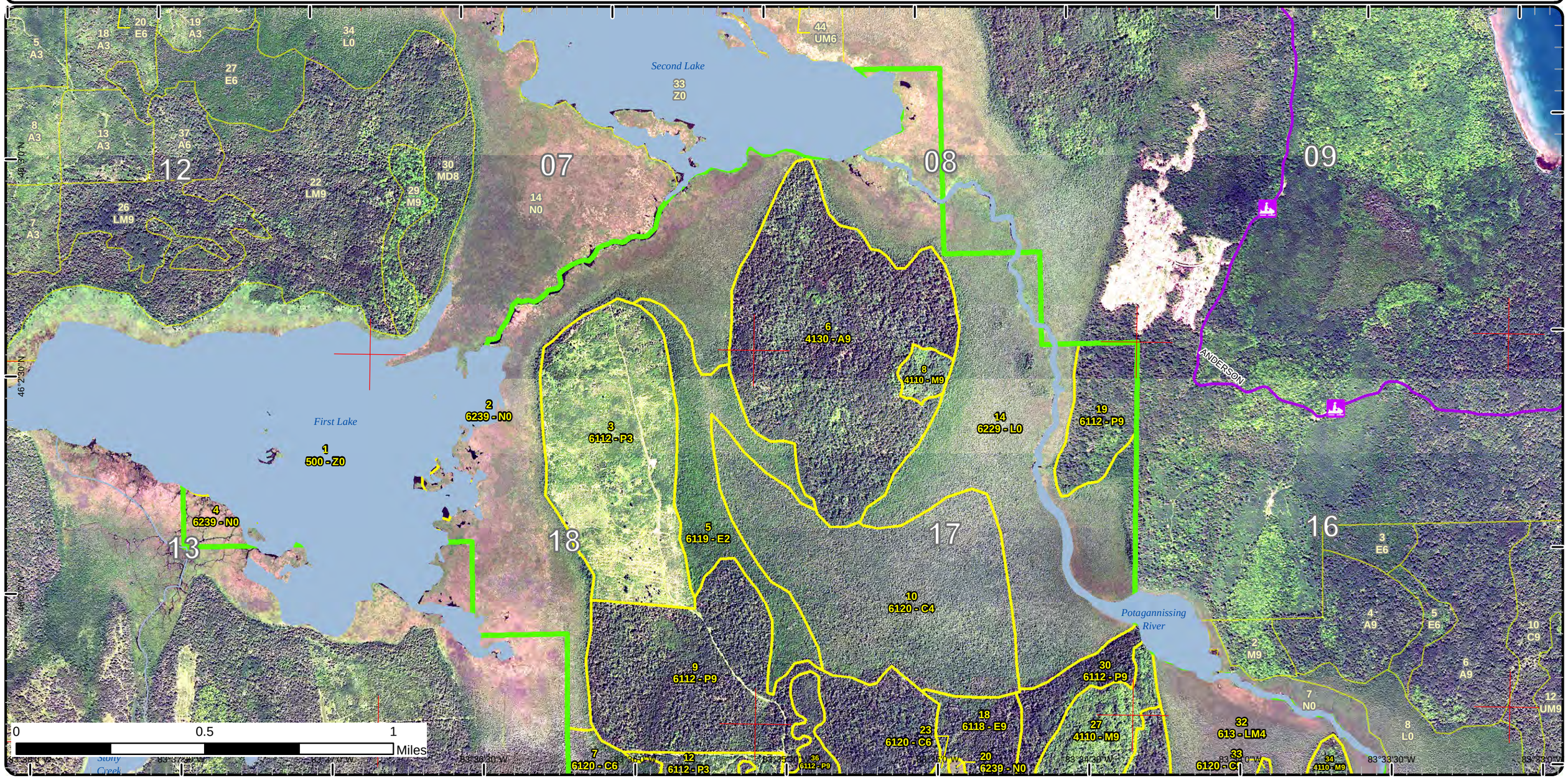

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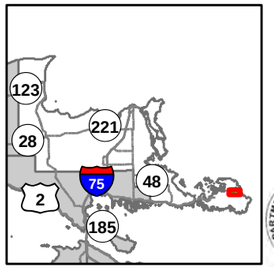

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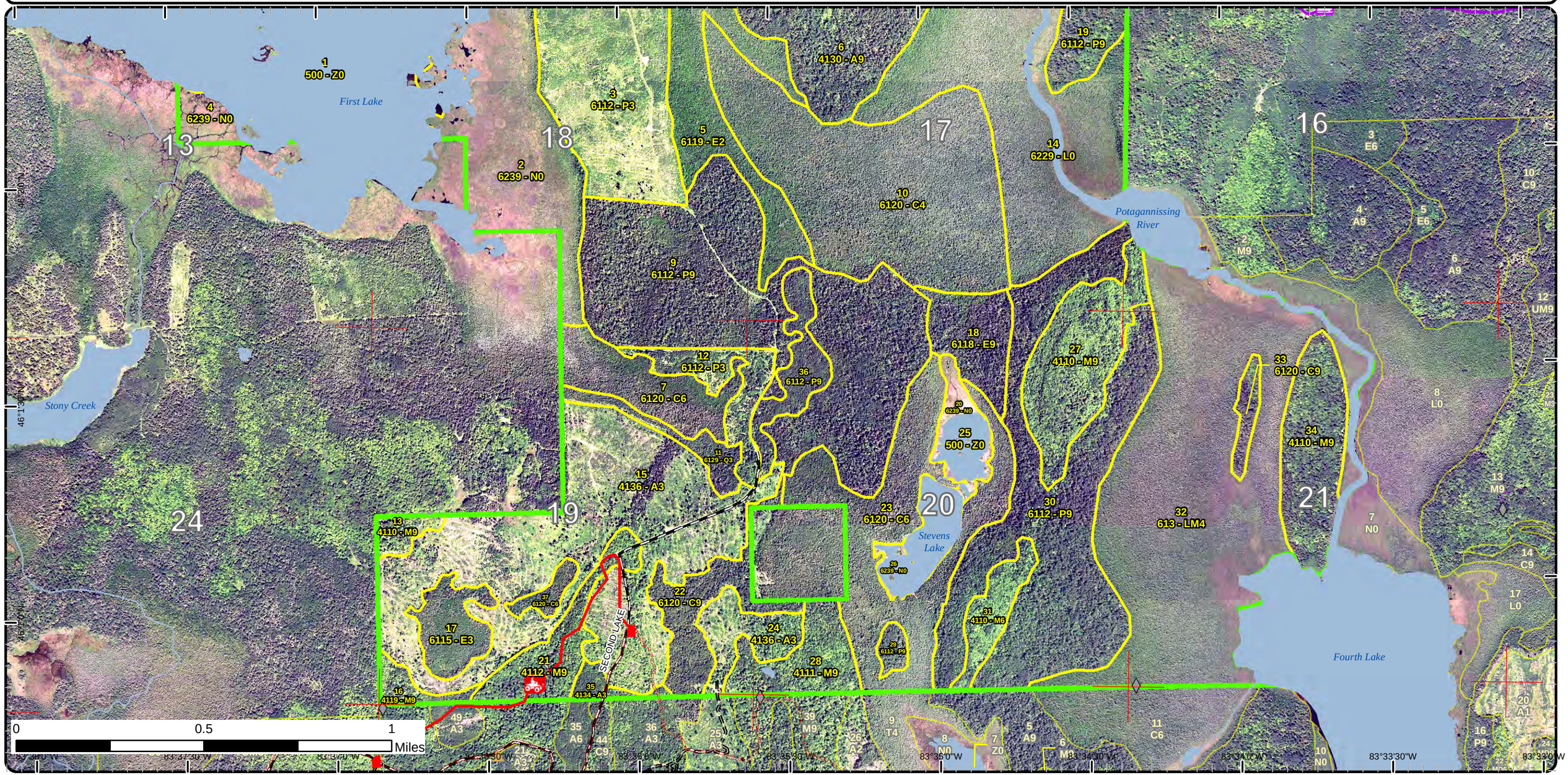
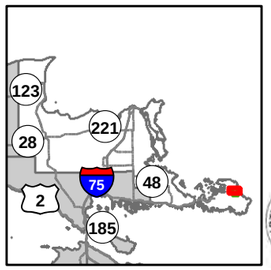


Special Conservation Areas & Site Conditions Map



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- 3L: Other wildlife concerns
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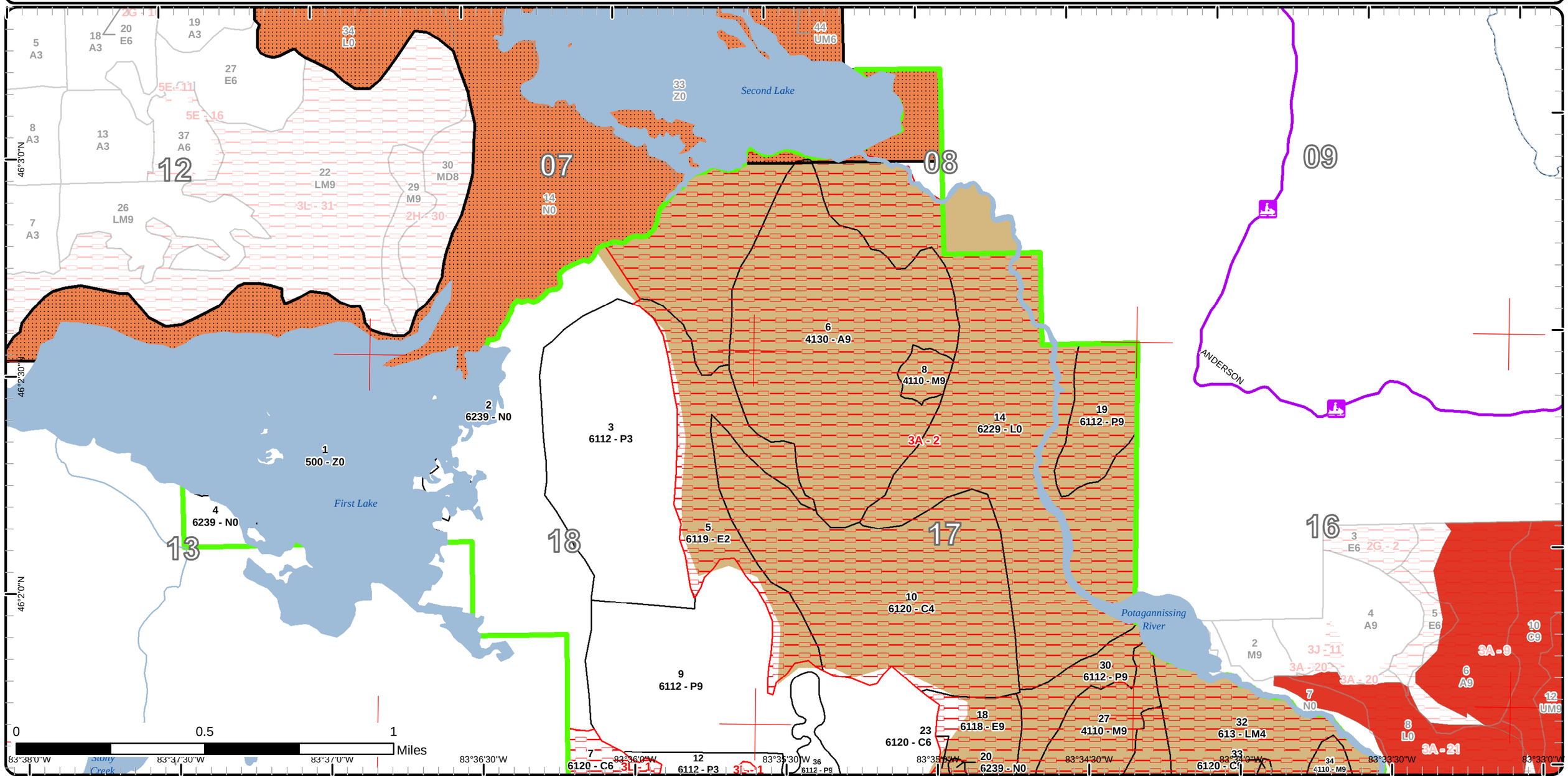
- Forest Habitat Core Interior
- Cold Water Streams
- Cold Water Lakes
- Other Habitat Area



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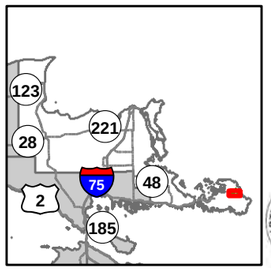

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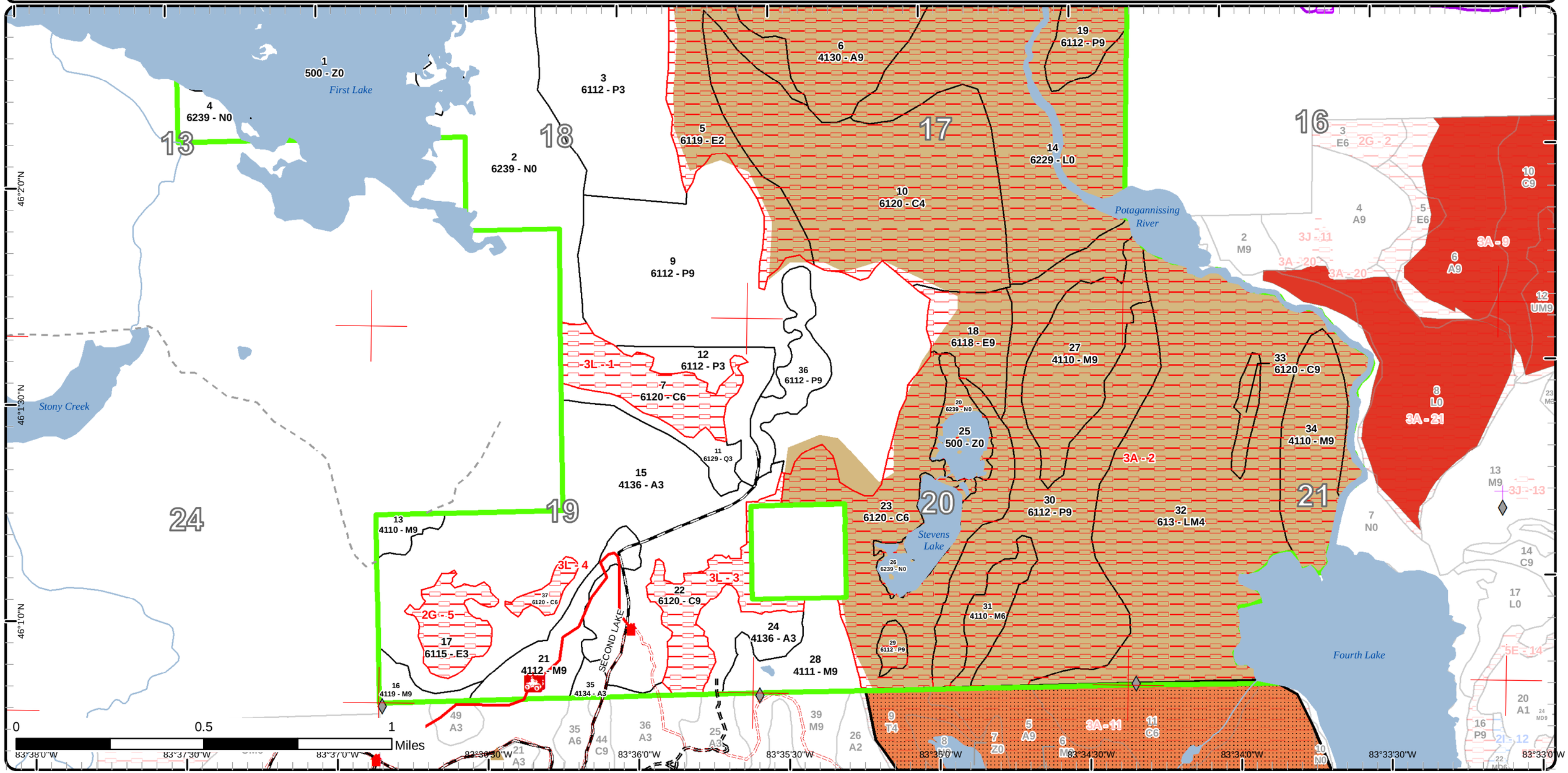

Report 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit **Compartment 6** **Year of Entry 2021**

Jeff Wise : Examiner

Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	260	0	0	7	0	0	0	0	0	0	0	225	0	0	0	0	0	**492**
Cedar	0	0	0	0	0	0	0	0	0	0	202	0	0	48	118	0	43	0	**411**
Lowland Aspen/Balsam Poplar	0	0	186	0	0	0	0	0	0	6	0	186	0	0	39	0	0	265	**682**
Lowland Conifers	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
Lowland Deciduous	0	0	0	0	0	0	0	110	0	0	0	0	0	0	0	0	0	33	**143**
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	293	0	0	0	0	0	0	0	0	**293**
Lowland Shrub	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**315**
Marsh	302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**302**
Northern Hardwood	0	0	0	0	0	0	0	0	20	143	0	10	0	0	56	0	0	10	**239**
Water	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**202**
Total	**819**	**260**	**186**	**0**	**23**	**0**	**0**	**110**	**20**	**442**	**202**	**196**	**225**	**48**	**213**	**0**	**43**	**308**	**3095**

Report 2 – Treatment Summary

Sault Ste. Marie Mgt. Unit

Year of Entry: 2021

Acres of Harvest

Compartment 6

Total Compartment Acres: 3,095

Commercial Harvest - 262

Harvests with Site Condition - 0

Next Step Harvest - 0

Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Lowland Aspen/Balsam Poplar	239	0	0	0	0	0	0	0	0	**239**
Northern Hardwood	0	0	0	0	0	0	0	6	18	**23**
Total	**239**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**18**	**262**

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	262	0	0	0	0	0	0	0	0	**262**
Next Step	0	0	6	0	0	6	244	0	0	**256**
Total	**262**	**0**	**6**	**0**	**0**	**6**	**244**	**0**	**0**	**518**

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
9	45006009-Cut	238.7	6112 - Lowland Aspen	Sawtimber Well	70	81-110	Harvest	Clearcut with Retention	6112 - Lowland Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Harvest all trees to a 4" top except cedar, oak, pine, hemlock, and yellow birch, if any. Additional area retention will be determined when sale lines are put in, mainly around advanced regen, wet areas, and cedar pockets to maintain cover for wildlife and encourage varying age classes that benefit a variety of wildlife. Stand size may vary . Buffer any nests appropriately according to guidelines.

Next Step Treatments: Monitoring, Natural Regen (Re-Inventory)

Acceptable Regen: Present species

Other Comment: Harvest will maintain aspen habitat for grouse, woodcock, snowshoe hare, deer, and other wildlife

Proposed Start Date: 10/1 /2020

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
21	45006021-Cut	17.7	4112 - Maple, Beech, Cherry Association	Sawtimber Well	85	51-80	Harvest	Other - Specify	4112 - Maple, Beech, Cherry Association	Unspecified	Field Boundary

Habitat Cut: No **Site Condition:**

Prescription Specs: Remove all beech and ash except those marked with green paint.

Next Step Treatments:

Acceptable Regen:

Other Comment: Old next step comments: Check for beech and ash regen according to work instructions.

Proposed Start Date: 10/1 /2013

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28	45006028-Cut	5.7	4111 - S.Maple, Hard Mast Association	Sawtimber Well	80	81-110	Harvest	Salvage	411 - Northern Hardwood	Uneven-Aged	Field Boundary

Habitat Cut: No **Site Condition:**

Prescription Specs: Remove all beech and ash except those marked for retention. Cutting of operational trees that is required to maneuver in the stands will be allowed. The beech and/or ash will be cruised and any hardwood that is cut during the harvest will be piled and scaled. The price for hardwood pulp will be set higher than average to deter the cutting of more trees than is necessary. 1-3 beech and/or ash per acre will be marked with green paint as retention trees focusing on those that look resistant, have significant bear claw marks or are large and wolfy.

Next Step Treatments: Monitoring, Natural Regen (Intermediate); Pesticide, Other - Specify; Planting, Underplant

Acceptable Regen:

Other Comment: Approved via the post compartment review process.

Proposed Start Date: 12/9 /2014

Total Treatment Acreage Proposed: 262.1

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Jeff Wise : Examiner

Compartment: 6

Year of Entry: 2021

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions 2G	3A	3L
493	267	*0*	225	**Aspen**		225	
411	0	*0*	411	**Cedar**		321	89
682	451	*0*	230	**Lowland Aspen/Balsam Poplar**		230	
16	16	*0*	0	**Lowland Conifers**			
143	0	*0*	143	**Lowland Deciduous**	26	117	
293	0	*0*	293	**Lowland Mixed Forest**		293	
315	28	*0*	287	**Lowland Shrub**		287	
302	199	*0*	103	**Marsh**		103	0
239	87	*0*	152	**Northern Hardwood**		152	
202	175	*0*	28	**Water**		28	
3,095	1,223		1,872	Total Forested Acres	26	1,757	89
	40%		60%	Relative Percent			

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	**Unavailable**	**3L: Other wildlife concerns**	43	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments:						
2	**Unavailable**	**3A: Conservation Values incompatible with harvest at this time**	1,757	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	2E: Road needed	Unspecified	Unspecified
	Comments: DHA, comprises the entire east side of the compartment.						

3	**Unavailable**	**3L: Other wildlife concerns**	39	3J: Water quality / BMPs (stream, river, or lake)	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified
	Comments: Cedar cutting restraints and wet.						
4	**Unavailable**	**3L: Other wildlife concerns**	7	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments: Cedar cutting restraints						
5	**Unavailable**	**2G: Too wet (sensitive soils, does not include access issues)**	26	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 5 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres

Comments

Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
1	500 - Water	Nonstocked	174.5		Unspecified	No	First Lake
2	6239 - Mixed Emergent Wetland	Nonstocked	259.6		Unspecified	No	Marsh between First and Second Lake.
3	6112 - Lowland Aspen	Sapling Well	157.1	12	Unspecified	N/A	Sale 006-01, Stand in full regen, 27 tpa of cedar was left in cut, a lot has blown down. A few large white pine, much blew down last YOE.
4	6239 - Mixed Emergent Wetland	Nonstocked	23.7		Unspecified	No	
5	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	83.8	60	Unspecified	N/A	Low and swampy stand. Elm is scattered throughout.
6	4130 - Aspen	Sawtimber Well	225.1	110	81-110	N/A	OI comments states there is an osprey nest on north end but not confirmed, part of stand cut in '70's, looks to have been a high grade w/ small patches cut here and there, and manage for old growth. Many different age groups of aspen w/in the stand, some younger regen and some older. Balsam regen is thick in some areas. In some areas the aspen is ancient while other areas it is probably in the 60-70 yr. age class..
7	6120 - Lowland Cedar	Poletimber Well	43.2	153	81-110	N/A	Low ground. Tamarack & cedar are in poor condition.
8	4110 - Sugar Maple Association	Sawtimber Well	9.9	100	81-110	N/A	Small pocket of hardwood in stand 6, poorer quality but regeneration in the understory is nice with advanced 1-3" dbh trees. Sugar maple coming in underneath. Stand was thinned in the 70's.

Stand 3

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	50	Sapling	2	12
Northern White Cedar	10	Log/Pole	10	
Balsam Poplar	20	Sapling	1	
Balsam Fir	10	Sapling	1	

Stand 5

Canopy Species	% Cover	Size Class	DBH	Age
American Elm	40	Sapling/Pole	5	50
Northern White Cedar	10	Sapling/Pole	4	65
Black Ash	50	Sapling/Pole	4	60

Canopy Species	Density	Avg. Height	Size
American Elm	Low	5 - 10 feet	Sapling
Northern White Cedar	Low	5 - 10 feet	Sapling
Black Ash	Medium	5 - 10 feet	Sapling
Tag Alder	Medium	5 - 10 feet	Tall Shrub

Stand 6

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	79	Log/XLog/Pole	16	110

Canopy Species	Density	Avg. Height	Size
Quaking Aspen	High	Variable	Sapling
Balsam Fir	High	Variable	Sapling
White Spruce	Low	Variable	Pole
Northern White Cedar	Medium	Variable	Log

Stand 7

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	63	Pole	9	153
Tamarack	33	Log/Pole	14	108

Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	5 - 10 feet	Sapling
Northern White Cedar	Low	5 - 10 feet	Sapling
Black Ash	Low	>20 feet	Sapling

Stand 8

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	98	Log/Pole	14	100

Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	Variable	Sapling
Ironwood	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
9	6112 - Lowland Aspen	Sawtimber Well	239.0	70	81-110	N/A	Was under contract last YOE but was never cut.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Pole/Log	9	70
Balsam Fir	12	Pole	8	
White Spruce	8	Pole/Log	12	
Northern White Cedar	10	Log/Pole	10	133
Balsam Poplar	10	Pole/Log	9	

Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling
White Spruce	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
10	6120 - Lowland Cedar	Poletimber Poor	194.6	90	51-80	N/A	Very wet stand. Dead standing tamarack throughout stand. Cedar is in very poor condition as well.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	80	Pole/Sapling	8	90
Tamarack	20	Pole	8	

Canopy Species	Density	Avg. Height	Size
Northern White Cedar	Low	Variable	Sapling
Tag Alder	Medium	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
11	6129 - Mixed Coniferous Lowland Forest	Sapling Well	15.9	36	Unspecified	N/A	Old strip cut. A few larger residual cedar w/in the stand (8"), balsam, spruce, and tamarack are quite thick, some very nice cedar regen w/in the stand as well.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	35	Sapling	3	36
Black Spruce	10	Sapling	3	36
Northern White Cedar	13	Sapling	8	36

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	< 5 feet	Sapling
Black Spruce	Medium	< 5 feet	Sapling
Northern White Cedar	Low	< 5 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
12	6112 - Lowland Aspen	Sapling Well	28.9	17	Unspecified	N/A	Sale 006-01, cut with stand 1. A couple of older patches of aspen regeneration exists from a high grade cut 20+ yrs. ago.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	40	Sapling	4	17
Balsam Poplar	32	Sapling	1	17
Balsam Fir	20	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
13	4110 - Sugar Maple Association	Sawtimber Well	8.9	85	51-80	N/A	Sale 005-11, sugar maple is nice quality.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	95	Log/Pole	15	85

Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	10 - 20 feet	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
14	6229 - Mixed lowland shrub	Nonstocked	315.3		Unspecified	No	Large wet area consists of mature cedar in the 8-10" dbh range that is half dead probably due to high water at one time. There is a lot of dead standing tamarack. Mature cedar consists of <25% of the canopy therefore still non-forested. Also, within the understory a few small cedar trees 2-4' tall that look in good condition, and the understory consists of tag alder, michigan holly, and bog willow.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
15	4136 - Aspen, Mixed Conifer	Sapling Well	235.9	6	Unspecified	N/A	Sale 005-11, has a retention strip in the north east part, latest see imagery. Stand in full regen.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	10	Sapling	1	
Quaking Aspen	50	Sapling	1	6
Balsam Poplar	8	Sapling	1	
White Spruce	10	Sapling/Pole	3	
Bigtooth Aspen	9	Sapling	1	

16	4119 - Mixed Northern Hardwoods	Sawtimber Well	9.6	91	81-110	N/A	Low quality and small acreage, contains a strip of aspen from an old cut, slightly different composition than stand 21.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	40	Log	15	91
Beech	35	Log	16	
Quaking Aspen	10	Log	14	

Canopy Species	Density	Avg. Height	Size
Beech	Medium	Variable	Sapling
Maple (spp.)	Medium	Variable	Sapling

17	6115 - Lowland Ash	Sapling Well	25.7	60	Unspecified	N/A	Pocket of very low stagnant ground. Black ash is small diameter but is probably really old.

Canopy Species	% Cover	Size Class	DBH	Age
Black Ash	90	Sapling/Pole	3	60

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Black Ash	Medium	Variable	Sapling
Tag Alder	Medium	Variable	Tall Shrub

18	6118 - Lowland Deciduous with Cedar	Sawtimber Well	33.1	130	81-110	N/A	Stand of cedar overtopped with large aspen. Stand has a slight slope from East to West and looks like it contains seeps and is wet from the large ridge coming off of adjacent stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	73	Log/XLog	18	130
Northern White Cedar	20	Log/Pole	13	

Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	Variable	Sapling
Northern White Cedar	High	Variable	Pole

19	6112 - Lowland Aspen	Sawtimber Well	39.4	130	81-110	N/A	Ancient stand of aspen w/ cedar in the understory. Both species are large in diameter. Small pocket of red maple exists in south part of stand. An occasional large white pine is scattered w/in the stand.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	78	Log/XLog	16	130
Northern White Cedar	18	Log	15	127

Canopy Species	Density	Avg. Height	Size
Red Maple	Low	Variable	Sapling
Balsam Fir	Low	Variable	Sapling
White Spruce	Low	Variable	Sapling
Northern White Cedar	High	Variable	Log
Striped Maple	Low	Variable	Sapling

20	6239 - Mixed Emergent Wetland	Nonstocked	12.2		Unspecified	No	

21	4112 - Maple, Beech, Cherry Association	Sawtimber Well	34.4	85	51-80	N/A	Stand of nice hardwood thinned last YOE. Nice sugar maple saplings coming up in the understory.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	50	Log/Pole	15	85
Beech	46	Log/Pole	15	

Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	Variable	Sapling
Beech	High	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
22	6120 - Lowland Cedar	Sawtimber Well	38.8	128	81-110	N/A	Stand consists of decent quality cedar. A small stream runs thru the middle of it. Do not manage, the stand provides a good stream buffer and wildlife corridor. An active Goshawk nest in the SE corner of stand.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	94	Log/Pole	13	128

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	Variable	Sapling
White Spruce	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
23	6120 - Lowland Cedar	Poletimber Well	117.9	138	81-110	N/A	Large swamp surrounding Stevens Lake. Cedar is decent quality in some spots.

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	83	Pole	8	138
Tamarack	7	Log/Pole	12	

Canopy Species	Density	Avg. Height	Size
American Elm	Low	Variable	Sapling
Paper Birch	Low	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling
Black Ash	Medium	Variable	Sapling
Tag Alder	Low	Variable	Tall Shrub

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
24	4136 - Aspen, Mixed Conifer	Sapling Well	24.2	6	Unspecified	N/A	Sale 005-11, buffered SW corner of stand due to goshawk nest. Goshawk nest coordinates:Lat: 46*00'49.57" N, Long: 83*35'46.10" W 2019- did not investigate goshawk nest. Stand in full regen.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Sapling	1	6
Northern White Cedar	10	Log/Pole	12	
Bigtooth Aspen	10	Sapling	1	
Balsam Poplar	10	Sapling	1	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
25	500 - Water	Nonstocked	27.8		Unspecified	No	Stevens Lake
26	6239 - Mixed Emergent Wetland	Nonstocked	6.6		Unspecified	No	
27	4110 - Sugar Maple Association	Sawtimber Well	65.5	80	81-110	N/A	Illegal cabin in NE corner of stand. Hardwood is poorer quality and is mixed. The west side of the stand is one long North/South ridge, scattered oaks w/in the stand.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	80	Log/Pole	14	80
Beech	8	Log/Pole	14	

Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	Variable	Sapling
Northern White Cedar	Low	Variable	Pole
Ironwood	Medium	Variable	Sapling
Striped Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
28	4111 - S.Maple, Hard Mast Association	Sawtimber Well	34.3	80	81-110	N/A	.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	65	Log/Pole	14	80
Beech	30	Log/Pole	14	

Canopy Species	Density	Avg. Height	Size
Beech	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
29	6112 - Lowland Aspen	Sawtimber Well	5.6	80	81-110	N/A	Small island of aspen with pole sized cedar underneath. Stand is unique in that it is surrounded by a cedar swamp.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	98	Log/Pole	12	80

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Northern White Cedar	High	Variable	Pole

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
30	6112 - Lowland Aspen	Sawtimber Well	185.5	100	81-110	N/A	Stand contains ancient aspen with a mix of conifer within the understory. Aspen is in poor condition. Access into the stand is very poor.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	88	Log/XLog/Pole	17	100

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Pole
White Spruce	Medium	Variable	Pole
Northern White Cedar	Medium	Variable	Pole

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
31	4110 - Sugar Maple Association	Poletimber Well	20.4	75	81-110	N/A	Stand of decent hardwood. Pretty diverse hardwood stand in terms of species.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	68	Pole	9	75
Basswood	8	Log	13	
Beech	10	Pole	12	

Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	Variable	Sapling
Beech	Low	Variable	Sapling
White Spruce	Low	Variable	Sapling
Ironwood	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
32	613 - Lowland Mixed Forest	Poletimber Poor	293.2	87	1-50	N/A	Remote call, info based on same stand from Comp 17 to the south, degrades to lowland brush near the north and east edges.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
33	6120 - Lowland Cedar	Sawtimber Well	8.9	120	51-80	N/A	Unique stand. Consists of mostly cedar, but does contain a small patch of aspen with some sugar maple understory in the northernmost tip of the stand. There is also the occasional large sugar maple, one large hemlock in the north part of the stand.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	6	Log/Pole	14	
Northern White Cedar	92	Log/Pole	13	120

Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
34	4110 - Sugar Maple Association	Sawtimber Well	55.9	130	81-110	N/A	Hardwood is ancient. Sugar maple regen w/in the understory is decent and is well established.

Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	75	Log/XLog	17	130
Basswood	10	Log/XLog	20	
Red Oak	7	Log/XLog	16	

Canopy Species	Density	Avg. Height	Size
Sugar Maple	High	Variable	Sapling
Ironwood	Medium	Variable	Sapling
Striped Maple	Low	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
35	4134 - Aspen, Spruce/Fir	Sapling Well	7.4	31	Immature	N/A	Stand of aspen which runs into the compartment to the south. Cut around 1997

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	65	Sapling	2	31
Balsam Poplar	8	Sapling	2	
Balsam Fir	10	Sapling/Pole	3	
White Spruce	10	Sapling/Pole	3	

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	< 5 feet	Sapling
White Spruce	Medium	Variable	Seeding
Aspen (spp.)	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	6112 - Lowland Aspen	Sawtimber Well	26.2	70	81-110	N/A	Was under contract last YOE but was never cut.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	60	Pole/Log	9	70
Balsam Fir	12	Pole	8	
White Spruce	8	Pole/Log	12	
Northern White Cedar	10	Log/Pole	10	133
Balsam Poplar	10	Pole/Log	9	

Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling
White Spruce	Medium	Variable	Sapling

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
37	6120 - Lowland Cedar	Poletimber Well	7.3	91	111-140	N/A	Pocket of cedar in the aspen cut.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	10	Pole	11	
Quaking Aspen	10	Pole/Log	13	
Balsam Poplar	8	Pole	10	
Balsam Fir	10	Pole/Sapling	6	
White Spruce	10	Pole/Log	10	
Northern White Cedar	52	Pole	7	91

Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
White Spruce	Medium	Variable	Pole
Northern White Cedar	Medium	Variable	Pole
Tag Alder	Low	Variable	Tall Shrub