



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12019

Entry Year: 2027

Acreage: 2,514

County: Dickinson

Management Area: Ralph Moraine

Stand Examiner: Deb Goupell

Legal Description:

T44N R27W Sec 5-7

T44N R28W Sec1-3, 11, 12

Identified Planning Goals:

Manage all forested cover types on a sustainable yield. Develop an age class distribution within aspen cover type as directed by SFMP management plan, prescribing for harvest by age 50. Encourage diversity and conifers where possible.

Soil and topography:

The majority of the soils are fine sandy loams with 6-18% slope. There is relatively little lowland areas in this compartment.

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

Entirely State owned land; some private ownership on the west side.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

None noted

Special Management Designations or Considerations:

Cold water streams on far west end.

Watershed and Fisheries Considerations:

This compartment contains Wild West Creek and Flat Rock Creek. Wild West Creek and Flat Rock Creek are designated Type 1 trout streams less than 50 feet wide and have predicted mean July water temperatures of 62.2 and 63.7°F (cold streams), respectively. A 300' buffer is recommended for Wild West Creek and Flat Rock Creek in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, a minimum 100 feet, plus 5 feet per 1% increase in slope, riparian management zone is recommended to protect riparian areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

This compartment is made up of relatively rich soils for the Ralph Ground Moraine Management Area. Much of the hardwood stands have a heavy oak component which is highly desirable by deer, bear, wild turkeys, and grouse. Thus, much of this area should be managed with acorn production in mind. Upland and lowland conifers that provide year round cover for many wildlife species is lacking in this compartment. Maintaining and enhancing the conifer component will provide cover and travel corridors from compartments to the south and north.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial oil & gas production in this part of the state. No active sand & gravel operations are known to exist in the area, but there is good potential for development of sand & gravel in the compartment on the upland drumlins. The compartment, however, might be too far from populated areas (commercial markets) for any aggregate resources present to have much value beyond use by the county road commission or DNR for local road maintenance. Some sparse ground-based exploration for metallic minerals has occurred in this area, but no known prospects have been identified, and potential for any economic development of metallic minerals within/beneath the compartment is considered low at this time. The nearest current leasing activity involving State-owned mineral rights is several miles west. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, the surface owner must provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development.

Vehicle Access:

Simpson Road (poor dirt road) and Tower Road (county gravel road) are the primary arteries of this compartment. Various

two-track roads and trails cut through the interior.

Survey Needs:

None at this time

Recreational Facilities and Opportunities:

No facilities within the compartment; snowmobile trail is located a half mile southeast of the compartment boundary. This area heavily used by hunters, trappers, ATV riders, fishermen.

Fire Protection:

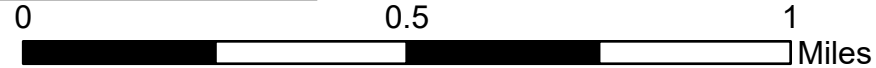
Additional Compartment Information:





























The following reports from the Inventory are attached:

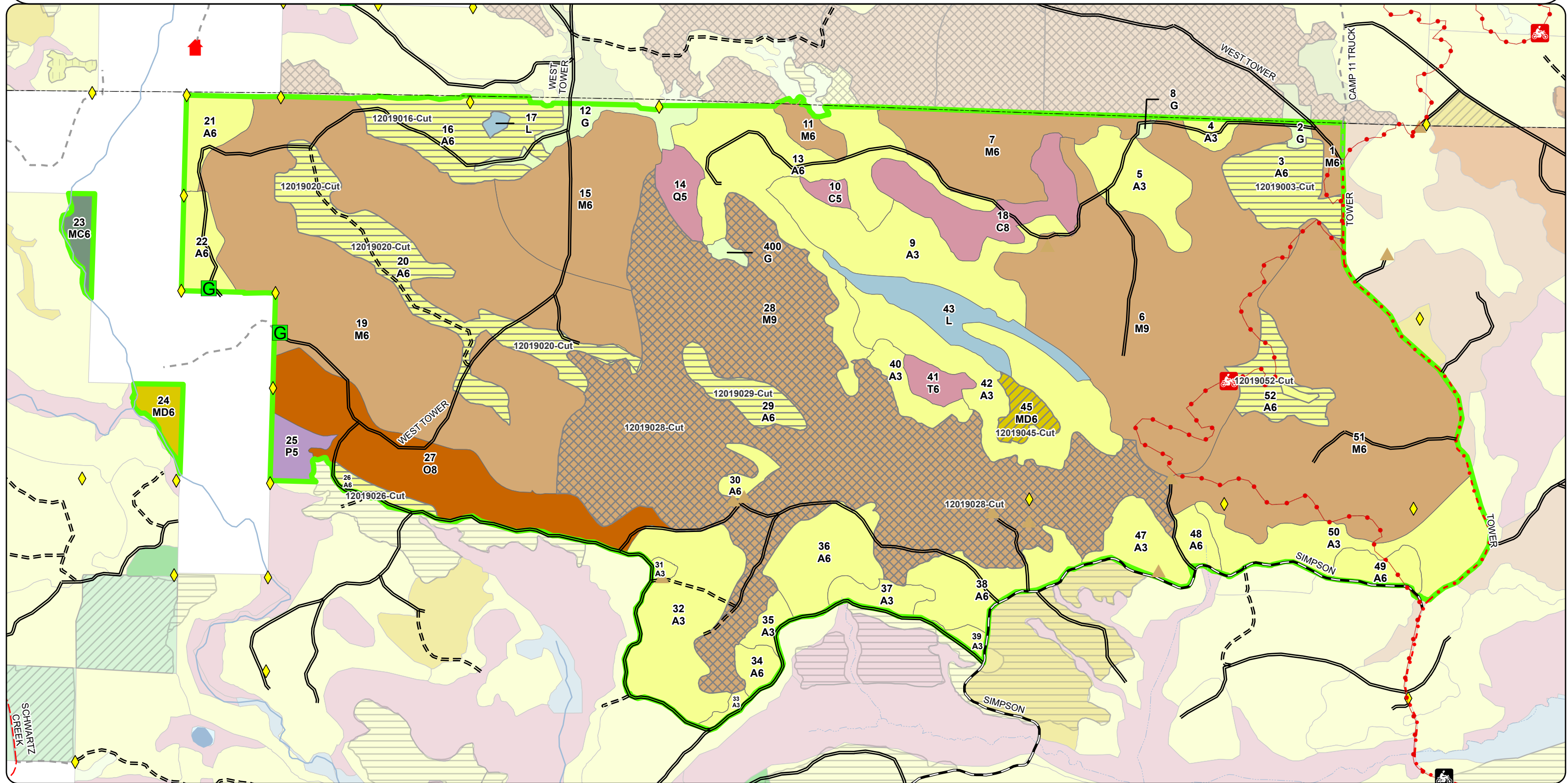
- Total Acres by Cover Type and Age Class
- Cover Type by Harvest Method
- Proposed Treatments – No Limiting Factors
- Proposed Treatments – With Limiting Factors
- Stand Details (Forested and Nonforested)
- Dedicated and Proposed Special Conservation Areas
- Site Condition Details

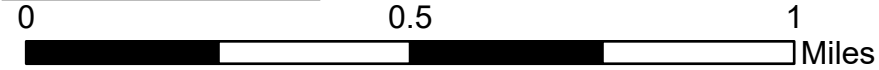
The following information is displayed, where pertinent, on the attached compartment maps:






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



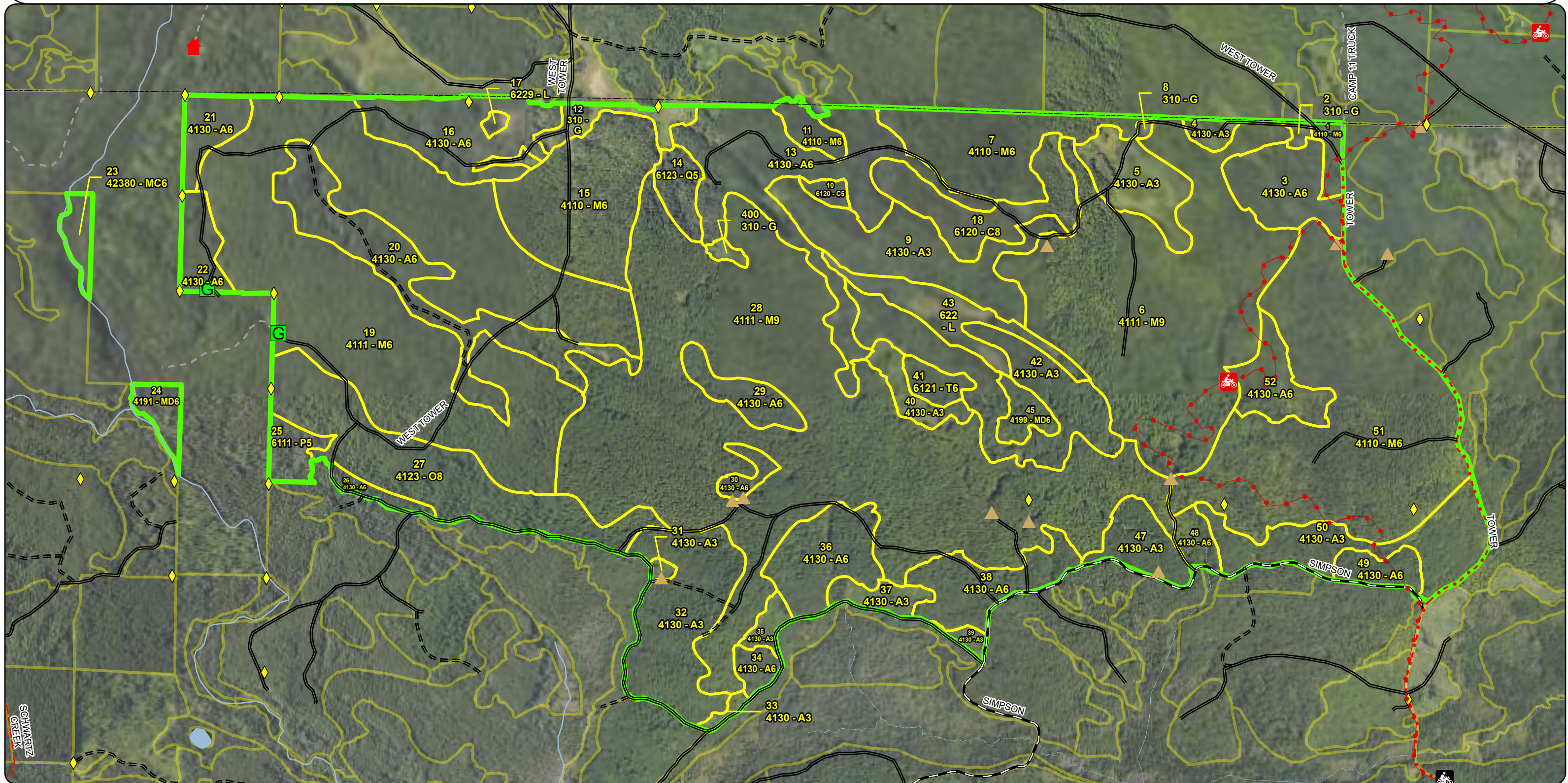
- | | | | | | | | |
|---|------------------------------|---|-------------------------------|---|-------------------------|---|---------------------------------|
|  | Survey Grade Corners |  | DNR - Forest Access Route |  | Counties |  | 413 - Aspen |
|  | Cabin |  | County - Gravel Road |  | Compartment Boundary |  | 419 - Mixed Upland Deciduous |
|  | Berms |  | County - Dirt Road (Seasonal) |  | Clearcut |  | 423 - Other Upland Conifers |
|  | Gate |  | Private - Dirt / Gravel Road |  | Selection |  | 611 - Lowland Deciduous Forest |
|  | Designated Motorcycle Trails |  | Intermittent Stream |  | Thinning |  | 612 - Lowland Coniferous Forest |
|  | DNR - Primary Forest Road |  | Perennial River |  | 411 - Northern Hardwood |  | 310 - Herbaceous Openland |
|  | DNR - Secondary Forest Road |  | Lakes and Rivers |  | 412 - Oak Types |  | 622 - Lowland Shrub |

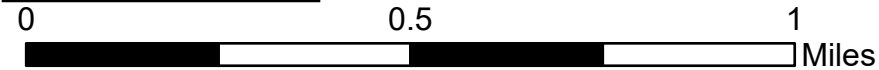




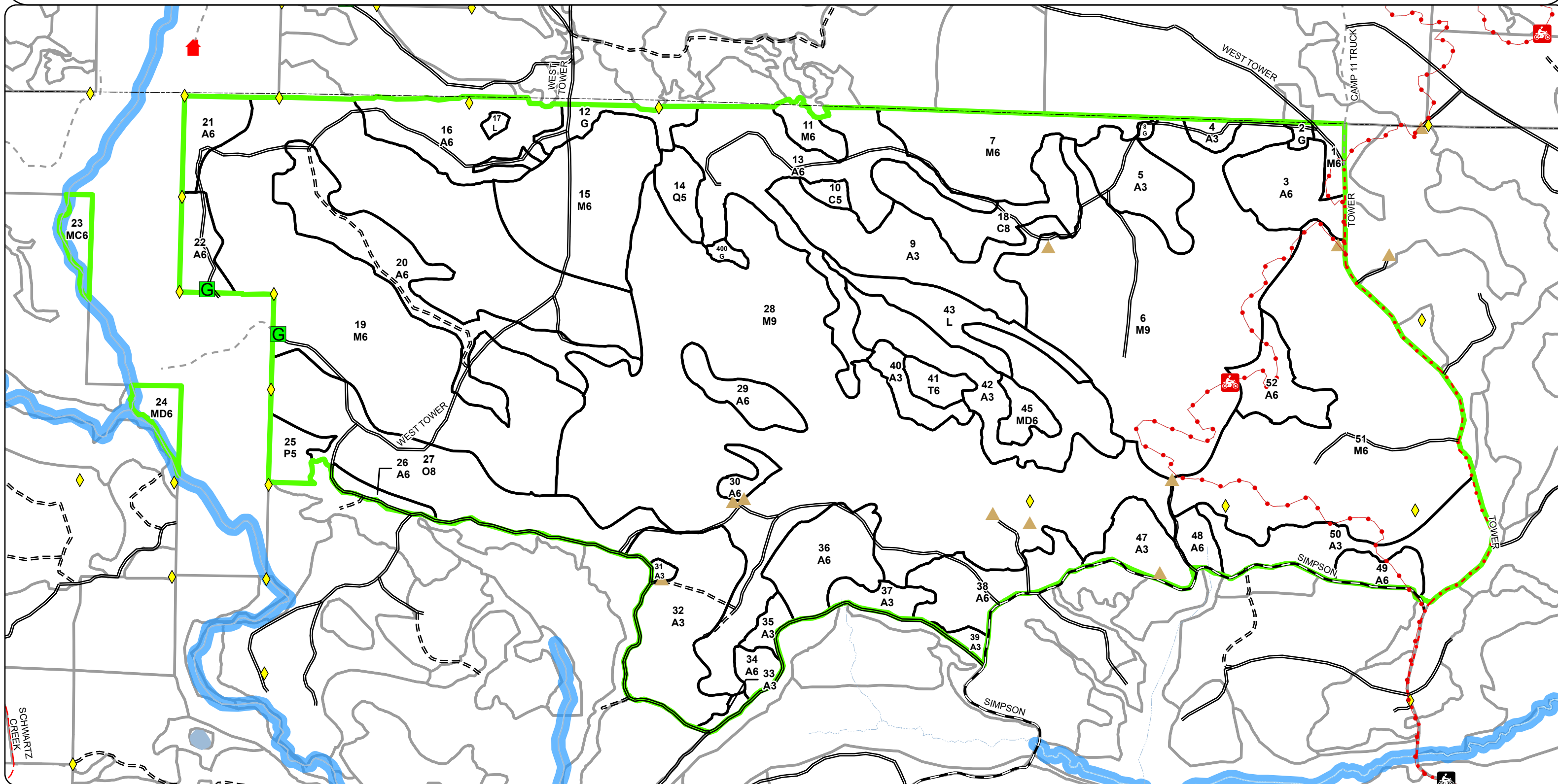
- | | | | | | |
|---|------------------------------|---|-------------------------------|---|------------------------------|
|  | Survey Grade Corners |  | DNR - Secondary Forest Road |  | Lakes and Rivers |
|  | Cabin |  | DNR - Forest Access Route |  | Counties |
|  | Berms |  | County - Gravel Road |  | Compartment Boundary |
|  | Gate |  | County - Dirt Road (Seasonal) | | 411 - Northern Hardwood |
|  | Designated Motorcycle Trails |  | Private - Dirt / Gravel Road | | 412 - Oak Types |
|  | DNR - Primary Forest Road |  | Intermittent Stream | | 413 - Aspen |
| | |  | Perennial River | | 419 - Mixed Upland Deciduous |

- 423 - Other Upland Conifers
611 - Lowland Deciduous Forest
612 - Lowland Coniferous Forest
310 - Herbaceous Openland
622 - Lowland Shrub





- | | | | | | |
|---|------------------------------|---|-------------------------------|---|-----------------------------------|
|  | Survey Grade Corners |  | DNR - Secondary Forest Road |  | Lakes and Rivers |
|  | Cabin |  | DNR - Forest Access Route |  | Counties |
|  | Berms |  | County - Gravel Road |  | Compartment Boundary |
|  | Gate |  | County - Dirt Road (Seasonal) |  | Stand Boundaries |
|  | Designated Motorcycle Trails |  | Private - Dirt / Gravel Road |  | Cold Water Streams |
|  | DNR - Primary Forest Road |  | Intermittent Stream |  | High Priority Trout Stream Buffer |
| | |  | Perennial River | | |



Report 1 – Total Acres by Cover Type and Age Class



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	79	54	22	302	193	124	24	0	9	0	0	0	0	0	0	0	0	806
Cedar	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0	0	0	0	46
Herbaceous Openland	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12
Lowland Conifers	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14
Lowland Shrub	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	10	11	0	0	0	0	0	0	21
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	1446	0	0	0	0	0	0	1446
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	95
Tamarack	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
Upland Conifers	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9
Total	55	79	54	22	302	207	124	24	0	9	40	1503	0	0	0	0	0	95	2513



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2027

Acres of Harvest

Compartment 19
Total Compartment Acres: 2,514

Commercial Harvest - 1373
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
Aspen	206	0	0	0	0	0	0	0	0	206
Mixed Upland Deciduous	0	0	0	0	11	0	0	0	0	11
Northern Hardwood	0	475	0	0	0	0	0	0	0	475
Total	206	475	0	0	11	0	0	0	0	692

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	692	0	0	0	0	0	0	0	0	692
Next Step	0	0	0	0	0	681	0	0	0	681
Total	692	0	0	0	0	681	0	0	0	1373



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
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Proposed Treatments:

3	12019003-Cut	34.6	4130 - Aspen	6	57	Unspeci fied	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest all stems 3" dbh and greater except oak and cedar. Leave submerchantable conifer, preferably in clumps scattered throughout <u>Specs:</u> stand as available. Also leave some representation of maple/basswood overstory trees for diversity (green tree during <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen, mixed hardwood, mixed softwood <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
16	12019016-Cut	51.8	4130 - Aspen	6	55	Unspeci fied	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest all stems 3" and greater at dbh except white pine, red pine, cedar, oak (if found). Scattered live clumps of submerchantable conifer <u>Specs:</u> will be left as available. Retention will be focused around pond for conifer retainment, as requested by WLD <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen, mixed hardwood, mixed softwood <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
20	12019020-Cut	71.4	4130 - Aspen	6	48	Unspeci fied	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest all stems 3" dbh and greater except oak, white pine, red pine, cedar. Retention will be focused around heavier areas of conifer, <u>Specs:</u> generally the northwest/north central, per WLD request. <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen, mixed hardwood, mixed softwood <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
26	12019026-Cut	6.8	4130 - Aspen	6	41	Unspeci fied	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest all stems 2" dbh and greater except oak & white pine. No other retention. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen, mixed softwood, mixed hardwood <u>Regen:</u> <u>Other</u> This stand has lost much volume due to SBW <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											



Standard

Standard	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
	28 12019028-Cut	475.4	4111 - S.Maple, Hard Mast Association	9	105	111-140	Harvest	Selection	411 - Northern Hardwood	Planting Record	No
<u>Prescription</u> Thin to BA 60, focusing on removal of high risk trees likely to not make to next marking cycle, following Compleat Marker. Larger basswood trees and all ash should be concentrated on for removal. Green tree some ash in better condition. Keep minor specie <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> oak, mixed hardwood, aspen, mixed softwood. <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
	29 12019029-Cut	18.0	4130 - Aspen	6	50	Unspecified	Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest all stems 3" dbh and greater except oak, red pine, white pine. Also retain submerchantable conifer. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen,mixed hardwood, mixed softwood <u>Regen:</u> <u>Other</u> Very little conifer in here <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
	45 12019045-Cut	10.7	4199 - Other Mixed Upland Deciduous	6	105	111-140	Harvest	Thinning	411 - Northern Hardwood	Planting Record	No
<u>Prescription</u> Thin to BA 70, focusing on removal of poorer formed trees that will not survive to next marking entry, following Compleat Marker. Oak may be marked but favor leaving over other species for mast. <u>Specs:</u> <u>Next Step</u> <u>Treatments:</u> <u>Acceptable</u> <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
	52 12019052-Cut	23.0	4130 - Aspen	6	60	81-110	Harvest	Clearcut	4199 - Other Mixed Upland Deciduous	Planting Record	No
<u>Prescription</u> Final harvest all stems 3" dbh and greater except oak and cedar. Retention is reflected in treatment, excluding low area from harvest. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> aspen, maple, mixed softwood <u>Regen:</u> <u>Other</u> May consider marking better quality sugar maple trees to leave <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											



S t a n d									Year of Entry: 2027		
	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	

Total Treatment
Acreage Proposed: 691.7



Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions				
					5C	2G	3J	5E
777	747	7	23	Aspen	7			23
46	46	0	0	Cedar				
23	23	0	0	Herbaceous Openland				
11	0	0	11	Lowland Aspen/Balsam Poplar		11		
14	14	0	0	Lowland Conifers				
32	32	0	0	Lowland Shrub				
21	11	0	10	Mixed Upland Deciduous			10	
1446	1446	0	0	Northern Hardwood				
95	95	0	0	Oak				
9	9	0	0	Tamarack				
9	0	0	9	Upland Conifers			9	
2,483	2,422	7	54	Total Forested Acres	7	11	20	23
	98%	0%	2%	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	Dominant Site Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable		3J: Water quality/BMPs (stream, river, or lake)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								
2	Unavailable		3J: Water quality/BMPs (stream, river, or lake)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:								

Report 4 – Site Conditions



3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: holding for "tail" aspen age class							
5	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: there is a bed and bank that cuts this stand in half							
8	Unavailable	5E: Long-Term Retention	2	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	5E: Long-Term Retention	13	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!
Year of Entry:

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				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																													
1	4110 - Sugar Maple Association	Poletimber Well	7.6	104	81-110	N/A	THE OAKS TS CUT 2010																																													
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th><th>Sub-Canopy Species</th><th>Density</th><th>Avg. Height</th><th>Size</th></tr><tr><td>Sugar Maple</td><td>50</td><td></td><td>9</td><td></td><td>Leatherwood</td><td>Medium</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr><tr><td>Basswood</td><td>50</td><td></td><td>14</td><td>104</td><td>Ironwood</td><td>Full</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr></table>								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size	Sugar Maple	50		9		Leatherwood	Medium	5 - 10 feet	5 - 10 feet	Basswood	50		14	104	Ironwood	Full	5 - 10 feet	5 - 10 feet																		
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Sugar Maple	50		9		Leatherwood	Medium	5 - 10 feet	5 - 10 feet																																												
Basswood	50		14	104	Ironwood	Full	5 - 10 feet	5 - 10 feet																																												
2	310 - Herbaceous Openland	None	2.5			No	Aspen, cherry, conifer filling in																																													
3	4130 - Aspen	Poletimber Well	34.6	57	Unspecified	N/A	Trace amounts of white ash and paper birch. West 1/3 of stand is rockier & wetter, more balm gilead																																													
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th><th>Sub-Canopy Species</th><th>Density</th><th>Avg. Height</th><th>Size</th></tr><tr><td>Sugar Maple</td><td>15</td><td></td><td>10</td><td></td><td>Ironwood</td><td>Medium</td><td>10 - 20 feet</td><td>10 - 20 feet</td></tr><tr><td>Basswood</td><td>10</td><td></td><td>12</td><td></td><td>White Spruce</td><td>Low</td><td>Variable</td><td>Variable</td></tr><tr><td>Quaking Aspen</td><td>65</td><td></td><td>11</td><td>57</td><td>Balsam Fir</td><td>Medium</td><td>Variable</td><td>Variable</td></tr><tr><td>Balsam Poplar</td><td>10</td><td>Seedling</td><td>9</td><td></td><td>Hazelnut (Spp.)</td><td>Medium</td><td>5 - 10 feet</td><td>5 - 10 feet</td></tr></table>								Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size	Sugar Maple	15		10		Ironwood	Medium	10 - 20 feet	10 - 20 feet	Basswood	10		12		White Spruce	Low	Variable	Variable	Quaking Aspen	65		11	57	Balsam Fir	Medium	Variable	Variable	Balsam Poplar	10	Seedling	9		Hazelnut (Spp.)	Medium	5 - 10 feet	5 - 10 feet
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Quaking Aspen	65		11	57	Balsam Fir	Medium		Variable	Variable																																											
Balsam Poplar	10	Seedling	9		Hazelnut (Spp.)	Medium	5 - 10 feet	5 - 10 feet																																												
4	4130 - Aspen	Sapling Well	5.9	5	Immature	N/A	Hlpster Hwd TS cut 2018. Most of residual black ash is dead.																																													
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th></tr><tr><td>Quaking Aspen</td><td>75</td><td>Log</td><td>1</td><td>5</td></tr><tr><td>Red Oak</td><td>1</td><td></td><td>14</td><td></td></tr><tr><td>Balsam Poplar</td><td>10</td><td>Log</td><td>1</td><td></td></tr><tr><td>Red Maple</td><td>14</td><td>Log</td><td>1</td><td></td></tr></table>							Canopy Species	% Cover	Size Class	DBH	Age	Quaking Aspen	75	Log	1	5	Red Oak	1		14		Balsam Poplar	10	Log	1		Red Maple	14	Log	1																						
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Quaking Aspen	85	Log	1	5																																																
6	4111 - S.Maple, Hard Mast Association	Sawtimber Well	243.2	104	81-110	N/A	THE OAKS TSALE CUT 2010. many multiple stem red oak, nearly no red oak regeneration except along road and with conifers in far NNW finger.																																													
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7	4110 - Sugar Maple Association	Poletimber Well	58.6	104	51-80	N/A	Tower Basswood cut 2000. Some sugar maple and white ash saplings >5'. Fewer oak. Hipster Hwd TS cut ~2021 (sale closed in 2022)																																													
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8	310 - Herbaceous Openland	None	1.2			No																																														



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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																							
15	4110 - Sugar Maple Association	Poletimber Well	80.9	101	81-110	N/A	many large rocks scattered in stand, on topsoil. South 2/3 of stand is best quality and potential (on hillside). North edge is heavier to aspen. (old notes)Needs field update next inventory cycle. Stand harvested with CF Squared Hardwood timber sale 32-037-18. Cut between 2019 and 2023. (2024)																																																							
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16	4130 - Aspen	Poletimber Well	51.8	55	Unspecified	N/A	Aspen ranges from 7-14" dbh																																																							
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17	6229 - Mixed Lowland Shrub	None	2.0			No																																																								
18	6120 - Lowland Cedar	Sawtimber Medium	41.4	108	Unspecified	N/A	Heavy to tag alder especially on south edge of stand. Most tamarack in far southwest.Cutting through this stand will compromise its cover integrity in an area where decent conifer cover is scarce. Scattered black ash still alive																																																							
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19	4111 - S.Maple, Hard Mast Association	Poletimber Well	351.2	102	81-110	N/A	Thinned in 2004. BAs range from 100-150. Quite a variable stand. (old notes)Stand harvested with CF Squared Hardwood timber sale 32-037-18. Cut between 2019 and 2023. (2024)																																																							
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20

4130 - Aspen

Poletimber Well

72.0

48

Unspecified

N/A

Trace amount of cherry. More maple saplings in pinch points

Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	5	Seedling	8	
Horsechestnut	5		9	
Sugar Maple	10	Seedling	8	
Red Oak	10		10	
Quaking Aspen	65		10	48
Balsam Fir	5	Seedling	8	

Sub-Canopy Species	Density	Avg. Height	Size
Hazelnut (Spp.)	High	5 - 10 feet	5 - 10 feet
White Spruce	Low	10 - 20 feet	10 - 20 feet
Ironwood	High	Variable	Variable
Balsam Fir	Low	10 - 20 feet	10 - 20 feet
Sugar Maple	Medium	10 - 20 feet	10 - 20 feet

21

4130 - Aspen

Poletimber Well

17.3

47

Unspecified

N/A

Fair amount of softwood on the ground. Will hold for next entry

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	5	Seedling	6	
Paper Birch	5	Seedling	6	
White Spruce	3	Seedling	7	
Quaking Aspen	87	Seedling	7	47

Sub-Canopy Species	Density	Avg. Height	Size
Hazelnut (Spp.)	High	5 - 10 feet	5 - 10 feet
Leatherwood	Medium	< 5 feet	< 5 feet
Balsam Fir	Low	Variable	Variable
White Spruce	Low	Variable	Variable
Ironwood	Medium	Variable	Variable

22

4130 - Aspen

Poletimber Well

16.5

37

Unspecified

N/A

West Tower TS cut 1987

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	5	Sapling	5	
Red Oak	3		18	
Quaking Aspen	70	Seedling	5	37
Bigtooth Aspen	10	Seedling	5	
Red Maple	12	Log	4	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	5 - 10 feet	5 - 10 feet
White Spruce	Medium	5 - 10 feet	5 - 10 feet
Hazelnut (Spp.)	High	5 - 10 feet	5 - 10 feet
Sugar Maple	Low	5 - 10 feet	5 - 10 feet

23

42380 - Non Pine Upland Conifer, Mixed Deciduous

Poletimber Well

9.4

94

81-110

N/A

Most of this stand is within 300' of prime trout waters.

24

4191 - Mixed Upland Deciduous with Conifer

Poletimber Well

10.4

95

81-110

N/A

Stand is within 300' of prime trout water.

25

6111 - Lowland Balsam Poplar

Poletimber Medium

12.2

96

Unspecified

N/A

Much of interior of stand is dead; drainage south central of stand. Larger spruce and balm are standing dead. Buffering this bed/bank preclude much of the stand for harvest

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Poplar	75		10	96
Paper Birch	2	Seedling	9	
White Spruce	13		11	
Black Spruce	10	Seedling	9	

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	5 - 10 feet	5 - 10 feet



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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
51	4110 - Sugar Maple Association	Poletimber Well	218.7	105	81-110	N/A	ONEill TS cut 1991-92. Lower BAs, heavier ironwood saplings along Tower Rd. Lots of basswood clumps. There is a wet conifer/ash swale in southwest lobe of this stand to protect. Hipster Hwd TS cut 2020-2022.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Oak		13		14		Ironwood	Medium	10 - 20 feet	10 - 20 feet
Sugar Maple		55		10	105	Leatherwood	Low	5 - 10 feet	5 - 10 feet
Basswood		30		14		White Spruce	Low	Variable	Variable
White Ash		1		9					
Bigtooth Aspen		1		12					
52	4130 - Aspen	Poletimber Well	24.4	60	81-110	N/A	There are hardwood knobs in here which are low quality (cracks, defect, broken limbs); low spot in east finger will serve retention. Keep all oak (only a few)		
Canopy Species		% Cover	Size Class	DBH	Age				
Sugar Maple		25		10					
Basswood		10		12					
Quaking Aspen		65	Seedling	8	60				
400	310 - Herbaceous Openland	None	2.8			No	OPIC - FMD: Site Index is from previous OI data.		