Compartment Review Presentation

Escanaba Forest Management Unit

Compartment 33018
Entry Year 2019
Acreage: 1,771
County Menominee
Management Area: Menominee End Moraine

Revision Date: 2017-06-29

Stand Examiner: Dustin Salter

Legal Description:

T36N R28W Sections 15, 22, 23, 26, 27, and 34

Identified Planning Goals:

This compartment is a mix of upland aspen, oak, and grass stands with a number of some lowland conifer near the Shakey River and the Little Shakey Creek. The spruce budworm is present, along with the eastern larch beetle. A significant portion of the spruce, balsam fir, and tamarack has been killed by the pests. The stands that have a significant amount of these species have been prescribed for harvesting, while there is an opportunity to regenerate these stands an minimize loss of volume. The mature aspen, low quality maple, and oak stands are prescribed for harvest. The lowland conifer stands with a significant portion of spruce and tamarack have been prescribed for harvest, before more mortality occurs.

Soil and topography:

Topography is level with some gently rolling hills. Soils include well drained loamy fine sand over loamy sand, black muck over sandy loam, and black muck over gravelly sandy loam.

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

This compartment is located in the middle of a block of state land that is about 20 miles long and 8 miles wide in the southwestern portion of Menominee County. There is no private ownership within the compartment boundaries. This compartment blocks up with other state land on the north and west sides. There are a number of private parcels around this compartment. The primary use of this land is for recreational purposes, but there is some farm land scattered around this compartment.

Unique Natural Features:

Cooper's Milk Vetch is known to occur in this compartment.

Archeological, Historical, and Cultural Features:

None Known

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

The Shakey River, Little Shakey Creek, and Swanson Creek flow through this compartment with a number of small creeks and drainages flowing into them. Part of Linnbeck Lake is also within the compartment boundaries.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

There is metallic mineral potential in this area, and there is active leasing and mineral exploration occurring just to the south and southwest related to the proposed Back Forty mine. Parcels within the compartment (Section 34) were previously leased by Aquila Resources. Sand/gravel pits are not located in the area but there does appear to be some potential on upland areas. No economic oil and gas production has been found in the UP. There is an active gravel pit within stand 65.

Vehicle Access:

The southern portion of the compartment is accessed off of a two track road that runs south off of the Swanson Road. The Swanson Road is a paved county road. The northern portion of the sale is accessed with the Linnbeck Lake Road which runs north off of the Swanson Road. Access into the northwestern third of the compartment is off of two track roads

that branch off of the Linnbeck Lake Road. Public access is restricted into this area, by a gate that is placed on the east side of the Little Sakey Creek. The bridge that was on-site is not acceptable for vehicular traffic anymore, so a number of years ago a temporary portable bridge was placed over top of it to allow for management activities. A temporary bridge will need to remain in place to allow harvesting of the prescribed stands west of the bridge and for any prescribed burning of the large grass stands.

Survey Needs:

Four registered corners will need to be set.

Recreational Facilities and Opportunities:

The primary recreational uses are hunting, fishing, four wheeling, and snowmobiling. There is a maintained hunter walking trail on the west side of the Little Shakey Creek, with a parking area on the east side of the creek. There is also a non-maintained access trail down to Linnbeck Lake.

Fire Protection:

A large percentage of the compartment is upland and could support a fast moving fire throughout most of the year. There are a number of lowland areas that provide natural fire breaks across the landscape. There are also a number of good water sources available.

Additional Compartment Information:

There are some possible oak wilt epi-centers within the upland oak types, that will need to be confirmed. If they are confirmed the oak wilt will need to be treated. This will entail a vibratory plow line to severe the roots and harvesting all oak within these areas. If any other oak wilt is confirmed throughout the next ten years those areas will also be treated.

The following reports from the Inventory are attached:

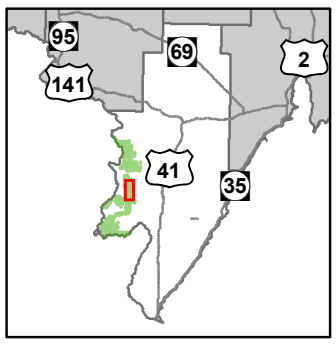
- **Total Acres by Cover Type and Age Class**
- **Cover Type by Harvest Method**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**
- **Stand Details (Forested and Nonforested)**
- **Dedicated and Proposed Special Conservation Areas**
- **Site Condition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

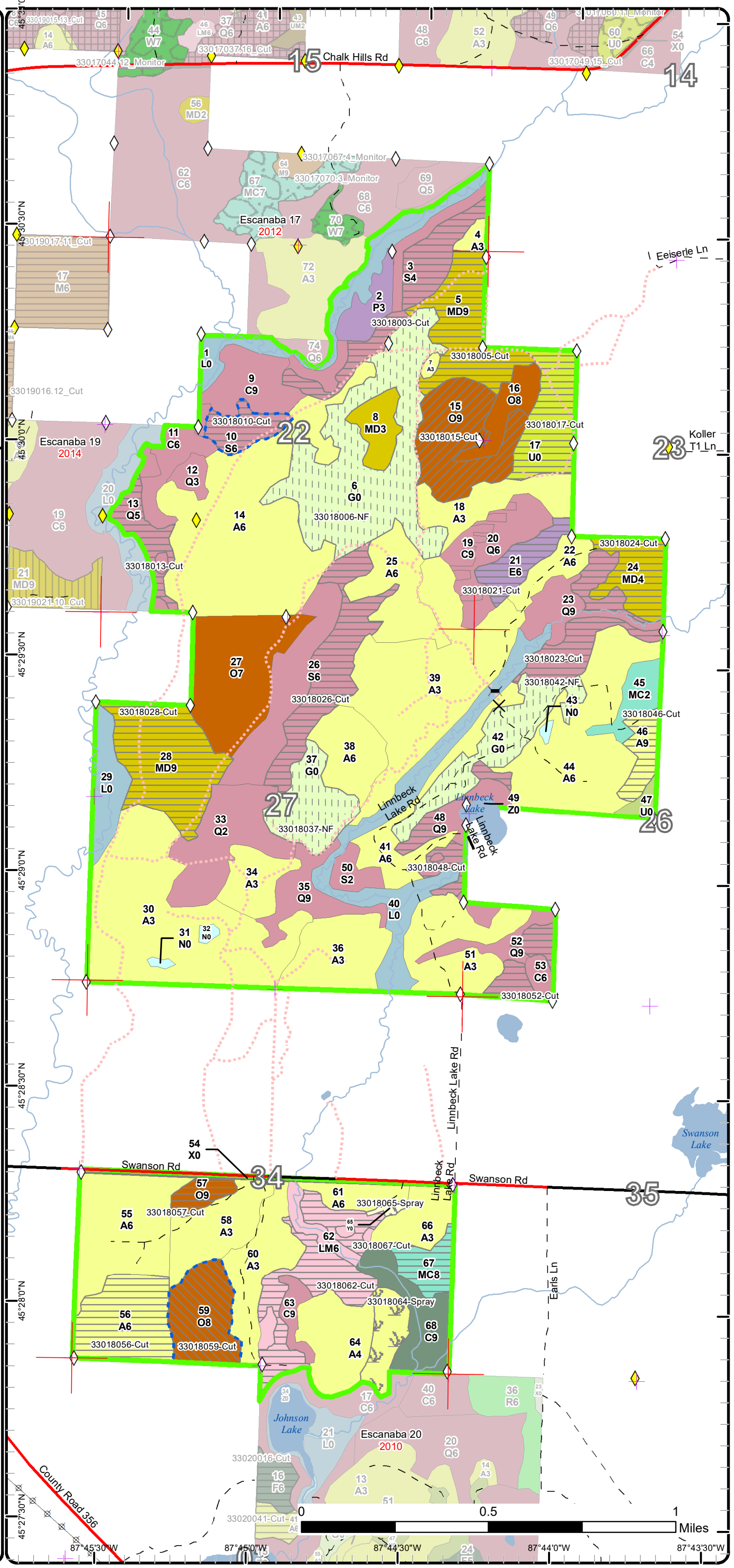
Cover Type & Treatments Map

Compartment: 18
T36N-R28W Sec. 22,23,26,27,34
County: Menominee
Unit: Escanaba
Mgmt Area: Menominee End Moraine
YOE: 2019
Acres: 1771 GIS Calculated
Examiner: Dustin Salter
Map Revised: 7/5/2017
Map Phase: Web-Post



N

- Miris Corners
- Remonumented Section Corners
- Survey Grade GPS Corners
- Field Grade GPS Corners
- Counties
- Gate
- Bridge
- County Paved Roads
- Paved Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Pesticide
- Opening Maintenance
- Other Harvest - See Comments
- Thinning (Crown, Low, Systematic)
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand/Soil
- Lakes



Stand Boundary Map

Compartment: 18
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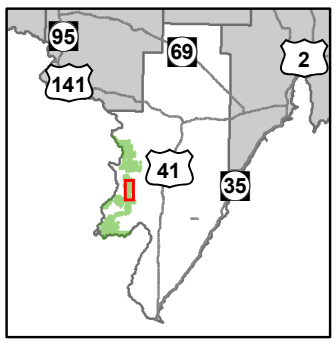

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- Survey Grade GPS Corners
- Field Grade GPS Corners
- Counties
- Gate
- Bridge
- County Paved Roads
- Paved Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Powerline
- Compartment Boundary
- Stand Boundaries
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 611 - Lowland Deciduous Forest
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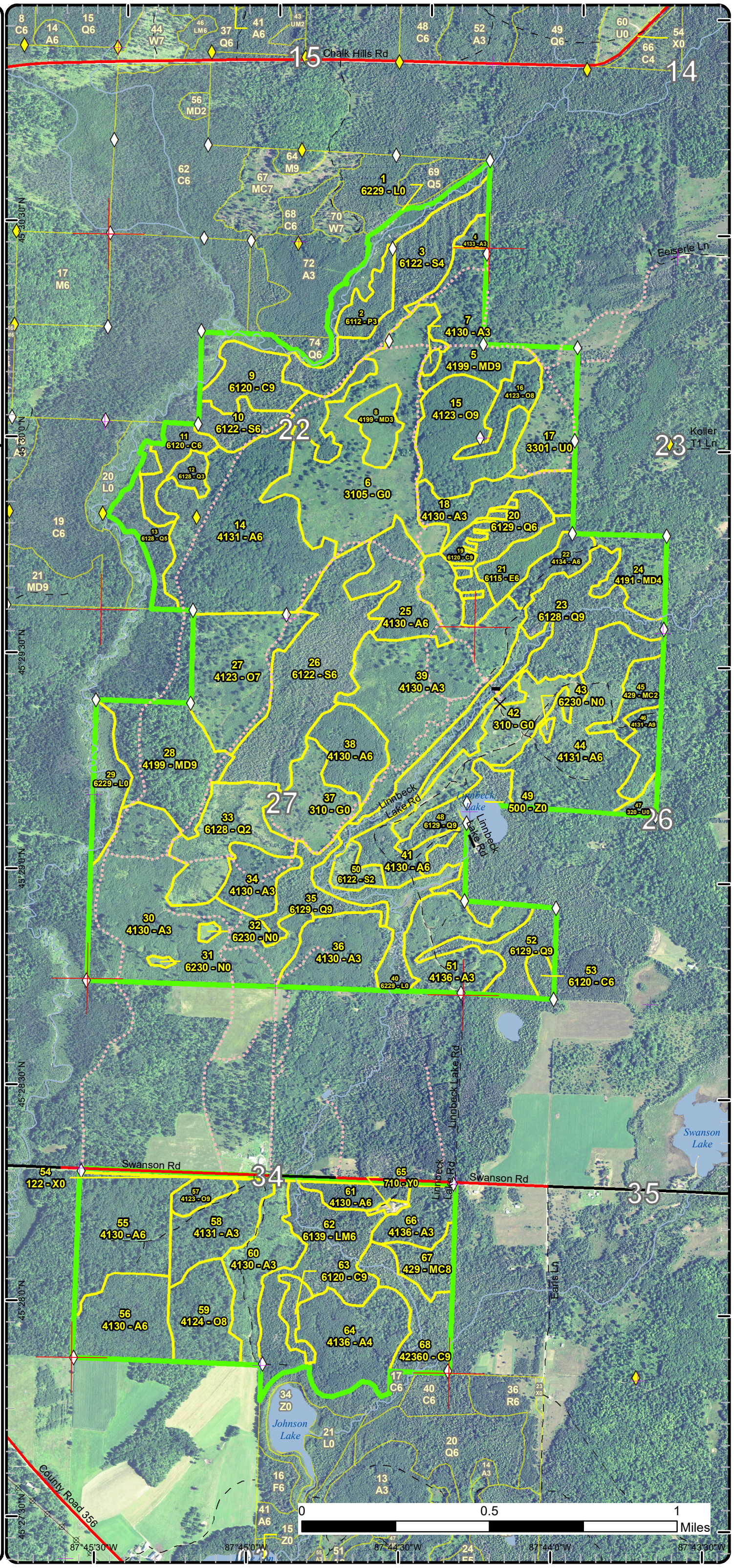

Special Conservation Areas & Site Conditions Map

Compartment: 18
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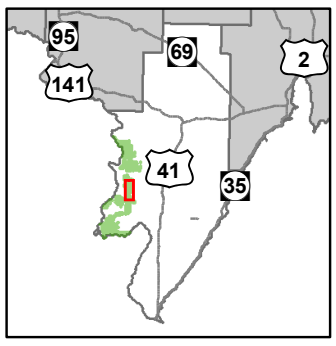

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- Survey Grade GPS Corners
- Field Grade GPS Corners
- Counties
- Gate
- Bridge
- County Paved Roads
- Paved Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
  - 5C: Delay treatment for age/size class diversity or exceptional site quality
  - 5T: Contigency Treatment for Forest Health Concerns
  - 3J: Water quality / BMPs (stream, river, or lake)
  - 3L: Other wildlife concerns
  - 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes

Chalk Hills Rd
Eeiserle Ln
Koller T1 Ln
Linnbeck Lake Rd
Swanson Rd
Earls Ln
County Road 356
Swanson Lake
Johnson Lake
45°30'30"N
45°29'30"N
45°29'0"N
45°28'30"N
45°28'0"N
45°27'30"N
87°45'30"W
87°45'0"W
87°44'30"W
87°44'0"W
87°43'30"W
0
0.5
1
Miles

Report 1 – Total Acres by Cover Type and Age Class

Escanaba Mgt. Unit **Compartment 18** **Year of Entry 2019**

Dustin Salter : 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	252	88	147	266	11	0	0	0	0	0	0	0	0	0	0	0	0	**764**
Cedar	0	0	0	0	0	0	0	0	0	0	29	48	0	0	0	0	0	0	**77**
Herbaceous Openland	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**145**
Low-Density Trees	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**28**
Lowland Aspen/Balsam Poplar	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Lowland Conifers	0	36	0	0	7	0	0	0	0	0	117	0	18	0	0	0	0	0	**178**
Lowland Deciduous	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	**14**
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	**47**
Lowland Shrub	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**89**
Lowland Spruce/Fir	0	7	0	0	0	0	0	0	0	0	81	41	0	0	0	0	0	0	**129**
Marsh	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Mixed Upland Deciduous	0	12	0	0	0	20	0	0	0	0	83	0	0	0	0	0	0	0	**114**
Oak	0	0	0	0	0	0	0	0	0	0	135	0	0	0	0	0	0	0	**135**
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Upland Conifers	0	0	0	11	0	0	0	0	0	0	13	0	0	0	0	0	0	0	**23**
Upland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Urban	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**279**	**307**	**100**	**158**	**273**	**31**	**0**	**0**	**0**	**14**	**458**	**136**	**18**	**0**	**0**	**0**	**0**	**0**	**1771**

Report 2 – Treatment Summary

Escanaba Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 18

Total Compartment Acres: 1,771

Commercial Harvest - 408

Harvests with Site Condition - 39

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	45	0	0	0	0	0	0	0	0	**45**
Low-Density Trees	28	0	0	0	0	0	0	0	0	**28**
Lowland Conifers	61	0	0	0	0	0	0	0	0	**61**
Lowland Deciduous	14	0	0	0	0	0	0	0	0	**14**
Lowland Mixed Forest	37	0	0	0	0	0	0	0	0	**37**
Lowland Spruce/Fir	75	0	0	0	0	0	0	0	0	**75**
Mixed Upland Deciduous	102	0	0	0	0	0	0	0	0	**102**
Oak	7	0	0	0	0	39	0	0	27	**74**
Upland Conifers	13	0	0	0	0	0	0	0	0	**13**
Total	**381**	**0**	**0**	**0**	**0**	**39**	**0**	**0**	**27**	**447**

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	447	0	0	0	0	15	0	0	145	**607**
Next Step	0	0	0	0	0	0	396	0	0	**396**
Total	**447**	**0**	**0**	**0**	**0**	**15**	**396**	**0**	**145**	**1003**

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	33018003-Cut	27.5	6122 - Black Spruce	Poletimber Poor	102	81-110	Harvest	Clearcut with Retention	6122 - Black Spruce	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3"; except retain some dense good quality cedar clumps/patches. The majority of these patches will be in the transition zone. Also, maintain a 100' buffer along the river. One of the retention patches is delineated out of the treatment.

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

Acceptable Regen: Soruce/fir, cedar, tamarack, pine, and all lowland hardwoods.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
5	33018005-Cut	35.3	4199 - Other Mixed Upland Deciduous	Sawtimber Well	91	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except retain some dense clumps/patches of good quality oak. Also, retain some mature pine for seed.

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

Acceptable Regen: Maple, oak, aspen, spruce/fir, and pine.

If the stand doesn't successfully regenerate, plant red pine, per TMS instructions. The sedge mat will need to be treated.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
6	33018006-NF	87.0	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Prescribed fire, farming (dozing, disking, raking, herbiciding, seeding (native or naturalized species only)), fertilizing and liming, brushhog/saw removal of competing trees and establishment of native hard and soft mast producers such as red oak, crabapple or others.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
10	33018010-Cut	11.6	6122 - Black Spruce	Poletimber Well	94	51-80	Harvest	Clearcut with Retention	6122 - Black Spruce	Even-Aged	Proposal

Habitat Cut: No **Site Condition: Long-Term Retention**

Prescription Specs: Cut all trees greater than 3" inches.
The retention will be the western end of the stand, which will provide a travel corridor for wildlife.

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

Acceptable Regen: Spruce/fir, tamarack, cedar, pine, and all lowland hardwoods.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
13	33018013-Cut	12.3	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	94	51-80	Harvest	Clearcut with Retention	6139 - Mixed Lowland Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches. The retention will be the two dense areas of cedar that have been removed from the harvest.

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

Acceptable Regen: Spruce/fir, tamarack, pine, cedar, aspen, balm, maple, and ash.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
15	33018015-Cut	39.2	4123 - Red Oak	Sawtimber Well	91	111-140	Harvest	Crown Thinning	4123 - Red Oak	Uneven-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Thin this stand down to 80 BA. Cut all aspen. Release the high quality oak, while maintaining some of the maple.

Next Step Treatments:

Acceptable Regen: No regeneration is expected, this is the stands first thinning.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
17	33018017-Cut	27.5	3301 - Low Density Deciduous Trees	Nonstocked	81	1-50	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all aspen, balm, maple, and spruce/fir greater than 3" inches. Also, cut all black cherry greater than 6" inches. All oak and pine will be retained.

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

Acceptable Regen: Aspen, maple, cherry, oak, spruce/fir, and pine.

If this treatment doesn't successfully regenerate the stand, plant red pine per TMS instructions. The sedge mat is dense, it will need to be treated in order to plant.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
21	33018021-Cut	13.7	6115 - Lowland Ash	Poletimber Well	89	81-110	Harvest	Clearcut	613 - Lowland Mixed Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches. No retention is being left, due to the threat of the emerald ash borer.

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

Acceptable Regen: Spruce/fir, tamarack, balm, and ash.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
23	33018023-Cut	24.6	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	94	81-110	Harvest	Clearcut with Retention	6139 - Mixed Lowland Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except mark to leave some large white pine. The area of the stand that has been excluded will be the retention.

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

Acceptable Regen: Spruce/fir, tamarack, cedar, pine, aspen, balm, maple, birch, and ash.

Other Comment: A number of the dense pockets of cedar are along the creek, so the buffer we will be expanded in these areas to include the majority of the good quality cedar.

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
24	33018024-Cut	19.8	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	48	1-50	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except mark to retain some pine and oak for seed and diversity.

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

Acceptable Regen: Aspen, spruce/fir, pine, oak, and cherry.

Other Comment: If this treatment fails, plant red pine per TMS instructions. The sedge will have to be treated, to have successful regeneration.

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
26	33018026-Cut	36.0	6122 - Black Spruce	Poletimber Well	94	111-140	Harvest	Clearcut with Retention	6122 - Black Spruce	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except retain some dense pockets of good quality cedar. Most of them will be on the western edge of the stand. Some of them have been already delineated out of the harvest area. In addition, mark some pine seed trees to retain.

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

Acceptable Regen: Spruce/fir, tamarack, pine, cedar, and any hardwoods.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28	33018028-Cut	47.2	4199 - Other Mixed Upland Deciduous	Sawtimber Well	91	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except retain the white pine and some dense pockets of mature oak. If oak wilt is identified within the stand, treat as necessary.

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

Acceptable Regen: Maple, oak, aspen, pine, and spruce/fir.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
37	33018037-NF	26.0	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Prescribed fire, farming (dozing, disking, raking, herbiciding, seeding (native or naturalized species only)), fertilizing and liming, brushhog/saw removal of competing trees and establishment of native hard and soft mast producers such as red oak, crabapple or others.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
42	33018042-NF	31.7	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/ Grass Planting	310 - Herbaceous Openland		Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Prescribed fire, farming (dozing, disking, raking, herbiciding, seeding (native or naturalized species only)), fertilizing and liming, brushhog/saw removal of competing trees and establishment of native hard and soft mast producers such as red oak, crabapple or others.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
46	33018046-Cut	10.7	4131 - Aspen, Oak	Sawtimber Well	49	81-110	Harvest	Clearcut with Retention	4131 - Aspen, Oak	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except retain some dense patches/clumps of oak.

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

Acceptable Regen: Aspen, oak, maple, spruce/fir, and pine.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
48	33018048-Cut	12.5	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	94	141-170	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except retain a 300' buffer around Linnbeck Lake. Also, leave some dense clumps of cedar, where available.

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

Acceptable Regen: Spruce/fir, tamarack, pine, cedar, aspen, and all hardwood species.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
52	33018052-Cut	11.1	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	97	111-140	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches. The retention will be the portion of the stand that has been removed from treatment.

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

Acceptable Regen: Tamarack, spruce/fir, pine, and cedar.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
56	33018056-Cut	33.9	4130 - Aspen	Poletimber Well	38	81-110	Harvest	Clearcut with Retention	4131 - Aspen, Oak	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except leave 5% retention in patches. The patches will be retained in the denser oak and pine areas.

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

Acceptable Regen: Aspen, oak, pine, and maple.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
57	33018057-Cut	7.2	4123 - Red Oak	Sawtimber Well	99	51-80	Harvest	Clearcut with Retention	4122 - Oak, Pine	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except mark some pine to retain. If oak wilt is present, treat as necessary.

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

Acceptable Regen: Oak, pine, and aspen.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
59	33018059-Cut	27.1	4124 - Red with White Oak	Sawtimber Medium	99	1-50	Harvest	Other - Specify	4131 - Aspen, Oak	Two-Aged	Proposal

Habitat Cut: No **Site Condition:** **Contingency Treatment**

Prescription Specs: Treat the oak wilt epi-centers as needed. Cut all trees greater than 3" inches, within the oak wilt epi-centers.

Next Step Treatments:

Acceptable Regen: Aspen, oak, maple, and pine.

Other Comment: There are two possible oak wilt epi-centers within the stand.

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
62	33018062-Cut	37.2	6139 - Mixed Lowland Forest	Poletimber Well	100	51-80	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches. The retention will be the buffer along Little Shakey Creek and dense patches of cedar. All of the retention areas have been delineated out.

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

Acceptable Regen: Tamarack, spruce/fir, cedar, white pine, aspen, balm, and any lowland hardwoods.

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
64	33018064-Spray	13.8	4136 - Aspen, Mixed Conifer	Poletimber Poor	36	51-80	Pesticide	Hand Application	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Treat the autumn olive to remove it from the stand, before it continues to spread. Use the approved chemical. The plants will need to be sprayed by hand, the trees are too dense to operate machinery.

Next Step Treatments: Monitoring, Herbicide Use

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
65	33018065-Spray	1.6	710 - Sand, Soil	Nonstocked		Unspecified	Pesticide	Hand Application	710 - Sand, Soil		Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Herbicide to kill the phragmites within the stand. Use the approved chemical.

Next Step Treatments: Monitoring, Herbicide Use

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2018

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
67	33018067-Cut	12.5	429 - Mixed Upland Conifers	Sawtimber Medium	99	51-80	Harvest	Clearcut with Retention	429 - Mixed Upland Conifers	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Cut all trees greater than 3" inches; except mark to retain some pine and cedar for seed and diversity.

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

Acceptable Regen: Aspen, spruce/fir, pine, oak, balm, and cedar.

Other Comment:

Proposed Start Date: 10/01/2018

Total Treatment Acreage Proposed: 607.0

Report 4 – Site Conditions

Escanaba Mgt. Unit

Dustin Salter : Examiner

Compartment: 18

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions *5C*	*5T*	3J	3L	5E
763	763	***0***	1	**Aspen**					1
77	77	***0***	0	**Cedar**			0		0
145	145	***0***	0	**Herbaceous Openland**					
28	28	***0***	0	**Low-Density Trees**					
11	11	***0***	0	**Lowland Aspen/Balsam Poplar**					
178	107	***0***	71	**Lowland Conifers**			8	61	2
14	14	***0***	0	**Lowland Deciduous**					
47	37	***0***	10	**Lowland Mixed Forest**			7		4
89	89	***0***	0	**Lowland Shrub**					
129	83	***0***	47	**Lowland Spruce/Fir**				45	1
3	3	***0***	0	**Marsh**					
114	114	***0***	0	**Mixed Upland Deciduous**					
135	46	***89***	0	**Oak**	***62***	***27***			
2	2	***0***	0	**Sand, Soil**					
24	24	***0***	0	**Upland Conifers**					
4	4	***0***	0	**Upland Shrub**					
6	6	***0***	0	**Urban**					
1	1	***0***	0	**Water**					
1,771	1,553	***89***	129	Total Forested Acres	***62***	***27***	15	106	8
	88%	***5%***	7%	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**	**5E: Long-Term Retention**	1	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Retention patch within a clearcut.

3	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	13	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

This stand is a mix of mature oak and younger aspen. If the oak was cut at this time, the majority of the aspen would be destroyed. Harvest the oak when the aspen is mature/merchantable enough.

4	**Available**	**5T: Contigency Treatment for Forest Health Concerns**	27	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Young aspen stand with old mature oak. There are possible oak wilt epi-centers within this stand. If identified, treat as necessary. The stand is a mix of mature oak and 27 year old aspen. When the stand was cut 27 years ago all of the oak was retained. Possibly next entry this stand should be harvested when more of the aspen is merchantable.

5	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	49	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Mature oak with young aspen regeneration. Half of the oak was retained from harvest in clumps/patches. Harvest in the future when the regeneration is larger.

6	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	8	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Buffer around Linnbeck Lake.

7	**Unavailable**	**5E: Long-Term Retention**	4	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

Dense cedar patch, that will be part of the long term retention for this stand.

8	**Unavailable**	**3L: Other wildlife concerns**	15	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted to retain this portion of the stand, due to the amount of cedar in it. Also, little Shakey Creek flows through this stand.

9	**Unavailable**	**3J: Water quality / BMPs (stream, river, or lake)**	6	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Buffer along the Little Shakey Creek.

10	**Unavailable**	**3L: Other wildlife concerns**	8	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted to retain this portion of the stand, due to the amount of cedar in it.

11	**Unavailable**	**3L: Other wildlife concerns**	18	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted to retain this portion of the stand, due to the amount of cedar in it.

12	**Unavailable**	**3L: Other wildlife concerns**	19	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted to retain this portion of the stand, due to the amount of cedar in it.

13	**Unavailable**	**3L: Other wildlife concerns**	32	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted to retain this portion of the stand, due to the amount of cedar in it.

14	**Unavailable**	**5E: Long-Term Retention**	1	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
This retention will provide a link for a travel corridor for wildlife.

15	**Unavailable**	**5E: Long-Term Retention**	2	Unspecified	Unspecified	Unspecified	Unspecified

Comments:

16	**Unavailable**	**3L: Other wildlife concerns**	13	Unspecified	Unspecified	Unspecified	Unspecified

Comments:
Wildlife wanted a travel corridor for wildlife and there is some dense areas of cedar.

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
	Potential Old Growth		**SCA Removal**	9
Comments				
Does not meet SCA criteria.				
	Potential Old Growth		**SCA Removal**	16
Comments				
Does not meet SCA criteria.				
	Potential Old Growth		**SCA Removal**	26
Comments				
Does not meet SCA criteria.				
	Potential Old Growth		**SCA Removal**	60
Comments				
Does not meet SCA criteria.				
	Potential Old Growth		**SCA Removal**	107
Comments				
Does not meet SCA criteria.				

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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6112 - Lowland Aspen	Sapling Well	11.5	18	Immature	This land was acquired in 2008, as part of an exchange. Lowland aspen stand with some conifer mixed in, quite a bit of the conifer is residual from the previous harvest.
3	6122 - Black Spruce	Poletimber Poor	40.8	102	81-110	Mature spruce stand with cedar. This stand had numerous strips cut out of it in 1968. They regenerated with a mix of spruce/fir and balm. They are very suppressed and are not growing very well. Quite a bit of the spruce has died out of the stand already. Overall the cedar is low quality; except in the transition zone of the upland.
4	4133 - Aspen, Mixed Pine	Sapling Well	3.5	5	Immature	Stand was clearcut in 2000, under contract 28-99-01. The pine and oak was retained. Fully stocked aspen and balm stand with some mature white pine.
5	4199 - Other Mixed Upland Deciduous	Sawtimber Well	35.3	91	81-110	The north half of the stand was cut in 2000, under contract 28-99-01. The cut area was scarified and seeded with a mix of pine species, under FTP 33-536 - this failed. This stand was trenched with a passive trencher in 2011 and planted with 4-0 white spruce on 5/2/12 at a rate of 780 tpa on FTP 33-635 - this failed, there is only about 10 to 20% survival. This portion of the stand has a dense sedge layer. The southern portion of the stand has low quality red maple and poorer quality red oak. The whole stand needs to be harvested and allow natural regeneration to take place.
7	4130 - Aspen	Sapling Well	1.5	21	Immature	Stand was clearcut in 1996 on contract 044-94-01. Small good quality aspen stand.
8	4199 - Other Mixed Upland Deciduous	Sapling Well	12.0	5	Immature	Balm and aspen stand that keeps expanding with each burn. This stand is now dense and big enough to delineate out and remove from future burning.
9	6120 - Lowland Cedar	Sawtimber Well	21.6	102	81-110	Good quality cedar stand with some mature spruce, pine, and tamarack. This stand had strips cut out of it, in 1968-1970. The strips are primarily black spruce. The tamarack is dying out of the stand due to the eastern larch beetle. There isn't enough volume to try and salvage it.
10	6122 - Black Spruce	Poletimber Well	13.0	94	51-80	Mature black spruce stand. Some of the spruce has already died out, along with some of the tamarack from the eastern larch beetle.
11	6120 - Lowland Cedar	Poletimber Well	13.1	102	111-140	Lower quality cedar stand. The majority of the spruce and tamarack have already died out of the stand.
12	6128 - Lowland Coniferous, Mixed Deciduous	Sapling Well	7.4	33	1-50	Stand was cut about 30 years ago. This property was acquired in 2008 as part of an exchange. The stand has regenerated to a mix of lowland hardwoods and lowland conifer species with mature white pine and cedar.
13	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	14.3	94	51-80	Mature lowland stand with some upland knobs. This stand is very variable, with species and density. About half of the tamarack is already dead due to the eastern larch beetle and most of the balsam fir has also died due to the spruce budworm. This property was acquired in 2008 as part of an exchange.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
14	4131 - Aspen, Oak	Poletimber Well	107.6	34	51-80	Stand was cut in 1982 on contract 024-82A. Good quality aspen stand with some dense pockets/areas of mature red oak.
15	4123 - Red Oak	Sawtimber Well	39.2	91	111-140	High quality red oak stand, that is in need of a thinning. There is no evidence that this stand has been thinned before. There is a possible oak wilt epi-center on the southern tip of stand 16, that might extend into this stand.
16	4123 - Red Oak	Sawtimber Medium	12.7	91	51-80	Stand was cut in 1996 on contract 044-94-01. All of the oak was retained, which ranges from 30 to 80 BA. In the more open areas there is a dense understory of aspen regeneration. There is a possible oak wilt epi-center on the southern tip of the stand. If oak wilt is present, treat it.
18	4130 - Aspen	Sapling Well	23.3	21	Immature	Stand was cut in 1996 on contract 044-94-01. The oak was retained, along with some pine, spruce and maple. Good quality aspen regeneration, with some residual mature trees.
19	6120 - Lowland Cedar	Sawtimber Well	7.2	107	141-170	High quality cedar stand. This stand was part of stand 20, but it was delineated out to retain the good quality cedar for cover and diversity.
20	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	19.3	94	81-110	Mature lowland conifer stand. There were 12 strips cut out of this stand in 1972. The strips have regenerated with spruce/fir, balm, birch, and tamarack. The tamarack is dying out of the stand due to the eastern larch beetle and the spruce is being defoliated by the spruce budworm.
21	6115 - Lowland Ash	Poletimber Well	13.7	89	81-110	Mature lowland ash stand, with an understory of spruce regeneration.
22	4134 - Aspen, Spruce/Fir	Poletimber Well	11.4	26	1-50	Stand was clearcut in 1991 on contract 058-88-01. The oak, pine, cedar, and cherry was retained. The stand is a mix od aspen and spruce with a significant component of mature white pine. The spruce is heavily defoliated by the spruce budworm, but there isn't enough volume at this time to salvage it.
23	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	39.8	94	81-110	Mature lowland conifer and hardwood stand. This stand contains many different mature species, all of which are in need of a harvest. Little Shakey Creek flows through the central and eastern portions of the stand. The tamarack is dying out, due to the eastern larch beetle, and the majority of the balsam fir has already died and the spruce is heavily defoliated from the spruce budworm.
24	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	19.8	48	1-50	Stand was disked and direct seeded in 2001 on FTP - 33-533 with a mixture of red and white pine seed, and a bag of acorns. The seeding failed. In 2012, the stand was trenched and planted with 4-0 spruce seedlings on FTP 33-635. This treatment also failed, only about 10 to 20% of the seedlings have survived. This stand contains a very dense sedge layer. This stand contains scattered patches of aspen and other merchantable/mature species. Harvest the residual timber, trying to regenerate the stand naturally.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	4130 - Aspen	Poletimber Well	28.3	32	51-80	Lower quality aspen stand, that should be harvested next entry to maximize sprouting.
26	6122 - Black Spruce	Poletimber Well	68.3	94	111-140	Mature black spruce stand with some dense pockets of tamarack, cedar, and ash. The spruce is being defoliated by the spruce budworm and about half of the tamarack has already died due to the eastern larch beetle. The dense pockets of good quality cedar, are primarily along the transition zone with stand 27. The majority of stand has sphagnum moss throughout, so it is not necessary to retain many conifer seed trees.
27	4123 - Red Oak	Sawtimber Poor	49.0	99	1-50	Stand was clearcut in 2010 and 2012 on contract 025-09-01. The pine was retained, along with about half of the red oak. The stand has an overstory of mature red oak with an understory of aspen and red maple regeneration. The regeneration is very suppressed where there is an overstory of oak. In the shaded areas the regeneration is growing much slower allowing the deer to heavily browse it. There are some areas without regeneration now. The open areas of the stand have regenerated very well.
28	4199 - Other Mixed Upland Deciduous	Sawtimber Well	47.2	91	81-110	Stand was thinned in 2000 on contract 028-99-01. The stand was to be than be underplanted with pine seedlings under FTP 33-575, this was never done. That FTP was cancelled. This is a mature stand of red maple and red oak. The red maple is low quality. The western portion of the stand has quite a bit of aspen saplings, from the last harvest. There is a possible oak wilt epi-center in the southern portion of the stand.
30	4130 - Aspen	Sapling Well	99.6	7	Immature	Stand was clearcut in 2009/10 on contract 026-09-01. All oak was left in the northern most point of the stand and the remainder was harvested. The pine was also retained, along with a buffer around each of the vernal ponds. Dense good quality aspen regeneration. The oak that was cut, stump sprouted very well.
33	6128 - Lowland Coniferous, Mixed Deciduous	Sapling Medium	36.3	7	Immature	Stand was clearcut in 200/10 on contract 026-06-01. There is a drainage on the East side of the stand that will was buffered. This drainage flows into Little Shakey Creek. Some seed tree clumps were also retained, but most of them have blown over. About 60% of the stand has good regeneration, with more still filling in. By next entry the stand should be fully stocked, excluding the marsh areas that weren't forested before the harvest.
34	4130 - Aspen	Sapling Well	16.3	17	Immature	Stand was clearcut in 2000 on contract 028-99-01. The oak, pine, and cherry was retained. Good quality aspen regeneration.
35	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	17.8	117	81-110	Mature lowland conifer stand, with some dense pockets of cedar. A small drain/creek flows through the northern portion of this stand into Little Shakey Creek. The tamarack is dying out due to the eastern larch beetle and the spruce/fir has some defoliation from the spruce budworm.
36	4130 - Aspen	Sapling Well	30.3	17	Immature	Stand was clearcut in 2000 on contract 028-99-01. The oak, pine, and cherry was retained. Dense good quality aspen regeneration.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4130 - Aspen	Poletimber Well	22.2	32	51-80	Stand was clearcut in 1984/85 on contracts 49-84 and 33-85-02. The oak was retained. Decent quality aspen stand, possibly harvest next entry to maximize sprouting.
39	4130 - Aspen	Sapling Well	85.0	8	Immature	Stand was clearcut 2009/10 on contract 024-09-01. The oak was retained in the northern portion of the stand, and cut in the southern portion. The oak that was cut, stump sprouted very well. A 100 foot buffer was left along the Little Shakey Creek where there was not a steep bank. MNFI shows that there is a hit of Cooper's Milk Vetch near this stand. In 2012, part of this stand was trenched to be planted with jack pine, per FTP 33-698. But after looking again at the stand the aspen had fully regenerated, so the stand was not planted.
41	4130 - Aspen	Poletimber Well	23.0	34	51-80	Stand was clearcut in 1983 on contract 40-83. Good quality aspen stand. The spruce budworm is causing defoliation of the spruce/fir, but there isn't enough volume at this time to do a salvage harvest.
44	4131 - Aspen, Oak	Poletimber Well	64.4	26	1-50	Stand was cut between 1990 and 1992 on contract 058-88-01. The cedar, oak, and cherry was retained. And the pine and spruce was marked to cut. Variable quality and density of aspen regeneration, but most of the stand is lower quality.
45	429 - Mixed Upland Conifers	Sapling Medium	11.4	26	Immature	Stand was cut between 1990 and 92 on contract 058-88-01. The cedar, oak, and cherry were retained. The pine and spruce were marked to cut. The stand is about half regenerated, but the there is more conifer regeneration filing in. The stand is about half upland and half lowland.
46	4131 - Aspen, Oak	Sawtimber Well	10.7	49	81-110	Mature aspen and oak stand.
48	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	24.0	94	141-170	Mature lowland conifer stand, surrounding Linnbeck Lake. The tamarack is dying out, due to the eastern larch beetle and the spruce/fir is being defoliated by the spruce budworm.
50	6122 - Black Spruce	Sapling Medium	7.1	8	Immature	Stand was clearcut in 2009-10 on contract 023-09-01. A buffer was left along the Shakey River. About 2/3rds of the stand has good regeneration, primarily spruce. There are patches of dense tagalder in the stand.
51	4136 - Aspen, Mixed Conifer	Sapling Well	35.5	8	Immature	Stand was clearcut in 2009-10 on contract 023-09-01. A 100' foot buffer was left along the Little Shakey Creek. Also, all oak, pine, and cherry was retained. A retention patch was also left in the south half. The stand has good aspen regeneration in about 75% of it, with a number of small openings mixed in.
52	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	19.5	97	111-140	Mature lowland conifer stand. The eastern larch beetle has already caused a significant amount of tamarack mortality already. The northern half of the stand is primarily spruce and the southern half is primarily tamarack. The majority of the cedar is very low quality. There is a small drain that flows through the stand and out the to the west through the peninsula and into Little Shakey Creek.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	6120 - Lowland Cedar	Poletimber Well	4.4	97	141-170	Good quality cedar stand with some mature tamarack and spruce mixed in. There isn't enough tamarack and spruce within the stand to try and harvest it.
55	4130 - Aspen	Poletimber Well	46.5	27	1-50	Stand was clearcut in 1990 on contract 048-88-01. The pine and oak was retained. Decent quality aspen stand, with quite a bit of mature pine and oak. Possibly harvest this stand next entry, while the aspen is still vigorous.
56	4130 - Aspen	Poletimber Well	33.9	38	81-110	Stand was clearcut in 1979, all pine and oak was retained. Good quality aspen stand, with quite a bit of mature oak and pine. Harvest this stand now to spread out the aspen age classes in this compartment.
57	4123 - Red Oak	Sawtimber Well	7.2	99	51-80	Stand was cut in 2001 on contract 026-99-01. The pine and oak was retained. Mature oak stand, with a possible oak wilt epi-center on the west end.
58	4131 - Aspen, Oak	Sapling Well	25.6	16	Immature	Stand was clearcut in 2001 on contract 026-99-01. The pine and oak was retained. Good quality aspen regeneration, with some dense pockets of mature oak. There is a thick understory of hazel brush and raspberries.
59	4124 - Red with White Oak	Sawtimber Medium	27.1	99	1-50	Stand was clearcut in 1990 on contract 048-88-01. The oak, pine, and spruce was retained. The stand is about half mature oak and half younger aspen. The oak should be harvested, but most of the aspen isn't merchantable enough to harvest at this time. Next entry harvest this stand. There is a possible oak wilt epi-center in the center of this stand. If oak wilt is confirmed, treat it as necessary.
60	4130 - Aspen	Sapling Well	28.3	7	Immature	Stand was clearcut in 2009 on contract 023-09-01. Some scattered oak was retained. Good quality aspen regeneration. The oak that was harvested, stump spouted well.
61	4130 - Aspen	Poletimber Well	9.8	36	51-80	Stand was clearcut in 1981. Decent quality aspen stand. The spruce budworm is defoliating the spruce/fir, but there isn't enough volume to try and salvage it.
62	6139 - Mixed Lowland Forest	Poletimber Well	47.4	100	51-80	Low quality lowland stand. Parts of the stand are primarily lowland hardwood and other areas have more conifer. Parts of the stand were dense with tamarack, but the eastern larch beetle has killed about half of it. The spruce/fir is dying out due to the spruce budworm. The Little Shakey Creek flows through the middle of the stand. This stand needs to be harvested while there is enough volume to do so and while there is still a viable conifer seed source.
63	6120 - Lowland Cedar	Sawtimber Well	6.5	104	141-170	Good quality cedar stand, with some other species mixed in.
64	4136 - Aspen, Mixed Conifer	Poletimber Poor	41.0	36	51-80	Stand was clearcut in 1981 on contract 27-80A. The oak and pine was retained. Good quality aspen stand with some mature pine and oak. Along the east side of the stand there is quite a bit of autumn olive, that should be treated for removal.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	4136 - Aspen, Mixed Conifer	Sapling Well	16.0	18	Immature	Stand was cut in 1991 on contract 026-99-01. The pine, oak, and cedar was retained. There was also a lot of residual spruce/fir that was retained. Good quality aspen stand with high percentage of conifers mixed in. The spruce budworm is present and has caused some defoliation of the spruce/fir, but there isn't enough volume to try and salvage it. The stand has dense witch hazel brush throughout most of it.
67	429 - Mixed Upland Conifers	Sawtimber Medium	12.5	99	51-80	This stand was cut in 1984 on contract 15-84. The shorter lived species were cut. The stand currently has mature pine, cedar, and spruce over younger aspen, spruce/fir, and balm. The spruce/fir has heavy defoliation from the spruce budworm, this stand should be harvested to salvage as much volume as possible.
68	42360 - Upland Cedar	Sawtimber Well	24.3	99	141-170	This stand has high quality cedar throughout most of the stand, with some mature pine and hardwoods mixed in. Little Shakey Creek flows through this stand and Swanson Creek flows into Little Shakey Creek within the stand.

Report 8 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	General Comments:
1	6229 - Mixed lowland shrub	27.5	No	Floodplain of the Shakey River, which runs through the middle of the stand. Stand is a mix of lowland brush and marsh grass, with scattered clumps of trees.
6	3105 - Mixed Upland Herbaceous	87.0	Yes	Stand was burned in 1982, 2003, 2009, and 2015. This stand is a mix on sedge, sweet fern, aspen/balm seedlings, and brush. Low quality opening.
17	3301 - Low Density Deciduous Trees	27.5	No	This stand was trenched and seeded with a mix of pine species in 2002 on FTP 33-535 - this failed. The stand has a very dense sedge mat. The stand is mostly open with clumps of mature aspen mixed in. Harvest this stand to try and naturally regenerate it.
29	6229 - Mixed lowland shrub	17.0	No	Lowland brush stand that the Shakey River flows through. The stand is primarily tagalder, with some trees along the edge.
31	6230 - Cattail	0.9	No	Cattails and marsh grass, with a buffer of mature trees around it.
32	6230 - Cattail	1.4	No	Cattails and marsh grass, with a buffer of mature trees around it.
37	310 - Herbaceous Openland	26.0	Yes	Stand was burned in 2003, 2009, and 2015. The stand has some residual oak, black cherry, and aspen (poles and saplings).
40	6229 - Mixed lowland shrub	44.3	No	Little Shakey Creek and its floodplain. The stand is a mix of tagalder, marsh grass, and pockets of mature trees.
42	310 - Herbaceous Openland	31.7	Yes	Stand was burned in 2003, 2009, and 2015. Stand is primarily sedge, sweet fern, patches of hazel brush, and scattered mature trees.
43	6230 - Cattail	0.9	No	Stand is a mix of cattails and marsh grass.
47	320 - Upland Shrub	3.9	No	Stand was clearcut between 1990 and 92 on contract 058-88-01. The stand didn't regenerate after the harvest, it is filling in with black cherry. There is hazel brush and honeysuckle throughout the stand.
49	500 - Water	0.8	No	Linnbeck Lake
54	122 - Road/Parking Lot	6.5	No	Swanson Road and its R.O.W.
65	710 - Sand, Soil	1.6	No	Gravel and sand pit. Swanson Road pit. Phragmites is present, along the south edge.