



Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 41162

Entry Year 2017

Acreage: 6,128

County Schoolcraft

Management Area: Seney Manistique Swamp

Revision Date: 2015-08-14

Stand Examiner: Robert Tylka

Legal Description:

T46N R16W sections 1 - 4, 9 - 12 and 13 - 15

Identified Planning Goals:

Soil and topography:

This is part of the Creighton marsh complex – flat and very wet. The soils are generally peat or mucks.

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

There are private lands with numerous hunting camps on the upland area immediately to the east of this compartment. There are no private lands within the compartment boundaries, and no development beyond the abandoned road and the 1976 Seney National Wildlife Refuge Fire control line.

Unique Natural Features:

This area is a classic example of a pattern fen ecosystem. There are numerous drainages throughout the area.

Archeological, Historical, and Cultural Features:

Remnants of the fire control lines from the 1976 Walsh Ditch Fire are still highly visible.

Special Management Designations or Considerations:

This compartment is included in the Creighton Marsh Patterned Fen ERA.

Watershed and Fisheries Considerations:

Marsh Creek, Stoner Creek, Shotgun Creek, and the Creighton River are found in this compartment. These streams support cold-water fishery communities, including brook trout, and thus should be protected from inputs of sediments which covers spawning gravels. BMP's should be followed as inputs of sediment and increases in sand bedload need to be prevented.

Wildlife Habitat Considerations:

Bounded on the west by the Creighton River, and containing the Stoner, Shotgun, and Marsh creeks, this compartment is dominated by a pattern fen ecosystem. The General Land Office Surveyors (circa 1850) noted that areas that did contain forest were dominated by tamarack, spruce, and cedar. White pine, white birch, red maple, hemlock, and yellow birch were less common. Balsam fir, red pine, aspen and beech appeared to have been relatively minor components in this system. Although cedar may have replaced tamarack as the dominant tree species in some locations and the Seney Fire line has somewhat impacted drainage patterns, the vegetation in the compartment appears fairly similar to that described by the first surveyors. Wildlife habitat objectives in this compartment center around maintaining the unique features associated with the pattern fen ecosystem. Old-growth designation for the entire compartment will facilitate this goal.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of peat and muck. There is insufficient data to determine the glacial drift thickness. The Ordovician Black River and Prairie du Chien Groups subcrop below the glacial drift. These rocks are quarried for stone/dolomite. Gravel pits are not located in the area and potential appears to be limited. There is no commercial oil and gas production in the UP.

Vehicle Access:

None at this time.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

There are no developed recreational facilities in this compartment, and none planned. The area may be used by hunters, fishermen and trappers..

Fire Protection:

Extremely poor access would make fire suppression very difficult.

Additional Compartment Information:

The area provides remote habitat for moose.

The following reports from the Inventory are attached:

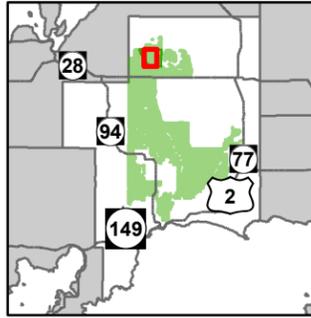
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

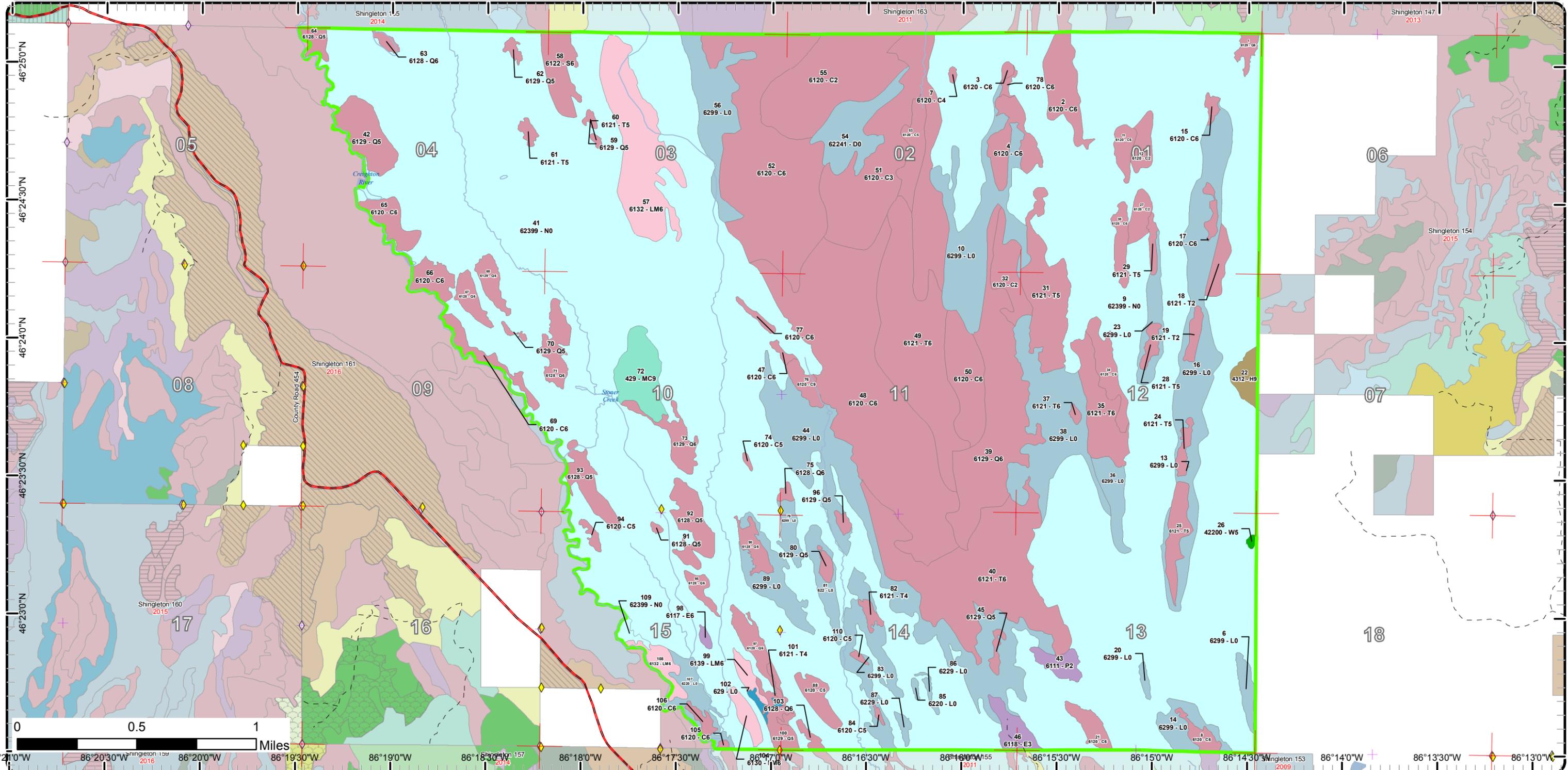
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 162
 T46N, R16W, Sec: 1-4, 9-15
 County: Schoolcraft
 Unit: Shingleton
 Mgmt Area: Seney Manistique Swamp
 YOE: 2017
 Acres: 6128 GIS Calculated
 Examiner: Robert Tylka
 Map Revised: 8/25/2015
 Map Phase: Review

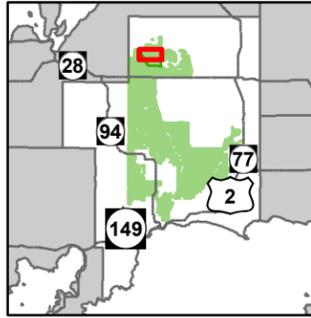


- ✚ Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- County Gravel Roads
- - - Poor Dirt Roads
- Rivers
- Lakes
- Forest Coverture
 - 422 - Natural Pines
 - 429 - Mixed Upland Conifers
 - 430 - Upland Mixed Fores
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Coverture
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
 - 629 - Mixed non-forested wetland

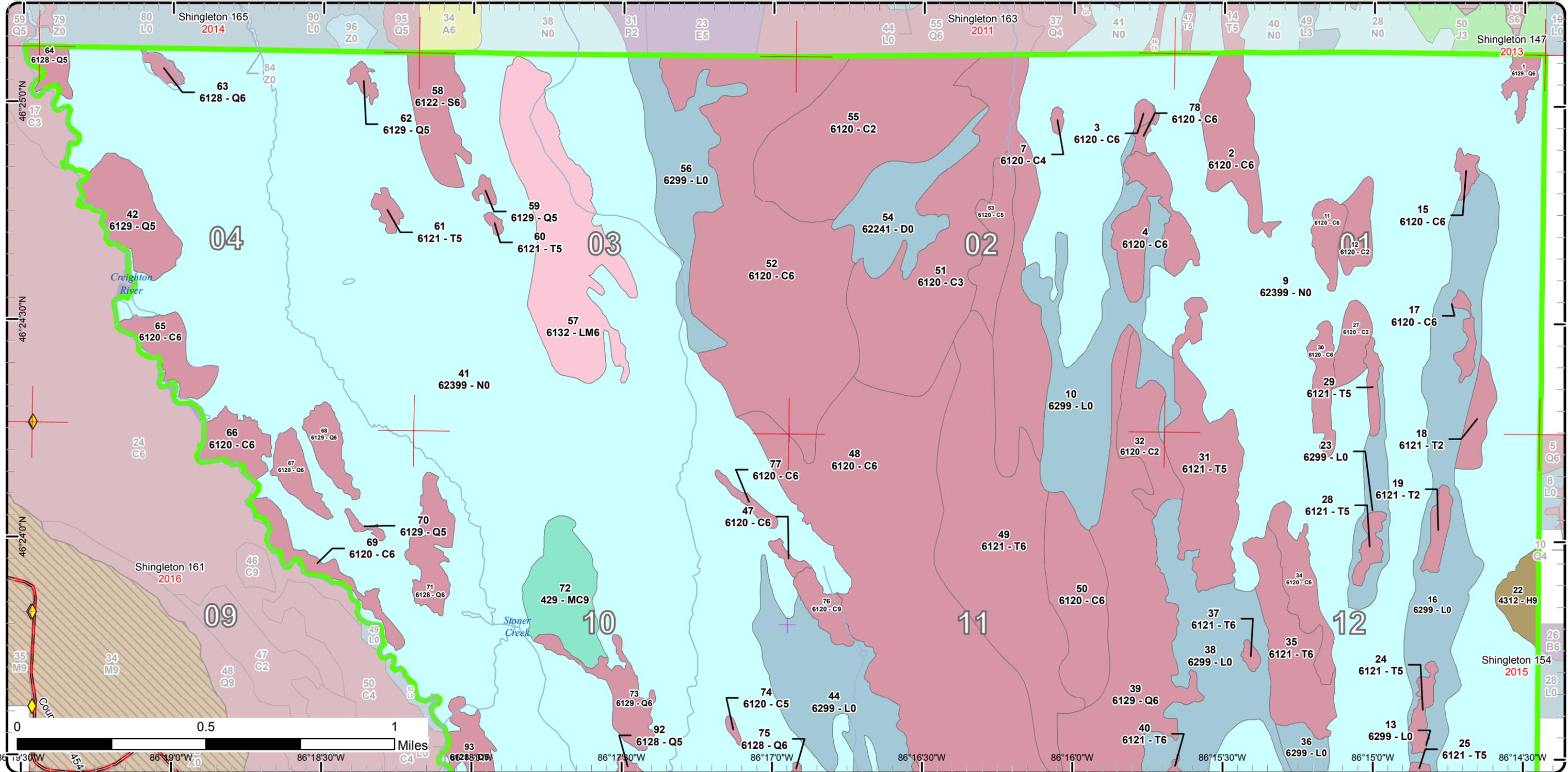


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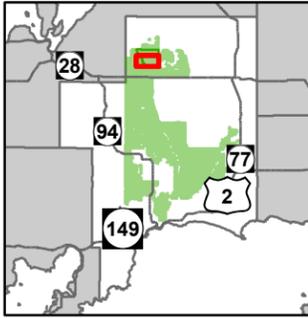


- ✚ Remonumented Section Corners Non-Forest Covertypes
- ◆ Survey Grade GPS Corners
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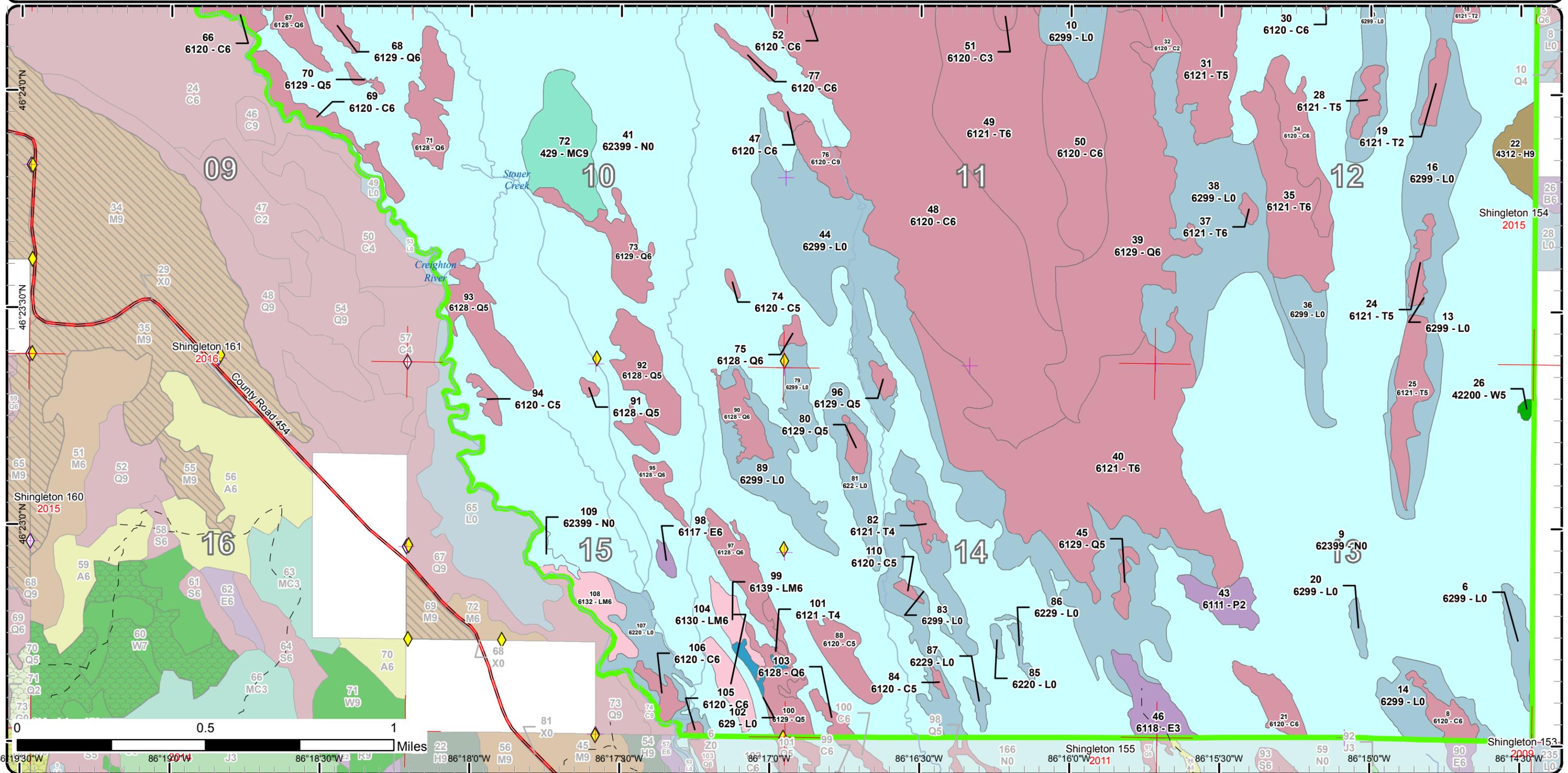


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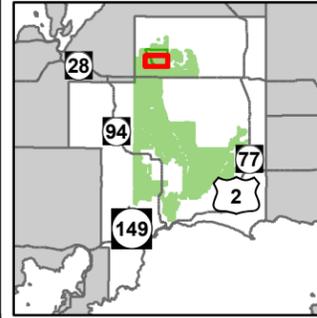
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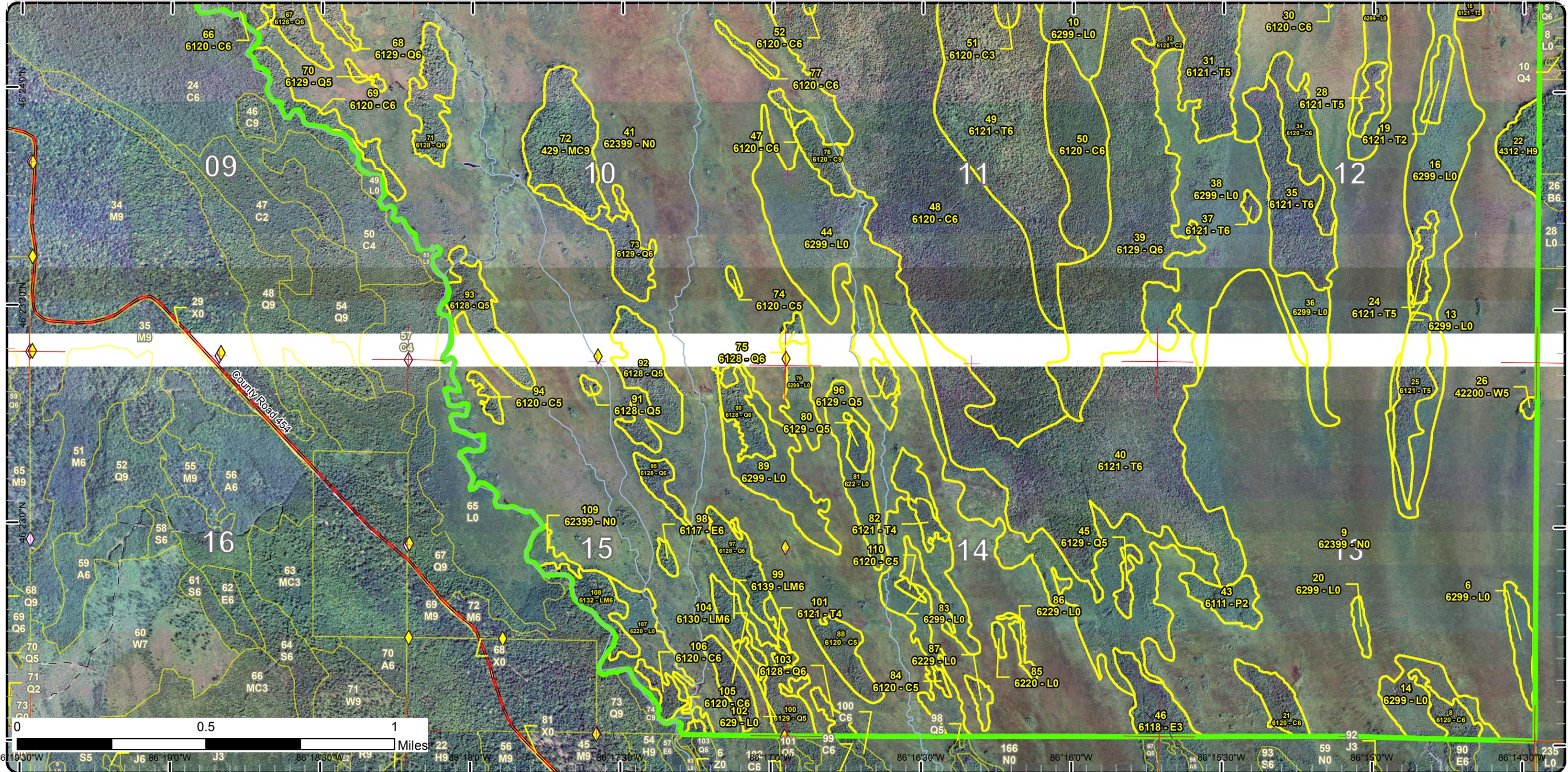


Stand Boundary Map



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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
Cedar	0	0	0	21	0	281	0	0	11	51	31	25	608	2	0	0	20	1050	
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	
Lowland Aspen/Balsam Poplar	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
Lowland Conifers	0	0	0	0	0	0	6	0	9	86	0	0	68	0	122	16	24	331	
Lowland Deciduous	0	0	0	15	0	0	0	0	0	0	0	0	2	0	0	0	0	17	
Lowland Mixed Forest	0	0	0	0	0	0	7	0	0	13	0	0	0	0	0	0	100	120	
Lowland Shrub	704	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	704	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	25	
Marsh	3319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3319	
Tamarack	0	0	0	17	0	0	0	0	0	5	0	5	423	4	0	0	7	461	
Treed Bog	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	35	
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Total	4064	0	0	0	64	0	281	13	0	20	180	31	30	1102	6	122	16	198	6127



Report 2 – Treatment Summary

Shingleton Mgt. Unit
Year of Entry: 2017

Compartment 162
Total Compartment Acres: 6,128

Acres of Harvest

Commercial Harvest -
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0



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	Approval Status
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#Type!

Habitat Cut:

Prescription
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date:

Site Condition:

**Total Treatment
Acreage Proposed: 0.0**

Dominant Site Conditions

	3B	3L
Cedar	1,049	
Hemlock	12	
Lowland Aspen/Balsam Poplar	11	
Lowland Conifers	330	
Lowland Deciduous	17	
Lowland Mixed Forest	119	0
Lowland Shrub	703	
Lowland Spruce/Fir	25	
Marsh	3,318	
Tamarack	460	
Treed Bog	41	
Upland Conifers	35	
White Pine	1	
Total Forested Acres	6,122	0
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
2	Unavailable	3B: Threatened, endangered, and special concern species/communities	6,122	Unspecified	Unspecified	Unspecified	Unspecified
Comments: No roads through Patterned Fen ERA							



Report 6 – 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
	Type 1 or Type 2 Old Growth	Verified Type 1 Old Growth Area	Proposed SCA	9
Comments This stand meets OG qualifications.				
Unspecified	Potential Old Growth		SCA Removal	6087
Comments already covered by ERA				
Unspecified	Potential Old Growth		SCA Removal	8
Comments Already Covered by ERA				



Report 7 – 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.
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	General Comments:
1	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	6.0	85	51-80	Relatively slow-growing conifer mix. Size class diversity suggests that there is more than one age class present.
2	6120 - Lowland Cedar	Poletimber Well	31.6	122	111-140	Slow-growing cedar/tamarack with a few other tree spp. scattered throughout. Stand density varies but most of the area is fully-stocked.
3	6120 - Lowland Cedar	Poletimber Well	2.0	100	51-80	Slow-growing cedar, tamarack and spruce.
4	6120 - Lowland Cedar	Poletimber Well	26.2	100	51-80	Slow-growing cedar etc.
7	6120 - Lowland Cedar	Poletimber Poor	1.2	100	1-50	Pocket of semi-open, slow-growing timber in the marsh.
8	6120 - Lowland Cedar	Poletimber Well	7.7	87	81-110	Cedar stand with a mix of other species including some larger white pine. Heavy mortality has occurred in the paper birch and balsam fir, leaving numerous snags.
11	6120 - Lowland Cedar	Poletimber Well	9.3	111	171-200	Dense but very slow-growing cedar. The understory is a mix of cedar regen and lowland brush.
12	6120 - Lowland Cedar	Sapling Medium	10.7	38	Unspecified	Cedar regeneration up 10' tall on slightly elevated ridges - most likely a result of burning in the 1976 Seney NWR fire. This is part of the patterned fen, so it is unlikely that these will ever be available for timber management.
15	6120 - Lowland Cedar	Poletimber Well	3.2	85	51-80	Age estimate is from previous inventory data, but scattered larger cedar suggest age variability.
17	6120 - Lowland Cedar	Poletimber Well	4.6	117	51-80	Slow-growing cedar mix. Stand density and age class appear to be variable, indicating that unevenaged characteristics are developing.
18	6121 - Tamarack	Sapling Medium	10.4	38	Unspecified	Mix of tamarack, cedar & spruce regeneration and various lowland brush species. This stand is probably a result of burning in the 1976 Seney NWR fire. A few red maple sprouts are also present.
19	6121 - Tamarack	Sapling Medium	6.2	38	Unspecified	Mix of tamarack, cedar & spruce regeneration and various lowland brush species. This stand is probably a result of burning in the 1976 Seney NWR fire. A few red maple sprouts are also present.
21	6120 - Lowland Cedar	Poletimber Well	10.8	122	51-80	ERA - Patterned Fen. The large white pine and some of the cedar are older than the spruce and smaller cedar, indicating that unevenaged structure is present. The understory is a mix of conifer regeneration and some lowland brush.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4312 - Hemlock, Mixed Deciduous	Sawtimber Well	12.3	178	141-170	Large hemlock & white pine with oak, red maple and yellow birch of all sizes mixed in. The M3 understory includes a lot of hemlock regeneration.
24	6121 - Tamarack	Poletimber Medium	5.8	125	51-80	Slow-growing tamarack mix. Two-aged structure is evident as species like spruce fill in the stand gaps and replace losses due to mortality.
25	6121 - Tamarack	Poletimber Medium	18.5	125	51-80	More tamarack/cedar mix that is beginning to display two-aged characteristics. Some cedar & spruce regen mixed into the lowland brush in the understory.
26	42200 - Natural White Pine	Poletimber Medium	1.2	125	1-50	This semi-open stand has large white pine (up to 18" DBH+) and a few tamarack and paper birch. The understory is a mix of white pine/black spruce 2-4" DBH and lowland brush.
27	6120 - Lowland Cedar	Sapling Medium	10.0	38	Unspecified	ERA - Patterned Fen.Cedar regeneration up 10' tall - most likely a result of burning in the 1976 Seney NWR fire.
28	6121 - Tamarack	Poletimber Medium	5.4	120	1-50	Slow-growing tamarack/cedar. Understory is a mix of tag alder and conifer regeneration.
29	6121 - Tamarack	Poletimber Medium	4.7	111	1-50	Very slow-growing tamarack/cedar mix. Understory is a mix of cedar, tamarack and lowland brush.
30	6120 - Lowland Cedar	Poletimber Well	11.0	111	111-140	Slow-growing cedar. Understory consists of lowland brush and a few cedar seedlings.
31	6121 - Tamarack	Poletimber Medium	54.5	122	1-50	The density and species composition of this stand vary as a result of developing age-class diversity. The understory is also highly variable, with cedar regeneration slowly replacing the lowland brush. The age shown here is from previous inventory and represents the oldest cohort of slow-growing cedar, but age-class diversity is becoming evident.
32	6120 - Lowland Cedar	Sapling Medium	24.2	59	1-50	Mostly cedar 10-30' tall. The understory appears to consist of low shrubs common to boggy sites and the slower-growing cedar, with little true regen yet.
34	6120 - Lowland Cedar	Poletimber Well	19.0	120	51-80	More slow-growing cedar. Site index was estimated using the year of stand origin from previous inventory data, which appears to be reasonably accurate. Some age class diversity is developing.
35	6121 - Tamarack	Poletimber Well	37.3	120	51-80	Cedar may eventually dominate this stand, as the understory also contains patches of cedar regeneration. Many larger tamarack (10"+ DBH, 4-5 pulpsticks) were present, but heavy mortality has taken a toll.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	6121 - Tamarack	Poletimber Well	1.7	120	51-80	This stand is developing unevenaged characteristics. It appears that the first generation of tamarack reached approx. 10-14" DBH and then died out, but a second generation has developed in the gaps along with the cedar. Cedar may eventually dominate this stand, as the understory (primarily tag alder) also contains patches of cedar regeneration. The age given here is for the original cohort, though only remnants of it remain.
39	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	121.9	148	51-80	Density, composition and age structure vary throughout this stand, which also includes patches of semi-open lowland brush. The year of origin was carried forward from previous inventory data, but uneven-aged characteristics have become pronounced.
40	6121 - Tamarack	Poletimber Well	167.1	129	51-80	Mostly slow-growing 2-4 stick tamarack with other conifers mixed in. The understory is a mix of conifers and tag alder. The fir and spruce poles appear to be a second generation.
42	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	30.5	99	51-80	Mixed softwood along the bank of the Creighton River.
43	6111 - Lowland Balsam Poplar	Sapling Medium	11.0	38	1-50	Slow-growing mixed aspen regeneration - most likely a result of burning in the 1976 Seney NWR fire. The understory is very light brush dominated by willow. Unclear whether or not this timber will reach merchantable size, but the site index appears to be too low for commercial management.
45	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	3.7	99	51-80	Lowland mixed confers. Stand density and composition are highly variable.
46	6118 - Lowland Deciduous with Cedar	Sapling Well	14.7	35	Unspecified	Mix of aspen, hardwood and conifer regeneration. A few trees already have a merchantable pulpstick.
47	6120 - Lowland Cedar	Poletimber Well	2.4	127	1-50	Slow-growing, semi-open cedar/tamarack stand with an understory of lowland brush and light conifer regen.
48	6120 - Lowland Cedar	Poletimber Well	278.2	127	141-170	Large cedar stand. Overall, most of it is fairly slow-growing but some areas have very large cedar and white pine (18"+ DBH.) Site indices and stand density/composition vary quite a bit with slight elevation changes. Hemlock, spruce, fir, red maple, black ash and paper birch are all scattered throughout.
49	6121 - Tamarack	Poletimber Well	132.6	123	51-80	Two-aged mix of tamarack over cedar. Both cedar and tamarack are found in the two age classes.
50	6120 - Lowland Cedar	Poletimber Well	42.7	127	171-200	Dense cedar stand with a few paper birch, balsam fir, black spruce and white pine also present, creating small pockets of Q-type within the stand.
51	6120 - Lowland Cedar	Sapling Well	155.1	59	Unspecified	Small diameter cedar. The understory varies from marsh/bog to lowland brush.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	6120 - Lowland Cedar	Poletimber Well	194.5	127	51-80	Slower-growing than some of the adjacent cedar stands. Some age variability is developing but overall it still looks evenaged.
53	6120 - Lowland Cedar	Poletimber Medium	19.7	127	1-50	Semi-open, very wet cedar stand. The understory is a mix of cedar regeneration and lowland brush.
55	6120 - Lowland Cedar	Sapling Medium	101.9	59	Unspecified	Mix of slow-growing conifers on wet ground.
57	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	91.3	81	81-110	This stand is a mix of two major timber types: lowland hardwoods (E-type) featuring red maple, balsam fir and scattered hemlock, and lowland conifers (Q-type) where spruce and cedar are dominant. Paper birch and large white pine are scattered throughout. The understory is more consistent, featuring a mix of conifers and red maple. This stand is truly an unevenaged mix, so a rough estimate of the age is shown here. Site indices also appear to be extremely variable.
58	6122 - Black Spruce	Poletimber Well	24.8	95	51-80	Mixed timber, but black spruce is the dominant species.
59	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	1.9	95	1-50	Mixed conifers on a very wet site. Lowland brush is dominant in the understory. Some age class diversity is developing.
60	6121 - Tamarack	Poletimber Medium	1.1	95	1-50	Small island of timber
61	6121 - Tamarack	Poletimber Medium	3.6	95	1-50	Semi-open lowland timber
62	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	2.8	95	51-80	Small island of timber. Some age class diversity may be present as the stand is filling in.
63	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.5	86	81-110	Understory features balsam fir, black spruce & cedar.
64	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	7.0	99	51-80	Mixed conifer stand along the Creighton River.
65	6120 - Lowland Cedar	Poletimber Well	16.6	99	51-80	Very wet stand along the Creighton River. The understory is a mix of light conifer regen and lowland brush. A few merchantable black ash are present.
66	6120 - Lowland Cedar	Poletimber Well	14.5	99	81-110	Cedar mix on wet ground along the Creighton River. Density and composition are variable.
67	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	10.3	94	51-80	Mixed lowland conifers on wet ground. Tag alder is fairly dominant in the understory where the stand is more open, but shade-tolerant tree spp are more prevalent under the denser canopy.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
68	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	10.6	94	51-80	Mixed conifers on wet ground.
69	6120 - Lowland Cedar	Poletimber Well	14.2	99	51-80	Slow-growing mixed conifers near the Creighton River Some black ash is also present.
70	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	1.6	94	1-50	Semi-open lowland conifers - uneven-aged characteristics are developing. The understory is dominated by lowland shrubs.
71	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	17.8	94	81-110	Mixed timber on wet ground.
72	429 - Mixed Upland Conifers	Sawtimber Well	34.6	178	81-110	This stand has reached an uneven-aged condition. The cedar poles are in the 6-8" DBH class, many of the the hemlock and white pine are larger (log size class) trees, and the understory is a conifer mix.
73	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	16.2	178	1-50	Semi-open timber on very wet ground. Age-class diversity is present; composition and stand density are highly variable, with basal area ranging from 0-90 sq.ft./acre.
74	6120 - Lowland Cedar	Poletimber Medium	1.0	122	1-50	Small island of slow-growing, semi-open timber.
75	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	2.4	122	111-140	Island of timber in the marsh.
76	6120 - Lowland Cedar	Sawtimber Well	9.3	127	201+	Type 1 old-growth. Very large cedar plus a few other spp. scattered within the stand. Some of the cedar are 22-24" DBH and greater, and display heights not commonly attained by this species. The 6-8" fir & spruce give the appearance of a second generation occupying canopy gaps formed by natural disturbances. The understory varies significantly in height, density and composition, and is best described as a mix of cedar, fir, spruce and hemlock. The age shown here is from previous inventory, but there are definitely cedar and hemlock present which are significantly older.
77	6120 - Lowland Cedar	Poletimber Well	3.2	127	51-80	Slow-growing cedar/tamarack stand with an understory of lowland brush and scattered conifer regen.
78	6120 - Lowland Cedar	Poletimber Well	2.0	100	1-50	Semi-open, very slow-growing mix of cedar & tamarack over lowland brush. Some trees are merchantable but the site index appears to be too low to consider this stand viable for timber management.
80	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	3.9	122	51-80	Mixed conifers on a slightly elevated ground.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
82	6121 - Tamarack	Poletimber Poor	4.0	131	51-80	Pocket of slow-growing timber over tag alder. A few larger cedar are also present, and a few smaller ones in the understory. In reality there is age class diversity but the trees are so slow-growing that it is not clearly evident.
84	6120 - Lowland Cedar	Poletimber Medium	1.0	131	51-80	Small island of timber.
88	6120 - Lowland Cedar	Poletimber Medium	12.4	122	51-80	Mixed stand featuring variable density and composition, with basal area ranging from 20 to 150 sq.ft./acre. Many of the white pine are 18"+ DBH. Understory is tag alder and a few small cedar on the wetter areas, and a mix of spruce, fir, red maple and white pine on the slightly higher ground. The balsam fir is probably a second generation, indicating that uneven-aged characteristics are developing in this stand.
90	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	10.5	122	51-80	Previous inventory data listed a year-of-origin of 1893 for this stand, but evidence of mortality, a second generation of fir, etc. strongly suggests that an uneven-aged condition has developed.
91	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	1.1	122	51-80	Small island of slow-growing timber.
92	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	24.5	122	51-80	Variable density mix of timber on wet ground. The understory is a mix of lowland brush and scattered conifer regeneration. The given year of origin reflects stand history, but uneven-aged conditions are developing.
93	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	18.9	122	51-80	Mixed timber - density and composition vary quite a bit from place to place within this stand. Site indices also vary significantly with elevation changes.
94	6120 - Lowland Cedar	Poletimber Medium	3.2	122	51-80	Cedar mix on wet ground.
95	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	6.3	61	51-80	Somewhat open but still fully-stocked mix of conifers with a few paper birch and red maple. The understory is a mix of lowland brush and scattered conifer regeneration. This stand was formerly listed with a year of origin of 1893, but only a few of the birch appear to be anywhere near that old. Most of the stocking appears to be a second generation, as mortality has claimed the original cohort.
96	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	2.8	122	1-50	Mixed conifers on a wet site. A few paper birch also present.
97	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	14.1	122	81-110	Two-aged, mixed stand featuring 14-20" white pine DBH sawlogs over a variety of poles/logs about 6-10" DBH. In the understory black spruce and balsam fir are the dominant species, but in some areas tag alder is more prevalent. Density and composition are highly variable, with basal area ranging from 20 to 120+ sq. ft./acre.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
98	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	2.1	122	81-110	Island of timber.
99	6139 - Mixed Lowland Forest	Poletimber Well	6.9	61	81-110	Stand's year of origin was previously listed as 1893, but mortality has claimed almost all of the first cohort from that stand.
100	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	10.1	122	81-110	Very large white pine over a mix of spruce, cedar and paper birch. Age class diversity is pretty well defined, as the spruce etc. are clearly younger than the white pine. Site indices and stand density are variable. The understory is primarily a mix of spruce and lowland brush, with a few scattered fir & red maple.
101	6121 - Tamarack	Poletimber Poor	6.8	122	1-50	Semi-open timber and lowland brush. Age class diversity is present but not well-defined, as the trees are simply all too slow-growing to make age classes distinctive.
103	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	3.6	122	141-170	Very large (24+\" DBH) white pine over a mix of red maple and cedar, with a few spruce and paper birch scattered about. The understory is mostly cedar and balsam fir regeneration with some low brush mixed in. Uneven-aged characteristics are fully developed as the second cohort of fir and maple have reached the main canopy..
104	6130 - Fir, Aspen, Maple	Poletimber Well	9.1	122	81-110	Large white pine over a mix of other species. Balsam fir and red maple have become the dominant species, and uneven-aged characteristics are very pronounced as mortality claims the less shade-tolerant species. The stand will become a lowland conifer type when more of the balsam reaches maturity. The old year of stand origin was listed as 1893, but the white pine relicts are probably older.
105	6120 - Lowland Cedar	Poletimber Well	1.0	99	81-110	Cedar near the east bank of the Creighton River. The understory is extremely variable.
106	6120 - Lowland Cedar	Poletimber Well	5.1	99	81-110	Cedar near the Creighton River. Mature tamarack was present but has died almost completely out.
108	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	12.7	99	81-110	Mixed timber on the east bank of the Creighton River.
110	6120 - Lowland Cedar	Poletimber Medium	1.3	131	51-80	Small island of cedar/tamarack/red maple.



Stand	Cover Type	Acres	Managed Site	General Comments:
6	6299 - Lowland Shrub (OI)	9.4	No	ERA - Patterned fen Dense tag alder 6-15' tall with a few scattered trees and other lowland spp.
9	62399 - Marsh (OI)	1406.0	No	ERA - Patterned fen Includes marsh grass, patches of light lowland brush and/or merchantable trees, and scattered submerchantable cedar & tamarack. Much of this stand burned in the Seney NWR fire of 1976. It is likely that many of the trees seeded in after the fire, and might eventually reach merchantable size. Evidence of seasonal flooding is also present in some areas.
10	6299 - Lowland Shrub (OI)	87.5	No	Mix of lowland species (tag alder, willow etc.) of varying size and density. There are also trees (mostly tamarack and cedar) scattered throughout. In some pockets these trees are denser and a few have reached merchantable size, but most are submerchantable. The site index is too low to classify any part of this stand as a commercially manageable area.
13	6299 - Lowland Shrub (OI)	0.0	No	Dense lowland brush area dominated by tag alder over marsh vegetation. There are also a few scattered cedar and tamarack (mostly submerchantable) scattered throughout the area.
14	6299 - Lowland Shrub (OI)	19.7	No	ERA - Patterned fen. Low- to medium-density lowland brush featuring a mix of species. Scattered submerchantable tamarack and cedar are also present, plus pockets of larger trees.
16	6299 - Lowland Shrub (OI)	116.2	No	Dense lowland brush area dominated by tag alder over marsh vegetation. There are also a few scattered cedar and tamarack (mostly submerchantable) scattered throughout the area.
20	6299 - Lowland Shrub (OI)	2.8	No	ERA - Patterned fen. Dense lowland brush area dominated by 8-12' tall tag alder over marsh vegetation.
23	6299 - Lowland Shrub (OI)	17.9	No	ERA - Patterned Fen. Dense lowland brush area dominated by tall tag alder over marsh vegetation.
36	6299 - Lowland Shrub (OI)	18.7	No	ERA - Patterned Fen. Dense lowland brush area dominated by 8-12' tall tag alder over marsh vegetation.
38	6299 - Lowland Shrub (OI)	87.2	No	ERA - Patterned Fen. Low- to medium-density lowland brush featuring a mix of species 3-6' tall. Willows appear to be the dominant species. Scattered submerchantable tamarack and cedar are present throughout the stand, as well as several pockets of merchantable-sized timber that are too small to map as separate stands.
41	62399 - Marsh (OI)	1908.2	No	ERA - Patterned Fen. This stand is a large expanse of patterned fen with numerous drainages running through it, including Stoner and Shotgun Creeks. The species and density vary from dense tag alder and/or willow to patches of open marshland. Pockets of trees also exist on some of the dryer spots, and seasonal flooding occurs in many of the lowest spots.
44	6299 - Lowland Shrub (OI)	159.2	No	Dense lowland brush consisting of mixed tag alder, willow etc. and scattered (mostly submerchantable) trees.



Stand	Cover Type	Acres	Managed Site	General Comments:
54	62241 - Treed Bog (OI)	41.1	No	Numerous submerchantable cedar and tamarack up to 4" DBH, but site indices are very low.
56	6299 - Lowland Shrub (OI)	54.1	No	Dense lowland brush consisting of mixed tag alder, willow etc.
79	6299 - Lowland Shrub (OI)	11.2	No	Fairly dense lowland brush area dominated by 8-12' tall tag alder over marsh vegetation.
81	622 - Lowland Shrub	17.1	No	Fairly dense lowland brush with scattered trees, most of which are submerchantable.
83	6299 - Lowland Shrub (OI)	42.7	No	ERA - Patterned Fen Lowland brush - primarily tag alder with pockets of willow, scattered trees, etc.
85	6220 - Alder/willow	1.4	No	ERA - Patterned Fen Pockets of tag alder with some scattered cedar, etc.
86	6229 - Mixed lowland shrub	2.6	No	Mostly lowland brush spp., but a few scattered tamarack and cedar are also present.
87	6229 - Mixed lowland shrub	3.1	No	Primarily a mix of lowland shrubs with a pocket of lowland conifers too small to map out separately.
89	6299 - Lowland Shrub (OI)	28.7	No	ERA - Patterned Fen. Moderate to light lowland brush area dominated by a mix of tag alder & willow over marsh vegetation. Scattered clumps of trees are also present.
102	629 - Mixed non-forested wetland	3.1	No	Lowland brush with scattered poles and saplings. Age class diversity is present but not well-defined, as the trees are simply all too slow-growing to make age classes distinctive.
107	6220 - Alder/willow	21.4	No	ERA - Patterned Fen Dense tag alder etc.
109	62399 - Marsh (OI)	4.6	No	Lowland brush along the Creighton River - mostly tag alder with a few scattered trees.