



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32227

Entry Year 2020

Acreage: 1,576

County Marquette

Management Area: Voelker Plains

Revision Date: 2018-08-06

Stand Examiner: Rick Hill

Legal Description:

T46N R28W Sec's 21, 28, 29, 32, 33

Identified Planning Goals:

Vegetative management in the Voelker Plains management area will provide a variety of forest products; maintain or enhance wildlife habitat; protect areas with unique characteristics; and provide for forest based recreational uses. Timber management objectives for the 10-year planning period include improving the age-class distribution of jack pine, aspen and lowland spruce/fir; maintaining the presence of minor cover types on the landscape; and maintaining non-forest vegetation types. Wildlife management objectives include addressing the habitat requirements identified for the following featured species: American woodcock, beaver, black bear and Kirtland's warbler. Management activities may be constrained by site conditions and the skewed age-class distributions. Balancing age classes and spruce budworm will be issues for this 10-year planning period

Soil and topography:

Soil composition in the compartment ranges from Rubicon and Croswell sand to Greenwood and Dawson peat. The topography is relatively level to slightly rolling. The hill portions of the compartment are composed of the Rubicon-Keweenaw complex where the level plains are made up of the Rubicon and Croswell sands. Wetland portions of the compartment are composed of either the Carbondale and Tawas mucks or the Greenwood and Dawson peat.

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

Ownership in and around the compartment is both state owned land intermixed with predominately non-industrial private landowners. There is some industrial forestland in the area. The main land uses are timber production and recreation. Development in the area includes camps and permanent residences. There are two television transmitter towers in the area as well.

Unique Natural Features:

This compartment contains part of the Black River swamp.

Archeological, Historical, and Cultural Features:

There are no known sites.

Special Management Designations or Considerations:

There are some riparian management areas present within the compartment.

Watershed and Fisheries Considerations:

This compartment contains unnamed streams which serve as tributaries to the West Branch of the Middle Branch of the Escanaba River. These unnamed tributaries are designated Type 1 trout streams less than 50' width. A 300' buffer is recommended for these unnamed tributaries in riparian areas susceptible to Aspen regeneration (specifically stand 17). For areas not susceptible to Aspen regeneration 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices (specifically stand 15). The West Branch of the Middle Branch of the Escanaba River is a designated Type 1 trout stream less than 50' width. A 300' buffer is recommended for the West Branch of the Middle Branch of the Escanaba River in riparian areas susceptible to Aspen regeneration (specifically stands 25). For areas not susceptible to Aspen regeneration 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

Compartment 227 is found within the Voelker Plains Management Area; on an Outwash Plain in central Marquette County. The dominant Natural Communities are dry northern forests and dry mesic northern forests. Wildlife considerations in the Voelker Plains management area consist of: managing jack pine habitat with strategies that more closely mimic natural fire disturbance regimes and increasing stand size and striving to accommodate many species associated with xeric forest habitat is desirable. Wildlife management issues in the management area are: early successional forest conditions (associated with alder, riparian zones, or forested wetlands), mast (hard and soft); habitat

fragmentation, early successional forest; and large open land complexes.

The following have been identified as featured species for the Voelker Plains Management Area: American woodcock, beaver, black bear, and Kirtland's warbler.

Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are located more than three miles to the northeast, and there appears to be some sand potential within the compartment. There is no iron ore potential within the compartment. Potential for other metallic minerals is unknown. A portion of the compartment was previously leased by Prime Meridian Resources for metallic mineral exploration. It is not known whether they conducted any exploration of the leased state mineral rights. There is no potential for economical oil and gas production in the UP.

Vehicle Access:

There is relatively good access throughout the compartment via county roads either paved or graveled. Various two-tracks branch off of these roads to get to individual stands.

Survey Needs:

Some survey may be needed for timber sales in the area.

Recreational Facilities and Opportunities:

Hunting and trout fishing are the most popular activities within this area.

Fire Protection:

This compartment is located within the South Ishpeming-581 Zone dispatch area. With the dominant timber type being jack pine it is vulnerable to large scale fires developing in a short period of time. Adequate roads and water sources exist to aid in 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:

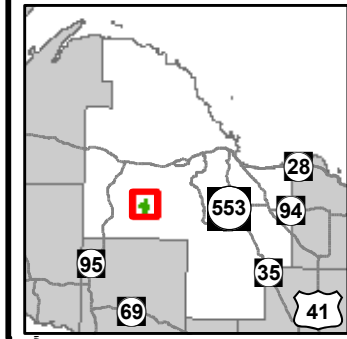
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Overview Map

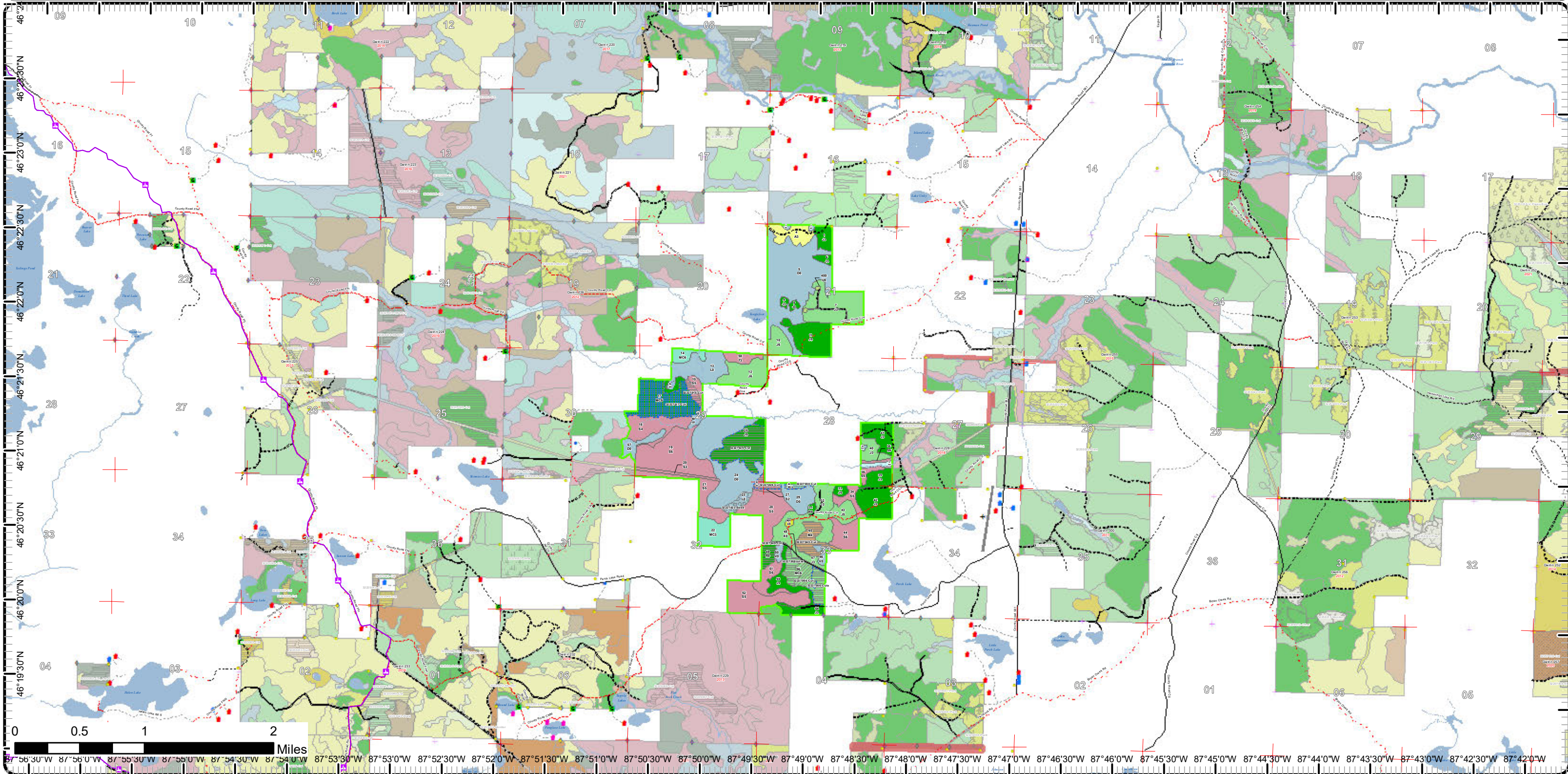
Compartment: 227
T46N,R28W, Sec. 21, 28, 29, 32,
33

County: Marquette
Unit: Gwinn
Mgmt Area: Voelker Plains
YOE: 2020

Acres: 1,577 GIS Calculated
Examiner: Rick Hill
Map Revised: 8/24/2018
Map Phase: Web-Post

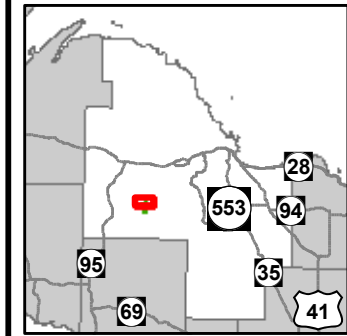


- | | | | |
|--|--------------------------------|-------------------------------------|-----------------------------------|
| — Miris Corners | ▲ Cabin | ■ Lakes and Rivers All | ■ 612 - Lowland Coniferous Forest |
| + Remonumented Section Corners | ■ House | □ Pipeline | ■ 122 - Roads/Parking Lot |
| ● Survey Grade Corners | ■ Structure, Seasonal Dwelling | ⊕ Powerline | ■ 320 - Upland Shrub |
| ◆ Field Grade Corners | ✈ Airport | ■ Airports | ■ 330 - Low Density Trees |
| --- Counties | ✈ Airport | ■ Compartment Boundary | ■ 500 - Water |
| == DNR - Secondary Forest Road | ▲ Berms | ■ Treatments with Site Conditions | ■ 622 - Lowland Shrub |
| == DNR - Forest Access Route | ▲ Gate | ■ Clearcut (w/Reserves) | ■ 623 - Emergent Wetland |
| — Federal / State / County - Paved Road | ✈ Bridges | ■ Seed Tree (w/Reserves) | ■ Lakes |
| - - - Federal / State - Dirt / Gravel Road | ▲ Structures | ■ Seeding (tree species) | |
| - . - . County - Gravel Road | ● Tower | ■ Thinning (Crown, Low, Systematic) | |
| - - - County - Dirt Road (Seasonal) | — Intermittent Stream | ■ 411 - Northern Hardwood | |
| - - - Private - Dirt / Gravel Road | — Island in Lake or River | ■ 413 - Aspen | |
| □ Unspecified Structure | — Lake/Pond | ■ 421 - Planted Pines | |
| | — Perennial River | ■ 422 - Natural Pines | |
| | | ■ 429 - Mixed Upland Conifers | |

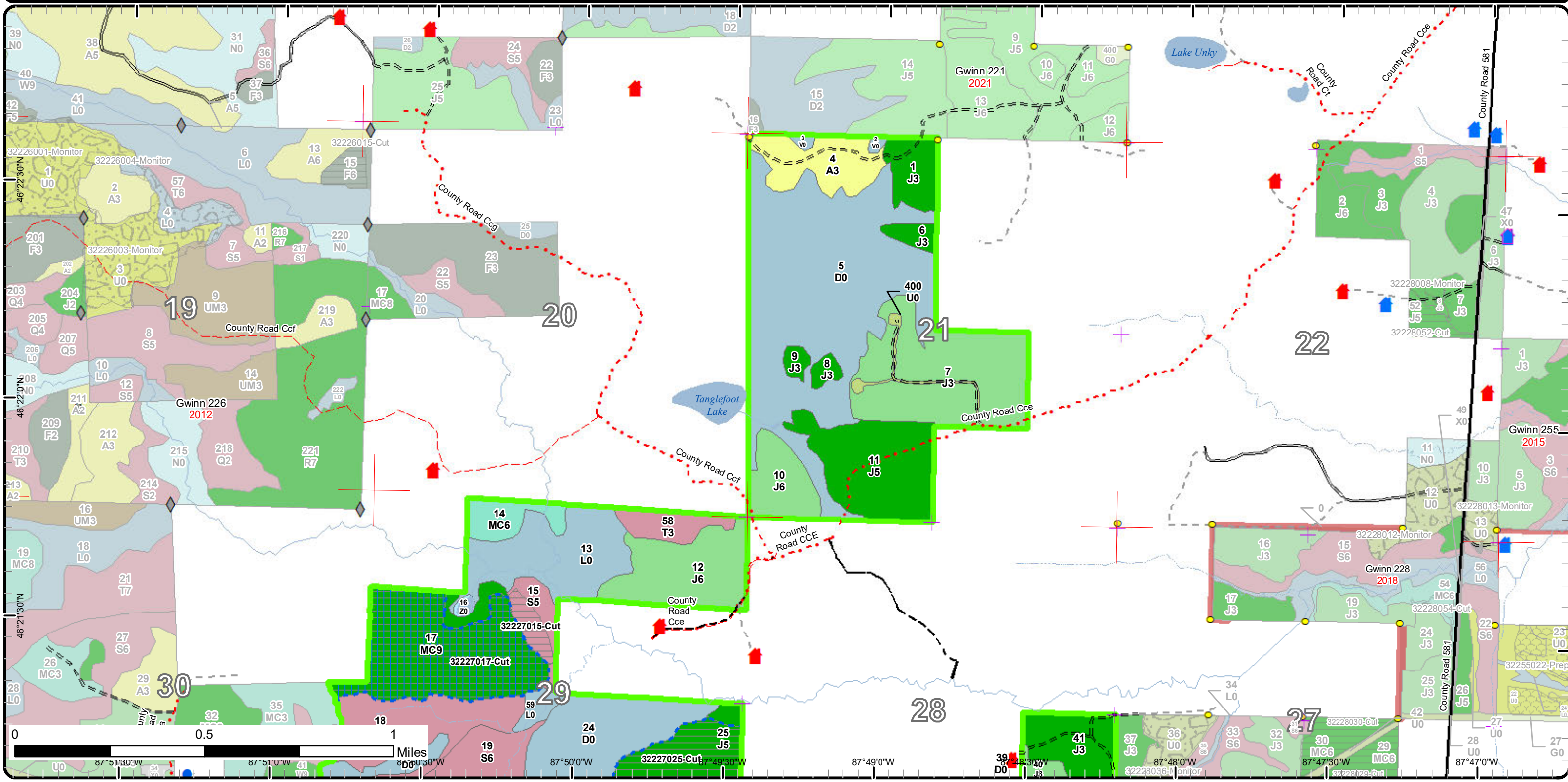


Cover Type & Treatments Map

Compartment: 227
 T46N,R28W, Sec. 21, 28, 29
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner: Rick Hill
 Map Revised: 8/24/2018
 Map Phase: Web-Post

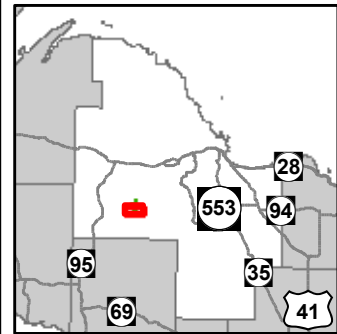


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- ⬆ Unspecified Structure
- 🏠 Cabin
- 🏠 House
- 🏠 Structures
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- 413 - Aspen
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub
- Lakes

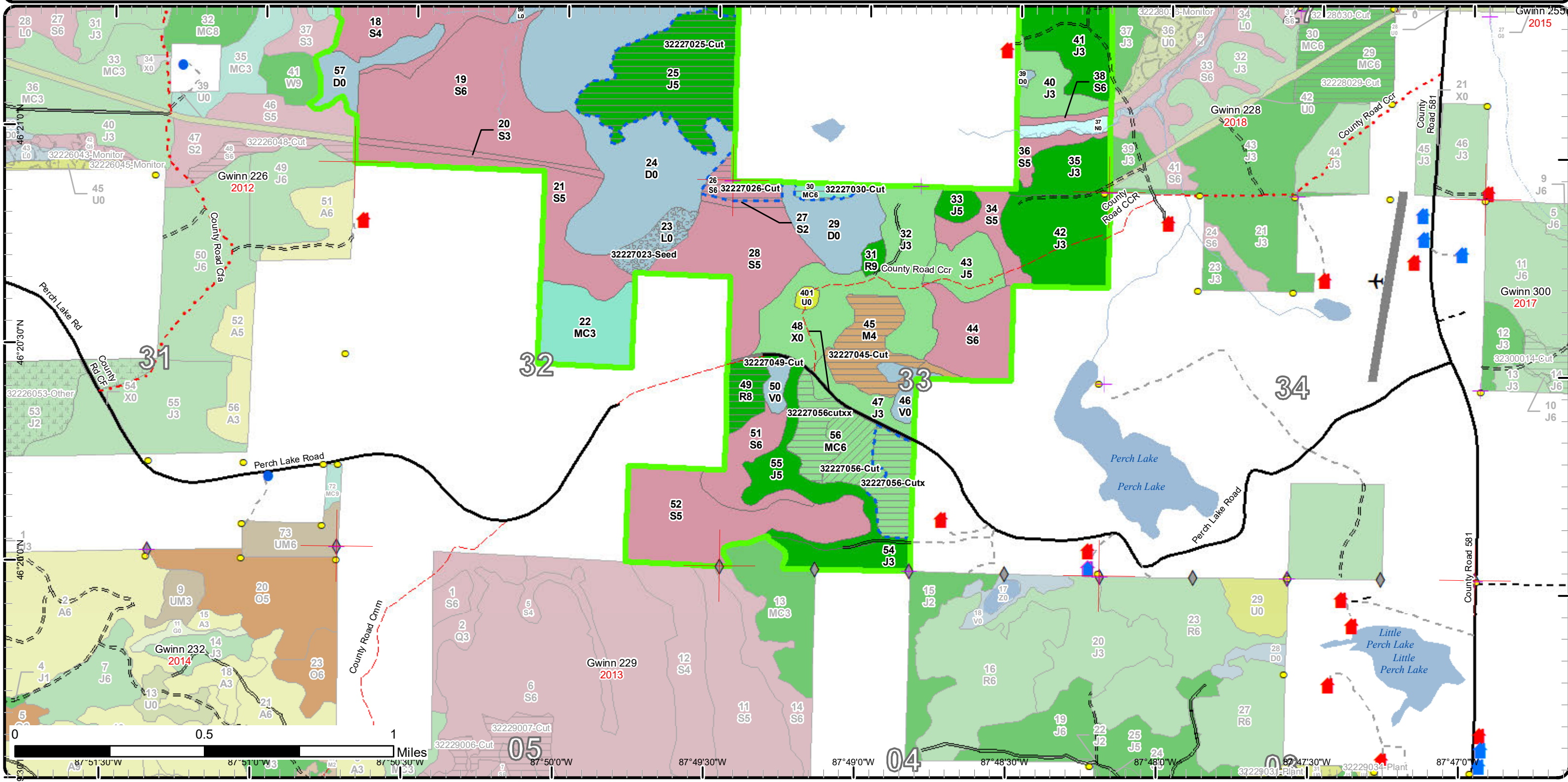


Cover Type & Treatments Map

Compartment: 227
 T46N,R28W, Sec. 28, 29, 32, 33
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner: Rick Hill
 Map Revised: 8/24/2018
 Map Phase: Web-Post

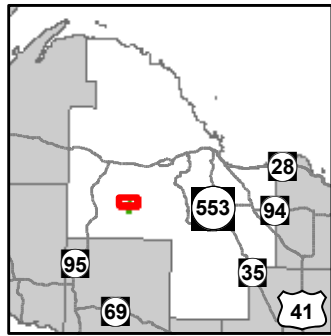


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- ⬆ Unspecified Structure
- 🏠 Cabin
- 🏠 House
- ✈ Airport
- 🏠 Structures
- 📶 Tower
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- ✈ Airports
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Seeding (tree species)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes

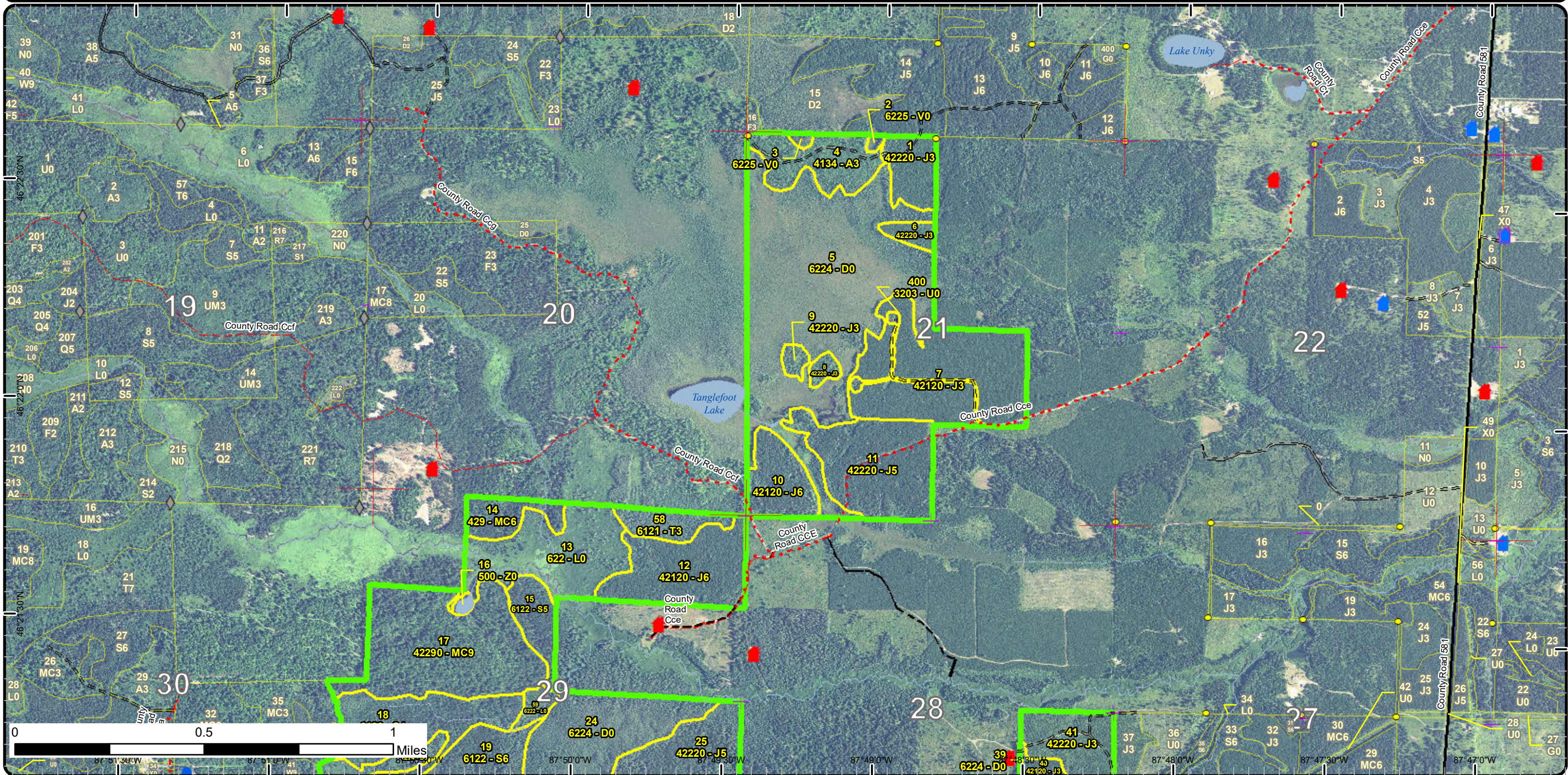


Stand Boundary Map

Compartment: 227
 T46N,R28W, Sec. 21, 28, 29
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner:
 Map Revised: 8/24/2018
 Map Phase: Web-Post



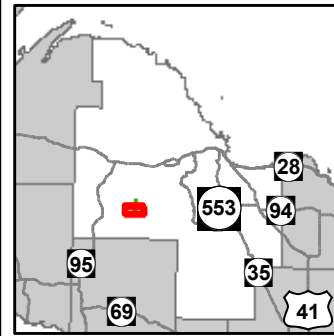
- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Unspecified Structure
- Cabin
- House
- Structures
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All



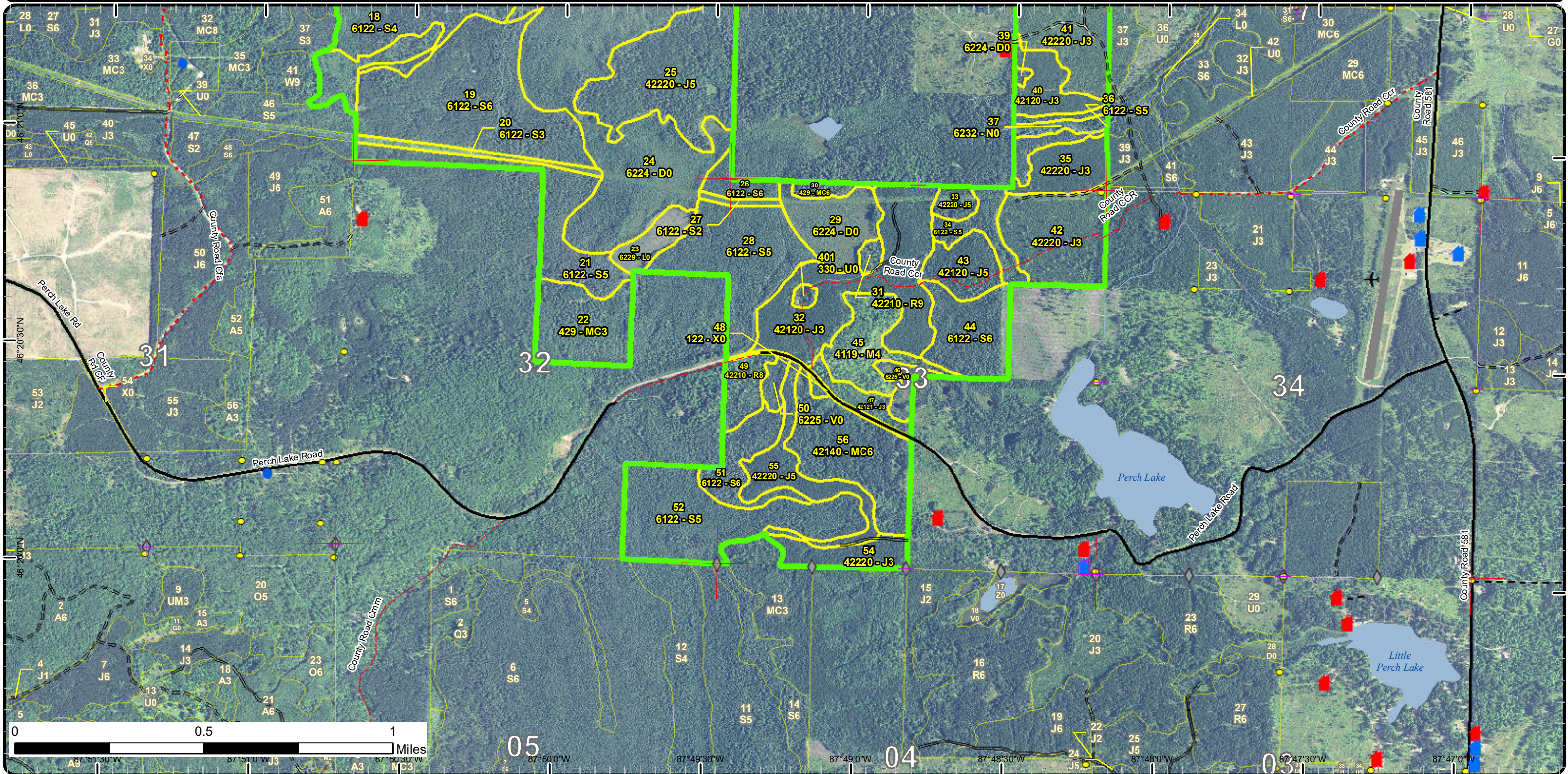
0 0.5 1 Miles
 87° 51' 30" W 87° 51' 0" W 87° 49' 0" W 87° 48' 0" W 87° 47' 30" W 87° 47' 0" W

Stand Boundary Map

Compartment: 227
 T46N,R28W, Sec. 28, 29, 32, 33
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner: Rick Hill
 Map Revised: 8/24/2018
 Map Phase: Web-Post

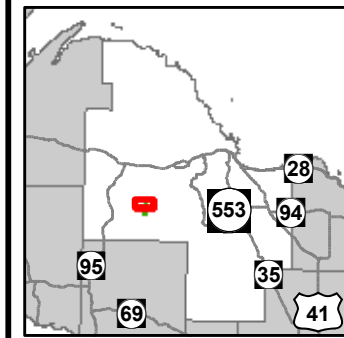


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Unspecified Structure
- Cabin
- House
- ✈ Airport
- Structures
- Tower
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Airports
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland

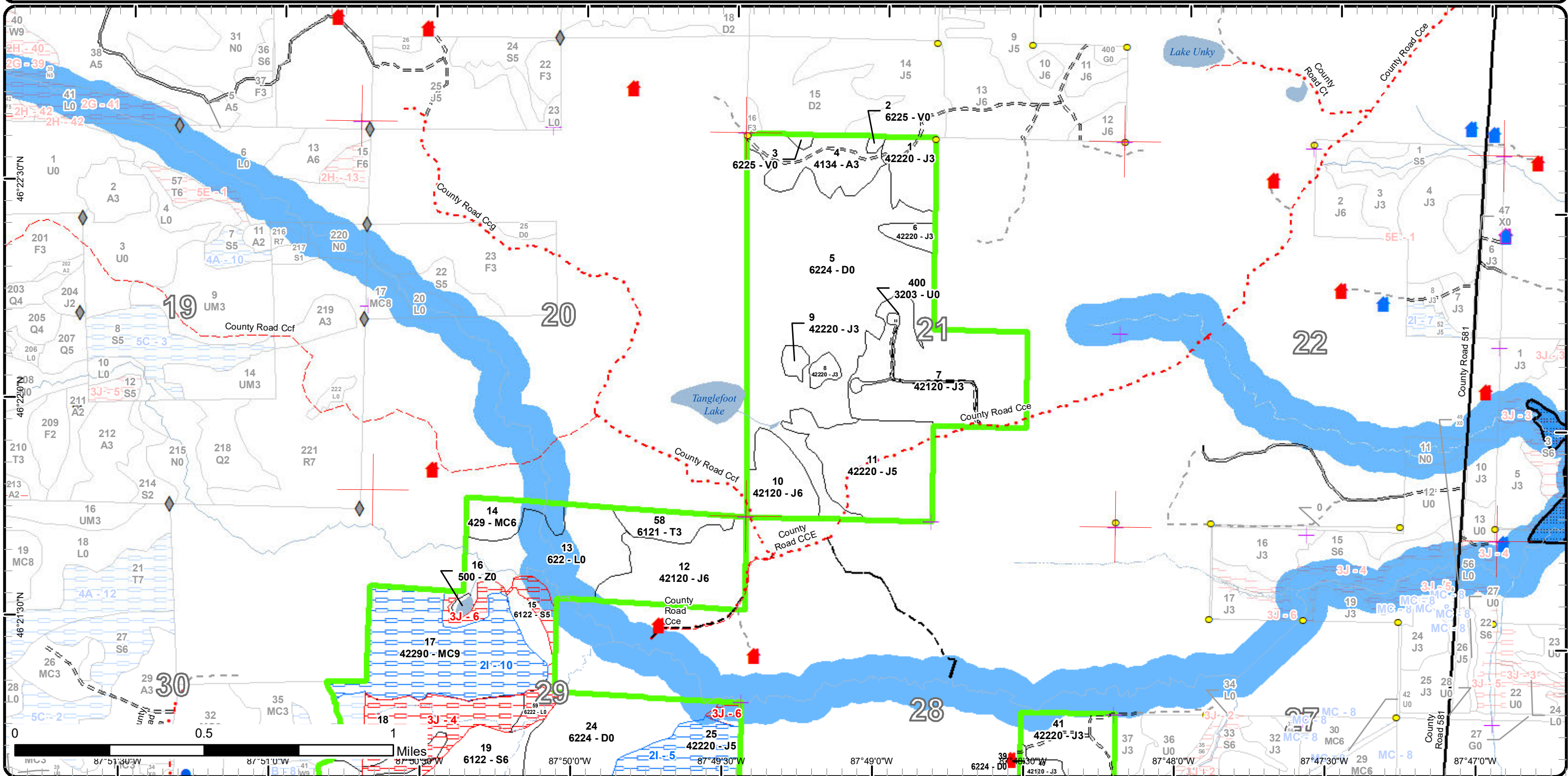


Special Conservation Areas & Site Conditions Map

Compartment: 227
 T46N,R28W, Sec. 121, 28, 29
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner: Rick Hill
 Map Revised: 8/24/2018
 Map Phase: Web-Post

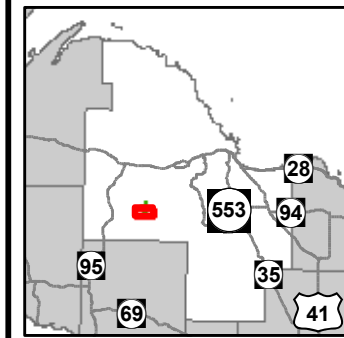


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- ⬆ Unspecified Structure
- 🏠 Cabin
- 🏠 House
- 🏠 Structures
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2I: Survey needed
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- SCA
- Cold Water Streams
- High Priority Trout Stream Buffer
- Riparian Area

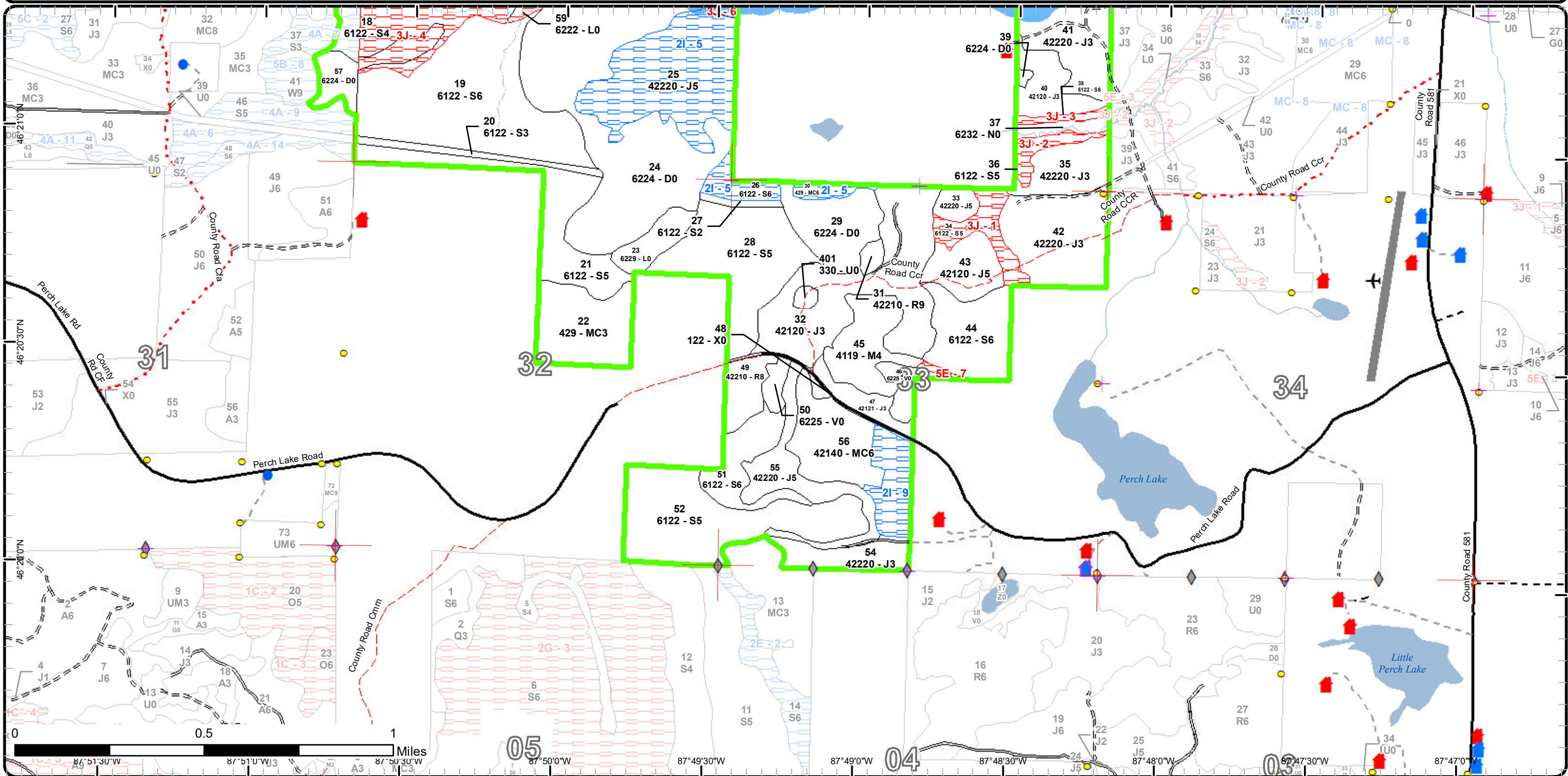


Special Conservation Areas & Site Conditions Map

Compartment: 227
 T46N,R28W, Sec. 28, 29, 32, 33
 County: Marquette
 Unit: Gwinn
 Mgmt Area: Voelker Plains
 YOE: 2020
 Acres: 1,577 GIS Calculated
 Examiner: Rick Hill
 Map Revised: 8/24/2018
 Map Phase: Web-Post



- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- Unspecified Structure
- ▲ Cabin
- ▲ House
- ✈ Airport
- Structures
- Tower
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Airports
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2I: Survey needed
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes



Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit
Rick Hill : Examiner

Compartment 227 Year of Entry 2020



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	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
Bog	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Jack Pine	0	0	100	180	176	0	66	0	0	0	0	0	0	0	0	0	0	0	522
Low-Density Trees	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Shrub	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
Lowland Spruce/Fir	0	0	0	10	0	0	0	134	213	32	0	0	0	0	0	0	0	0	388
Marsh	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	78	0	0	0	0	78
Northern Hardwood	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26
Planted Mixed Pines	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	0	0	46
Red Pine	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	3	15
Tamarack	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Treed Bog	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	322
Upland Conifers	0	0	0	33	13	0	0	0	5	0	0	0	0	0	0	0	0	0	50
Upland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	416	0	126	223	201	0	138	134	218	44	0	0	0	78	0	0	0	3	1579



Report 2 – Treatment Summary

Gwinn Mgt. Unit

Year of Entry: 2020

Acres of Harvest

Compartment 227

Total Compartment Acres: 1,576

Commercial Harvest - 72
 Harvests with Site Condition - 165
 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
Jack Pine	63	0	0	0	0	0	0	0	0	63
Lowland Spruce/Fir	15	0	0	0	0	0	0	0	0	15
Natural Mixed Pines	0	0	0	72	0	0	0	0	0	72
Northern Hardwood	25	0	0	0	0	0	0	0	0	25
Planted Mixed Pines	31	0	0	0	0	15	0	0	0	46
Red Pine	12	0	0	0	0	0	0	0	0	12
Upland Conifers	5	0	0	0	0	0	0	0	0	5
Total	150	0	0	72	0	15	0	0	0	237

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	237	0	0	11	0	0	0	0	0	248
Next Step	0	99	99	94	0	116	333	0	0	742
Total	237	99	99	106	0	116	333	0	0	990



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
15	32227015-Cut	6.6	6122 - Black Spruce	Poletimber Medium	79	51-80	Harvest	Clearcut with Retention	612 - Lowland Coniferous Forest	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Clearcut the stand leaving all red pine, white pine and cedar. River buffers will be retention.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Spruce and tamarack

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

17	32227017-Cut	72.0	42290 - Natural Mixed Pine	Sawtimber Well	128	81-110	Harvest	Seed Tree with Retention	4220 - Natural White Pine	Two-Aged	Proposal
----	--------------	------	-------------------------------	-------------------	-----	--------	---------	-----------------------------	------------------------------	----------	----------

Habitat Cut: No**Site Condition: Survey Needed**

Prescription Cut using a seed tree system. Target 30 square feet of residual. Release existing regeneration focus seed trees in areas with less current regen.

Specs: All merchantable red maple, fir, spruce, and aspen should be harvested. Legacy trees and oversize white pine will be left with this treatment. Leave any paper birch present.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine, red pine, mixed hardwood, mixed conifer

Regen:

Other

Comment: Wildlife - No oversized white pine trees should be harvested - Black Bear Paper Birch (2%) should be left for cavity nesting species and seed source.

Proposed Start Date: 10/01/2019

23	32227023- Seed	11.2	6229 - Mixed lowland shrub	Nonstocked	0	Unspec ified	Seeding	Machine Seed	6122 - Black Spruce	Even-Aged	Proposal
----	-------------------	------	-------------------------------	------------	---	-----------------	---------	--------------	------------------------	-----------	----------

Habitat Cut: No**Site Condition:**

Prescription Snowmobile seed black spruce to regenerate stand.

Specs:

Next Step Monitoring, Direct Seeding

Treatments:

Acceptable Black Spruce

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019

25	32227025-Cut	63.0	42220 - Natural Jack Pine	Poletimber Medium	59	81-110	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Proposal
----	--------------	------	------------------------------	----------------------	----	--------	---------	----------------------------	-----------------------------	-----------	----------

Habitat Cut: No**Site Condition: Survey Needed**

Prescription Clearcut stand leaving only white pine, red pine, and oak.

Specs:

Next Step SitePrep, Scarification; Pesticide, Aerial; Seeding, Hand Seed; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial
Treatments: Regen(3yr)

Acceptable Jack Pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2019



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
26	32227026-Cut	8.4	6122 - Black Spruce	Poletimber Well	82	51-80	Harvest	Clearcut with Retention	6122 - Black Spruce	Even-Aged	Proposal

Habitat Cut: No Site Condition: Survey NeededPrescription Clearcut the stand leave a pocket for retention along the edge.Specs:Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Black spruce, tamarack, firRegen:Other Wildlife - Retention should include Tamarack as well as black spruce (gray jay, red crossbill, wildlife cover)Comment:Proposed Start Date: 10/01/2019

30	32227030-Cut	4.5	429 - Mixed Upland Conifers	Poletimber Well	76	81-110	Harvest	Clearcut with Retention	42330 - Upland Fir	Even-Aged	Proposal
----	--------------	-----	--------------------------------	--------------------	----	--------	---------	----------------------------	-----------------------	-----------	----------

Habitat Cut: No Site Condition: Survey NeededPrescription Clearcut the stand leave a pocket for retention along the edges preferably with a higher concentration of red pine. Leave any oak, red pine orSpecs: white pine present within the stand. Insure retention pocket has white birch present.Next Step Monitoring, Natural Regen (Intermediate)Treatments:Acceptable Spruce, fir, mixed conifer, mixed hardwoodRegen:Other Wildlife - Some large white-birch should be add to retention – pileated woodpecker and seed sourceComment:Proposed Start Date: 10/01/2019

45	32227045-Cut	24.6	4119 - Mixed Northern Hardwoods	Poletimber Poor	53	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal
----	--------------	------	------------------------------------	--------------------	----	-------	---------	----------------------------	----------------------------	-----------	----------

Habitat Cut: No Site Condition:Prescription Cut all maple, and paper birch. leave any oak present also leave the few scattered red pine present within the stand. Insure retention pocket hasSpecs: white birch present within it.Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)Treatments:Acceptable Red pineRegen:Other Wildlife - Leave a few scattered large white-birch should be add to retention – pileated woodpecker and seed sourceComment:Proposed Start Date: 10/01/2019

49	32227049-Cut	11.8	42210 - Natural Red Pine	Sawtimber Medium	87	51-80	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal
----	--------------	------	-----------------------------	---------------------	----	-------	---------	----------------------------	----------------------------	-----------	----------

Habitat Cut: No Site Condition:Prescription Clearcut stand to allow for planting mark a few white pine to leave and leave all oak. Leave a retention pocket along the wet fringe of the stand.Specs:Next Step Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)Treatments:Acceptable Red pineRegen:Other Wildlife - Leave all white pine (4%) as well as the red oak (3%)Comment:Proposed Start Date: 10/01/2019



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
56	32227056-Cut	14.6	42140 - Planted Mixed Pine	Poletimber Well	52	141- 170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin stand by removing all jack pine and aspen also thin red pine to allow for operability and to achieve a final BA of 100 square feet. Trees showing defect and that are suppressed should be marked first, then spacing should be considered in removal order. For diversity and wildlife avoid marking red maple, cherry, oak, and white pine where possible.

Next Step
Treatments:

Acceptable
Regen:

Other Wildlife - Leave all white pine (4%) as well as the red oak (3%)
Comment:

Proposed Start Date: 10/01/2019

56	32227056-Cutx	16.7	42140 - Planted Mixed Pine	Poletimber Well	52	141- 170	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Proposal
----	---------------	------	-------------------------------	--------------------	----	-------------	---------	----------------------------	-----------------------------	-----------	----------

Habitat Cut: No**Site Condition: Survey Needed**

Prescription Clearcut the stand leave a pocket for retention along the edges preferably with a higher concentration of red pine. Leave any oak that is present within the stand. Insure retention pocket has good representation of cherry and red maple.

Next Step Seeding, Machine Seed; Pesticide, Skidder/Mechanical; Monitoring, Direct Seeding
Treatments:

Acceptable Jack pine, red pine, spruce
Regen:

Other
Comment:

Proposed Start Date: 10/01/2019

56	32227056cutx	14.6	42140 - Planted Mixed Pine	Poletimber Well	52	141- 170	Harvest	Clearcut with Retention	4212 - Planted Jack Pine	Even-Aged	Proposal
----	--------------	------	-------------------------------	--------------------	----	-------------	---------	----------------------------	-----------------------------	-----------	----------

Habitat Cut: No**Site Condition:**

Prescription Clearcut the stand leave a pocket for retention along the edges preferably with a higher concentration of red pine. Leave any oak that is present within the stand. Insure retention pocket has good representation of cherry and red maple.

Next Step Seeding, Machine Seed; Monitoring, Direct Seeding
Treatments:

Acceptable Jack pine, red pine, spruce
Regen:

Other
Comment:

Proposed Start Date: 07/24/2018

**Total Treatment
Acreage Proposed: 248.0**

Report 4 – Site Conditions

Gwinn Mgt. Unit
Rick Hill : Examiner

Compartment: 227
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		2I	4A	3J	5E
26	26	0	0	Aspen				
14	14	0	0	Bog				
521	455	63	3	Jack Pine	63		3	
2	2	0	0	Low-Density Trees				
64	59	0	5	Lowland Shrub			5	
388	307	16	65	Lowland Spruce/Fir	8	8	65	
5	5	0	0	Marsh				
78	0	72	6	Natural Mixed Pines	72		6	
26	25	0	1	Northern Hardwood				1
46	29	17	0	Planted Mixed Pines	17			
15	15	0	0	Red Pine				
12	12	0	0	Tamarack				
322	315	0	7	Treed Bog			7	
50	46	4	0	Upland Conifers	4			
3	3	0	0	Upland Shrub				
3	3	0	0	Urban				
2	2	0	0	Water				
1,576	1,318	173	86	Total Forested Acres	165	8	85	1
	84%	11%	5%	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	3J: Water quality / BMPs (stream, river, or lake)	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Gwinn Mgt. Unit
Rick Hill : Examiner

Compartment: 227
Year of Entry: 2020

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	45	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	2I: Survey needed	76	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	16	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
9	Available	2I: Survey needed	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	2I: Survey needed	72	Unspecified	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				



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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42220 - Natural Jack Pine	Sapling Well	15.2	16	Immature	Harvested in 2000 under TS#106-00-01, by Holli Forest Products. Stand was regenerated under FTP#C31-426, this stand was herbicided using Tordon 101 at the rate of 5 qts/acre. On 9/19/2001, the stand was disk trenched and simultaneously seeded to jack pine for a total of 22 acres.
4	4134 - Aspen, Spruce/Fir	Sapling Well	25.8	16	Immature	Cut under sale #106-00-01
6	42220 - Natural Jack Pine	Sapling Well	5.1	16	Immature	Stand cut under sale number 106-00-01. Stand regenerated under FTP#C31-426.
7	42120 - Planted Jack Pine	Sapling Well	72.5	23	Immature	Stand cut under permit #12-90 "Tanglefoot Lake Block". Stand regenerated under FTP C31-292.
8	42220 - Natural Jack Pine	Sapling Well	3.3	23	Immature	Stand treated with stand 7 see stand 7 for more information.
9	42220 - Natural Jack Pine	Sapling Well	3.1	23	Immature	See comments for stand 7 as stand was treated with the same timber sale.
10	42120 - Planted Jack Pine	Poletimber Well	20.7	38	1-50	Stand cut under permit #9-76A. stand regenerated under FTP C31-212. Was seeded via snowmobile. A subsequent regeneration survey found only 333 seedlings/acre. Therefore, it was underplanted in the spring of 1982.
11	42220 - Natural Jack Pine	Poletimber Medium	49.9	38	51-80	Stand harvested under permit #9-76A. Site regenerated under FTP C31-212, seeded via snowmobile. Was then underplanted in spring of 1982.
12	42120 - Planted Jack Pine	Poletimber Well	41.4	35	51-80	Cut under permit #3-80A, Stand regenerated under FTP C31-65.
14	429 - Mixed Upland Conifers	Poletimber Well	13.0	32	Immature	Cut under permit #003-85-type 2, negotiated sale. Red and white pine were marked, and all other merch. pulpwood species were cut. This stand was left to regenerate naturally.
15	6122 - Black Spruce	Poletimber Medium	14.1	79	51-80	
17	42290 - Natural Mixed Pine	Sawtimber Well	77.6	128	81-110	Large diameter red and white pine stand. The majority of the stand however is large red and white pine. There is good regeneration of both red and white pine in the open areas. Other areas have regenerated to balsam fir and primarily red maple. Cut under permit #17-80A.
18	6122 - Black Spruce	Poletimber Poor	41.9	69	1-50	
19	6122 - Black Spruce	Poletimber Well	89.2	76	81-110	
20	6122 - Black Spruce	Sapling Well	7.1	22	Immature	ELF ROW that is now seeding in to spruce and tamarack.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6122 - Black Spruce	Poletimber Medium	37.2	76	81-110	
22	429 - Mixed Upland Conifers	Sapling Well	33.0	24	Immature	This stand is a mix of sapling sized jack pine, aspen and spruce-fir with some residual oak, red and white pine.
25	42220 - Natural Jack Pine	Poletimber Medium	65.7	59	81-110	The stand was cut around 1965 under permit #40-63A. All merchantable jack pine and spruce were cut in part of the area and marked trees were cut in the rest.
26	6122 - Black Spruce	Poletimber Well	8.4	82	51-80	
27	6122 - Black Spruce	Sapling Medium	2.6	22	Immature	Old ELF ROW now seeding in with black spruce and tamarack. Heavy labrador tea, leather leaf, blueberry, etc. ground cover.
28	6122 - Black Spruce	Poletimber Medium	52.2	72	81-110	
30	429 - Mixed Upland Conifers	Poletimber Well	4.5	76	81-110	
31	42210 - Natural Red Pine	Sawtimber Well	2.9	120	81-110	Stand thinned in 2013 under TS#103-10-01.
32	42120 - Planted Jack Pine	Sapling Well	66.6	23	Immature	Stand was cut under permit #32-002-90 between 1990 and 1992, FTP's #31-285 & 286 were used to regenerate the stand.
33	42220 - Natural Jack Pine	Poletimber Medium	5.7	38	81-110	Small stand that appears to have been started by some form of disturbance, possibly fire as plow furrows are evident.
34	6122 - Black Spruce	Poletimber Medium	13.9	82	51-80	Stand is buffer for a cold water tributary of the West Branch Creek.
35	42220 - Natural Jack Pine	Sapling Well	18.2	23	Immature	
36	6122 - Black Spruce	Poletimber Medium	6.6	82	1-50	Stand buffers a cold water tributary to the West Branch Creek.
38	6122 - Black Spruce	Poletimber Well	3.0	84	Unspecified	Cold water tributary of the West Branch Creek flows through this stand.
40	42120 - Planted Jack Pine	Sapling Well	16.4	23	Immature	Cut in 1992 under permit #17-90, hand planted in May 1994 under FTP #31-289.
41	42220 - Natural Jack Pine	Sapling Well	28.7	14	Immature	Cut in 2001, timber sale #107-00-01, only jack pine was cut, not other species designated. Trenched and seeded 11/10/03 FTP #32-438. Scattered spruce and fir as well as smaller white pine.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	42220 - Natural Jack Pine	Sapling Well	40.5	16	Immature	Harvested in 2001, timber sale #105-00-01. FTP #31-427, herbicided 8/8/2001 with Tordon 101 at a rate of 5 qts/acre over 24.7 acres. Disk trenching and seeding followed on 9/25/2001 on all 34.3 acres.
43	42120 - Planted Jack Pine	Poletimber Medium	17.0	36	51-80	Harvested in 1980 under permit #5-80A. Stand regenerated naturally.
44	6122 - Black Spruce	Poletimber Well	29.9	69	1-50	Lots of leather leaf and other bog associates. Fair amount of tamarack in the 2-3-inch dbh class.
45	4119 - Mixed Northern Hardwoods	Poletimber Poor	26.0	53	51-80	Cut in 2013 under 32-103-10-01 Camp Bergamo. all red maple, birch and oak left. Residual maple and birch is dense enough to hamper regen.
47	42121 - Planted Jack Pine, Mixed Deciduous	Sapling Well	10.2	14	Immature	Cut in 2001 timber sale #108-00-01. FTP #31-434 was for the site prep. Trenching and planting was completed on 10/30/03.
49	42210 - Natural Red Pine	Sawtimber Medium	11.8	87	51-80	Stand cut in 2001, timber sale #108-00-01.
51	6122 - Black Spruce	Poletimber Well	20.0	72	81-110	
52	6122 - Black Spruce	Poletimber Medium	61.7	69	1-50	
54	42220 - Natural Jack Pine	Sapling Well	15.4	30	Immature	Cut in 1982 under permit #33-80A. FTP #31-72 for scarification and seeding.
55	42220 - Natural Jack Pine	Poletimber Medium	24.9	37	51-80	Cut in summer 1978 permit #31-77A, FTP #31-15 for scarification and seeded via snowmobile in March 1980 at approx. 1/2 lb/acre.
56	42140 - Planted Mixed Pine	Poletimber Well	46.0	52	141-170	This stand is a mix of jack pine and red pine. There is some aspen mixed in as well, mainly in a pocket on the west side. The red pine was interplanted in the fall of 1965 (42 acres, planting from #93).
58	6121 - Tamarack	Sapling Well	12.0	35	Unspecified	



Stand	Cover Type	Acres	Managed Site	General Comments:
2	6225 - Bog	1.1	No	
3	6225 - Bog	1.3	No	
5	6224 - Treed Bog	159.5	No	
13	622 - Lowland Shrub	48.0	No	
16	500 - Water	1.5	No	Spring fed pond.
23	6229 - Mixed lowland shrub	11.2		Seed tree harvest in 2013: TS#103-10-01. This stand occurs on a slight rise in the surrounding swamp of only 1-2 feet difference in elevation.
24	6224 - Treed Bog	120.0	No	
29	6224 - Treed Bog	25.6	No	
37	6232 - Wet Prairie	5.5	No	Cold water tributary of the West Branch Creek flows through this stand.
39	6224 - Treed Bog	1.0	No	
46	6225 - Bog	6.9	No	
48	122 - Road/Parking Lot	2.9	No	Perch Lake Road
50	6225 - Bog	4.6	No	
57	6224 - Treed Bog	16.1	No	
59	6222 - Shrub-Carr	4.8	No	
400	3203 - Upland Blueberry	3.1	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
401	330 - Low-Density Trees	2.0	Yes	<p>Formerly this site was used as a garbage dump for local camp owners, etc. A trench would be dug and used till it was full, then a new trench would be dug (by the Township)? It was closed by the 1970's? exact date unknown. Prior to that, it has been heard that Victor Makela had his logging camps here in the 30's or 40's? They used frozen winter logging roads and on the aerial photos the roads are still visible extending all the way to Republic where they loaded railroad cars with pulpwood. Victor's son Unto was also a large jobber in the area. We have many gravel permits issued to the Marquette Co Rd Commission during the 1960's for the SWNW of Sec. 33. This site is pretty sandy, unless that's actually what the County took was road sand for winter sanding of the highways.</p>