Natural Community Surveys of State Forest Lands - 2022



Prepared by: Joshua G. Cohen

Michigan Natural Features Inventory P.O. Box 13036 Lansing, MI 48901-3036

For: Michigan Department of Natural Resources Forest Resources Division

September 30, 2022

Report Number 2022-25







Watson Swamp rich conifer swamp, Traverse City Forest Management Unit. Photo by Joshua G. Cohen.

Suggested Citation:

Cohen, J.G. 2022. Natural Community Surveys of State Forest Lands 2022. Michigan Natural Features Inventory. Report Number 2022-25, Lansing, MI. 69 pp.

Cover Photo: Tokar's Patterned Fen, Newberry Forest Management Unit. Photo by Joshua G. Cohen

Copyright 2022 Michigan State University Board of Trustees. Michigan State University Extension programs and materials are open to all without regard to race, color, natural origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status.

Funding for this project was provided by the Michigan Department of Natural Resources (DNR) Forest Resources Division (FRD). We express our sincere gratitude to the numerous DNR staff that helped administer and guide this project including Keith Kintigh, David Price, and Jeffrey Stamply. For their support and assistance throughout this project, we thank our MNFI colleagues, especially Helen Enander, Nicole Smith, Courtney Ross, Rebecca Rogers, Kraig Korroch, Ashley Adkins, Deb Richardson, Sarah Carter, and Brian Klatt.

Surveyed recently harvested Stand 61 for pale agoseris (*Agoseris glauca*, state threatened) and rough fescue (*Festuca altaica*, state threatened). Documented pale agoseris and rough fescue throughout Stand 61. Updated element occurrences for pale agoseris (EO ID 2091) and rough rescue (EO ID 5710) and modified boundaries of element occurrences.



Pale agoseris in Stand 61, Compartment 1. Photo by Joshua G. Cohen.



2016 aerial photograph of pale agoseris (EO ID 2091) polygon documented in Compartment 1.



Rough fescue in Stand 61, Compartment 1. Photo by Joshua G. Cohen.



2016 aerial photograph of rough fescue (EO ID 5710) polygon documented in Compartment 1.

Surveyed recently harvested Stands 4 and 30 for pale agoseris (*Agoseris glauca*, state threatened) and rough fescue (*Festuca altaica*, state threatened). Documented pale agoseris in Stand 4 and pale agoseris and rough fescue in Stand 30. Updated element occurrences for pale agoseris (EO ID 11284) and rough rescue (EO ID 5710) and modified boundaries of element occurrences.



Pale agoseris in Stand 4, Compartment 21. Photo by Joshua G. Cohen.



2016 aerial photograph of pale agoseris (EO ID 11284) polygon documented in Stand 4, Compartment 21.



Rough fescue in Stand 30, Compartment 21. Photo by Joshua G. Cohen.



2016 aerial photograph of rough fescue (EO ID 5710) polygon documented in Compartment 21.



Pale agoseris in Stand 30, Compartment 21. Photo by Joshua G. Cohen.



2016 aerial photograph of pale agoseris (EO ID 11284) polygon documented in Stand 30, Compartment 21.

Surveys in Compartment 39 focused on Stands 6, 20, 24, 34, and 51 and documented a new element occurrence dry-mesic northern forest (EO ID 26201). Rush Lake Pines is a C-ranked dry-mesic northern forest.



Rush Lake Pines (EO ID 26201). Photo by Joshua G. Cohen.



2016 aerial photograph of Rush Lake Pines dry-mesic northern forest (EO ID 26201).

Surveys in Compartment 136 focused on Stands 5, 8, and 209 and documented a new element occurrence dry-mesic northern forest (EO ID 26200). Little Ocqueoc River Pines is a C-ranked dry-mesic northern forest. In addition, a new northern goshawk (*Accipter gentilis*, state special concern) element occurrence (EO ID 26215) was documented in Stand 209.



Little Ocqueoc River Pines (EO ID 26200). Photo by Joshua G. Cohen.



2016 aerial photograph of Ocqueoc River Pines dry-mesic northern forest (EO ID 26200).



Northern goshawk (Accipter gentilis, state special concern) perched next to stick nest in Stand 209, Compartment 136.



2016 aerial photograph of northern goshawk (EO ID 26215) polygon documented in Stand 209, Compartment 136.

Survey targeted Landslide Fen northern fen (EO ID 18799) in Compartment 56. Following the 2022 survey, the northern fen was remapped with current imagery and the element occurrence rank of BC was confirmed.



Landslide Fen northern fen (EO ID 18799). Photo by Joshua G. Cohen.



2016 aerial photograph of Landslide Fen northern fen (EO ID 18799).

Survey targeted Webb Road Mesic Forest mesic northern forest (EO ID 16067) in Compartment 102. Following the 2022 survey, the mesic northern forest was remapped with current imagery and the element occurrence rank of D was confirmed.



Webb Road Mesic Forest mesic northern forest (EO ID 16067). Photo by Joshua G. Cohen.



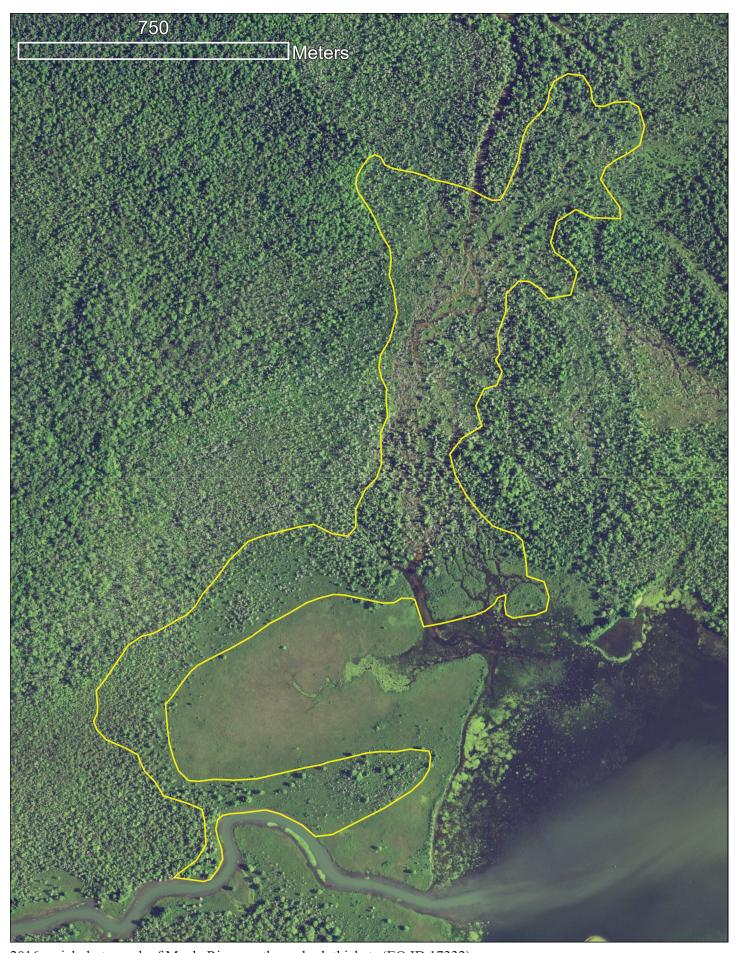
2016 aerial photograph of Webb Road Mesic Forest mesic northern forest (EO ID 16067).

Survey targeted Maple River northern shrub thicket (EO ID 17332) in Compartment 130. Following the 2022 survey, the northern shrub thicket was remapped with current imagery and the element occurrence rank of BC was confirmed.



Maple River northern shrub thicket (EO ID 17332). Photos by Joshua G. Cohen.





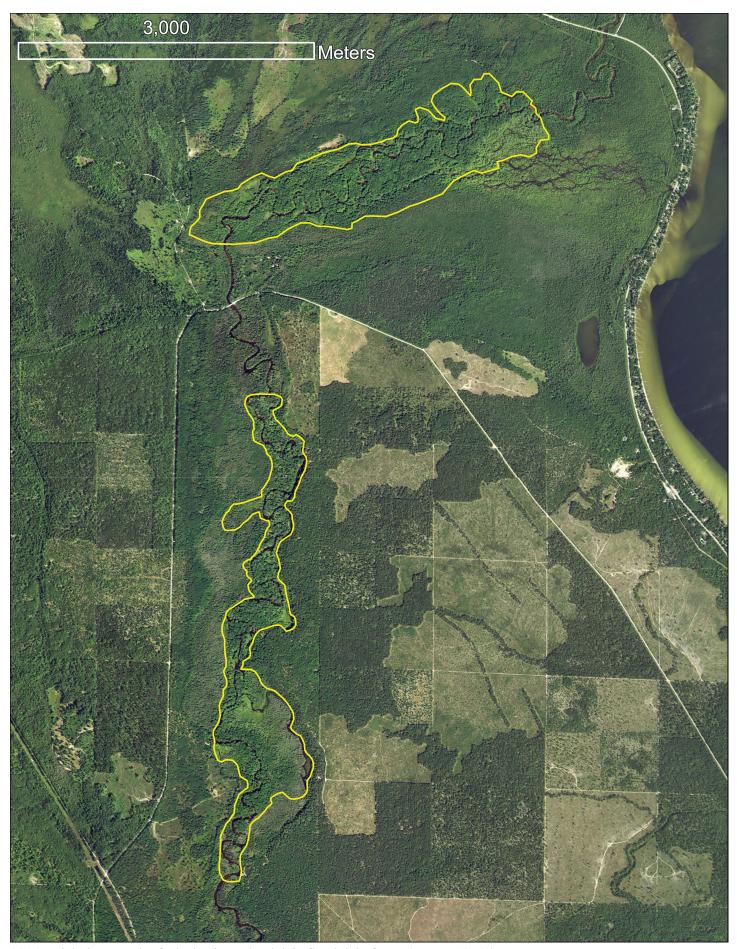
2016 aerial photograph of Maple River northern shrub thickets (EO ID 17332).

Survey targeted Black River Floodplain floodplain forest (EO ID 18760) in Compartment 207. Following the 2022 survey, the element occurrence rank of BC was confirmed. In additon, 14 wood turtles (*Glyptemys insculpta*, state special concern) were observed along the Black River and wood turtle EO ID 2114 was updated.

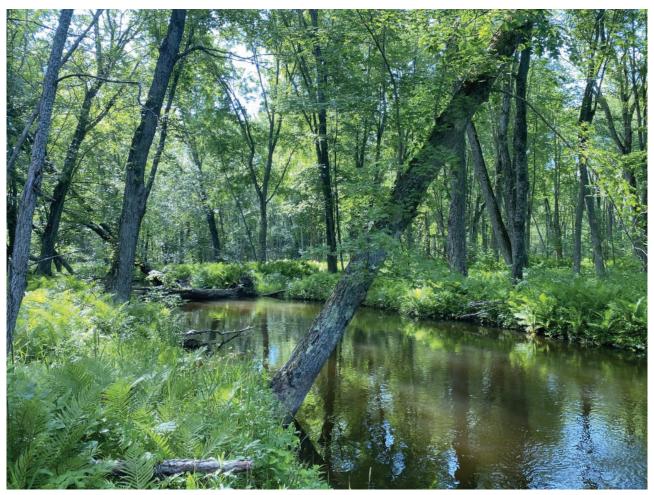


Black River Floodplain floodplain forest (EO ID 18760). Photos by Joshua G. Cohen.





2016 aerial photograph of Black River Floodplain floodplain forest (EO ID 18760).



The Black River Floodplain provides critical habitat for wood turtle (*Glyptemys insculpta*). Photos by Joshua G. Cohen.

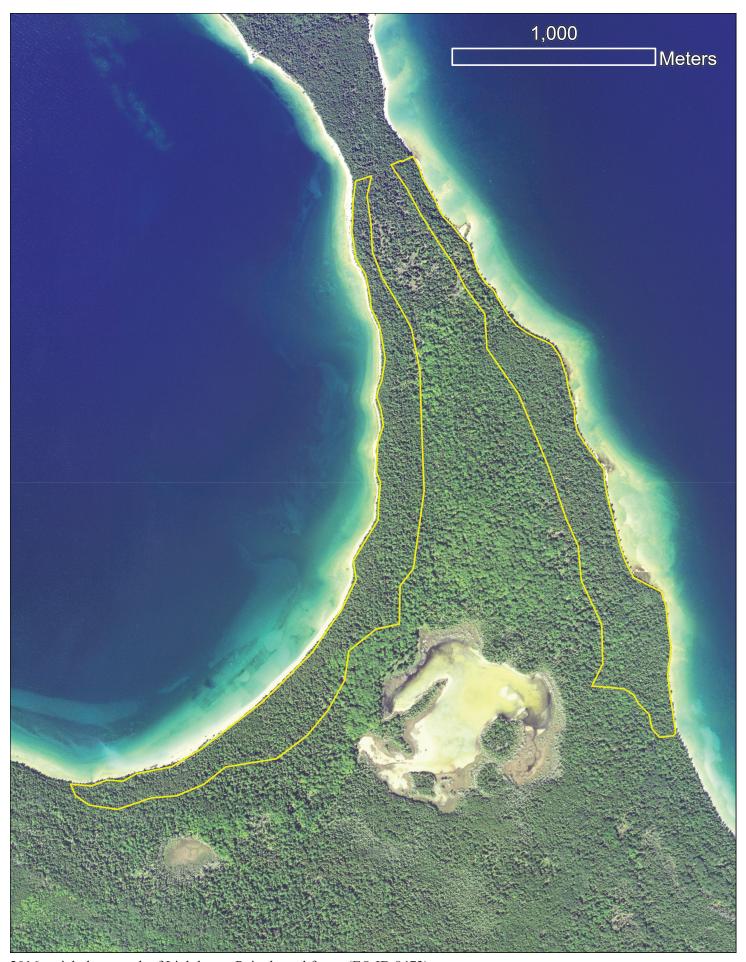


Natural Community Surveys of State Forest Lands 2022 Page-15

Surveys targeted five known element occurrences within the Bois Blanc Island compartment: boreal forest (EO ID 8473), limestone cobble shore (EO ID 17856), mesic northern forest (EO ID 9668), rich conifer swamp (EO ID 317), and rich conifer swamp (EO ID 17855). The element occurrence ranks for the Lighthouse Point mesic northern forest (EO ID 9668, AB rank), Lime Kiln Point limestone cobble shore (EO ID 17856, B rank), Central Cedar Swamp (EO ID 317, AB rank), and Lime Kiln Point rich conifer swamp (EO ID 17855, AB rank) were confirmed. The EO rank for the Lighthouse Point boreal forest (EO ID 8473) was downgraded from an A to an AB. Following the 2022 surveys the Central Cedar Swamp and Lime Kiln Point rich conifer swamps were remapped with current imagery.



Lighthouse Point boreal forest (EO ID 8473). Photo by Joshua G. Cohen.



2016aerial photograph of Lighthouse Point boreal forest (EO ID 8473).

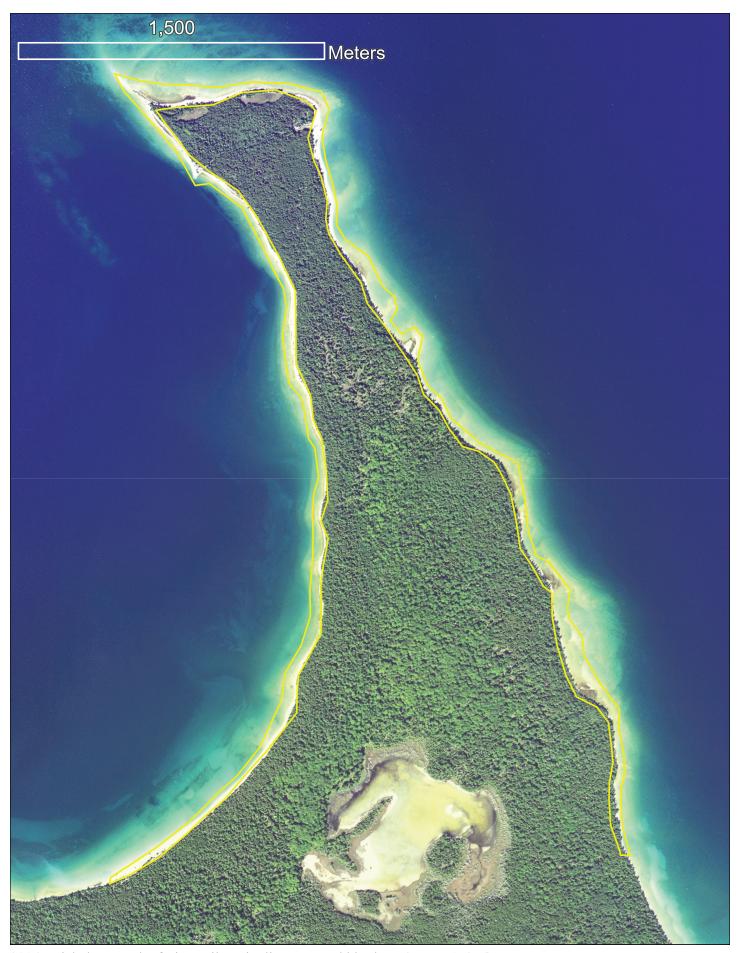


Lighthouse Point boreal forest (EO ID 8473). Photo by Joshua G. Cohen.



Lime Kiln Point limestone cobble shore (EO ID 17855). Photo by Joshua G. Cohen.

Natural Community Surveys of State Forest Lands 2022 Page - 18



2016 aerial photograph of Lime Kiln Point limestone cobble shore (EO ID 17856).



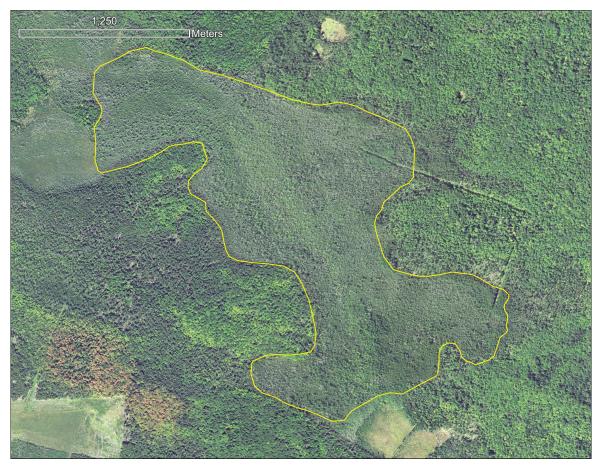
2016 aerial photograph of Lighthouse Point mesic northern forest (EO ID 9668).



Lighthouse Point mesic northern forest (EO ID 9668). Photo by Joshua G. Cohen.



Central Cedar Swamp rich conifer swamp (EO ID 317). Photo by Joshua G. Cohen.



2016 aerial photograph of Central Cedar Swamp rich conifer swamp (EO ID 317).



2016 aerial photograph of Lime Kiln Point rich conifer swamp (EO ID 17855).



Lime Kiln Point rich conifer swamp (EO ID 17855). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page-23

Grayling Compartments 173 and 174 and Traverse City Compartment 107

Survey targeted potential pine barrens in Grayling Compartments 173 (Stand 4) and 174 (Stand 2) and Traverse City Compartment 107 (Stand 108). Documented a new element occurrence pine barrens (EO ID 26199) that occurs in portions of Grayling Compartment 173 (Stand 4) and Traverse City Compartment 107 (Stand 108). Clear Lake Barrens is a C-ranked pine barrens.



Clear Lake Barrens pine barrens (EO ID 26199). Photo by Joshua G. Cohen.



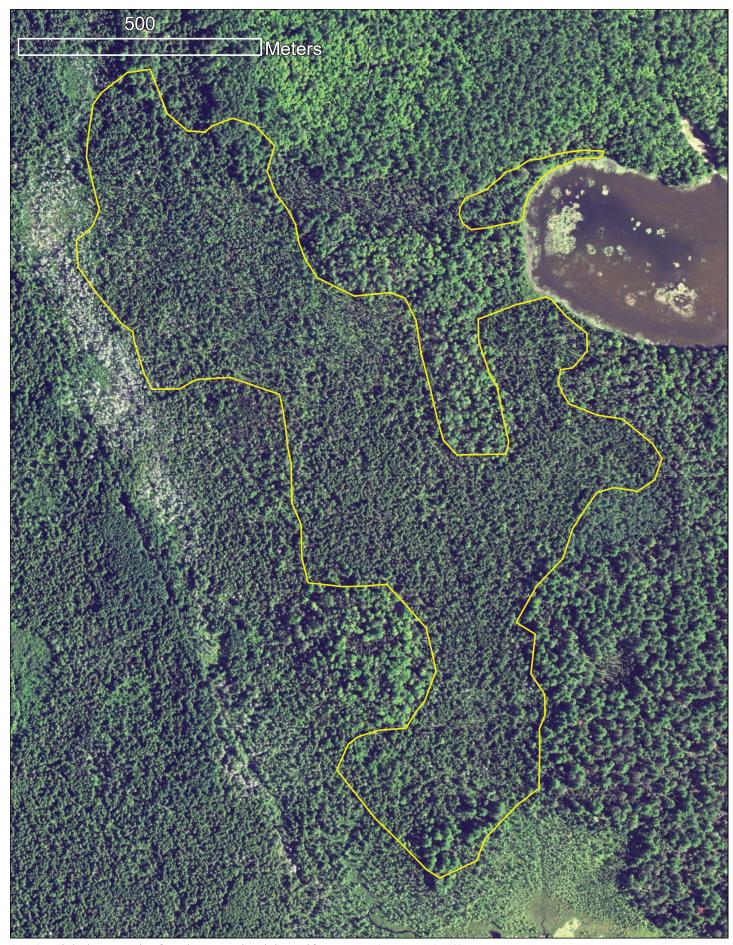
2016 aerial photograph of Clear Lake Barrens pine barrens (EO ID 26199).

Gwinn Compartment 49

Survey targeted Anderson Lake rich conifer swamp (EO ID 14542, C rank) in Compartment 49. Following the 2022 survey, the element occurrence rank of C was confirmed.



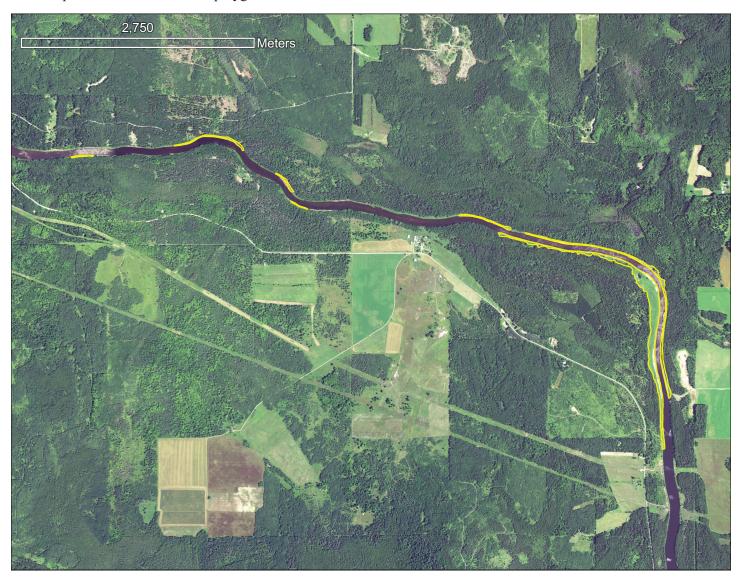
Anderson Lake rich conifer swamp (EO ID 14542). Photo by Joshua G. Cohen.



2016 aerial photograph of Anderson Lake rich conifer swamp (EO ID 14542).

Gwinn Compartment 87

Survey targeted Escanaba River North alvar (EO ID 2492, BC rank) in Compartment 87. Following the 2022 survey, the alvar was remapped with current imagery and the element occurrence rank of BC was confirmed. The survey resulted in the incorporation of six additional polygons to the alvar element occurrence.



2016 aerial photograph of Escanaba River North alvar (EO ID 2492, BC rank).





Escanaba River North alvar (EO ID 2492, BC rank). Photos by Joshua G. Cohen.



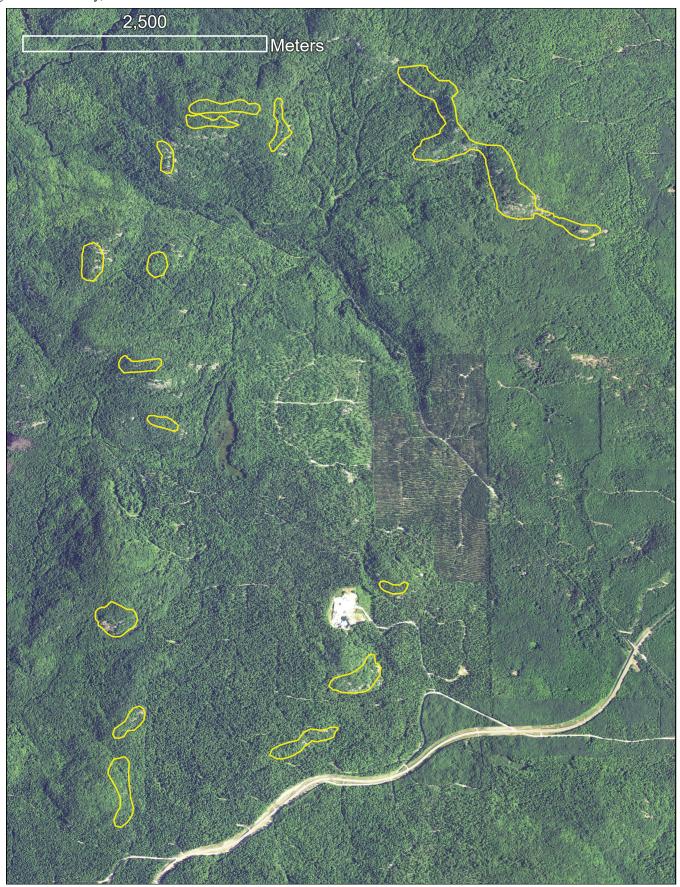
Escanaba River North alvar (EO ID 2492, BC rank). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 28

Gwinn Compartment 205

Survey targeted Powell Township Outcrops granite bedrock glade (EO ID 2171, AB rank) in Compartment 205. Following the 2022 survey, the element occurrence rank of AB was confirmed.



2016 aerial photograph of Powell Township Outcrops granite bedrock glade (EO ID 2171).



Powell Township Outcrops granite bedrock glade (EO ID 2171). Photos by Joshua G. Cohen.



Newberry Compartment 68

Survey targeted Paradise Fen poor fen (EO ID 18842, B rank) in Compartment 68. Following the 2022 survey, the element occurrence rank of B was confirmed.



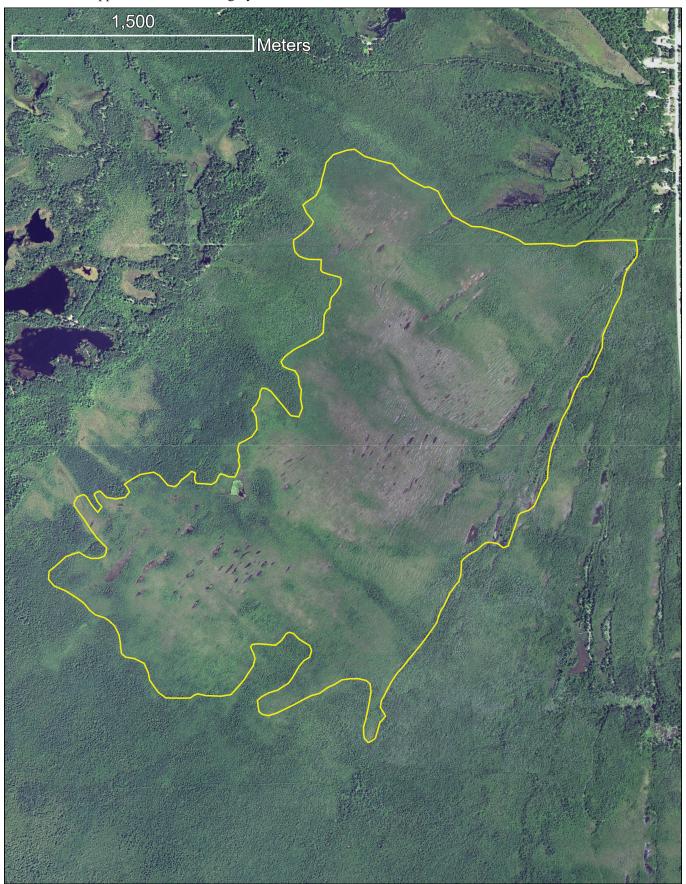
Paradise Fen poor fen (EO ID 18842, B rank). Photo by Joshua G. Cohen.



2016 aerial photograph of Paradise Fen poor fen (EO ID 18842).

Newberry Compartment 69

Survey targeted Tokar's Patterned Fen (EO ID 16871, AB rank) in Compartment 69. Following the 2022 survey, the patterned fen was remapped with current imagery and the element occurrence rank of AB was confirmed.



2016 aerial photograph of Tokar's Patterned Fen (EO ID 16871).



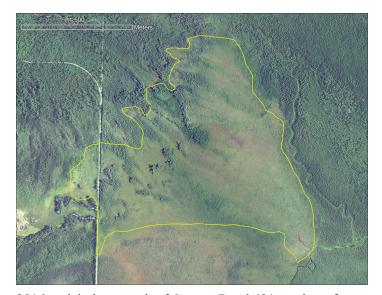
Tokar's Patterned Fen (EO ID 16871). Photos by Joshua G. Cohen.



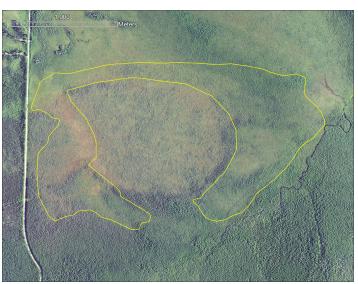
Natural Community Surveys of State Forest Lands 2022 Page-33

Newberry Compartment 99

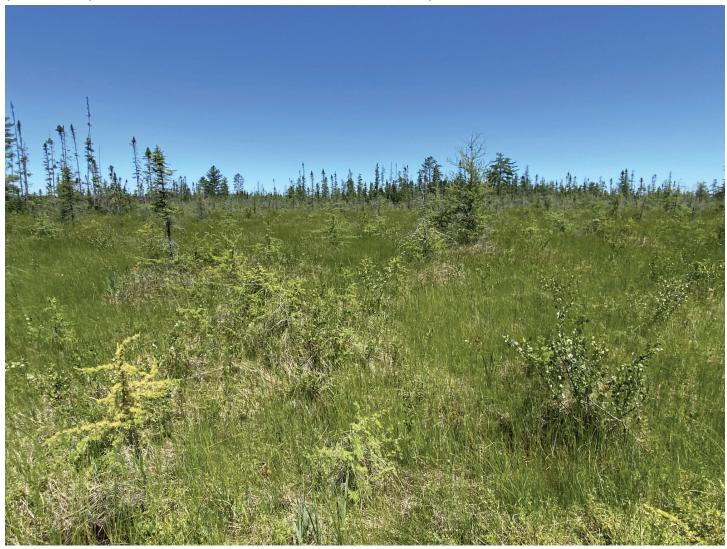
Survey targeted County Road 421 northern fen (EO ID 18680, AB rank) and poor fen (EO ID 18679, B rank) in Compartment 99. Following the 2022 survey, the northern fen and poor fen were remapped with current imagery and the element occurrence ranks were confirmed.



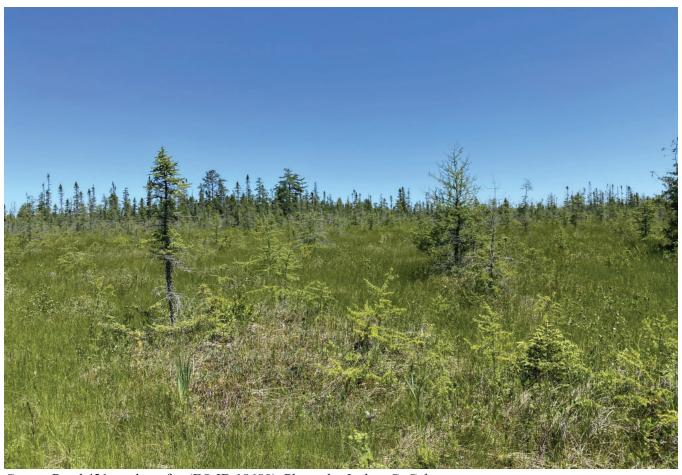
2016 aerial photograph of County Road 421 northern fen (EO ID 18680).



2016 aerial photograph of County Road 421 poor fen (EO ID 18679).



County Road 421 northern fen (EO ID 18680). Photo by Joshua G. Cohen.



County Road 421 northern fen (EO ID 18680). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page-35



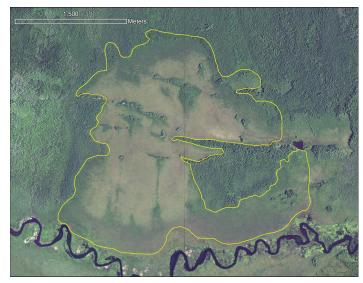
County Road 421 poor fen (EO ID 18679). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 36

Newberry Compartment 105

Surveys in Compartment 105 focused on the large peatland complex corresponding to Stand 51 and documented a new element occurrence northern fen (EO ID 26196) and dry-mesic northern forest (EO ID 26197). Pickleman's Fen is an Aranked northern fen. Pickleman's Pines is a B-ranked dry-mesic northern forest.



2016 aerial photograph of Pickleman's fen (EO ID 26196).



2016 aerial photograph of Pickleman's dry-mesic northern forest (EO ID 26197)



Pickeleman's Fen northern fen (EO ID 26196). Photo by Joshua G. Cohen.



Pickeleman's Fen northern fen (EO ID 26196). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 38



Pickeleman's Pines dry-mesic northern forest (EO ID 26197). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page-39

Roscommon Compartment 71

Survey targeted potential pine barrens in Roscommon Compartment 71, Stand 55. Documented a new element occurrence pine barrens (EO ID 26198). South Creek Barrens is a B-ranked pine barrens that recently burned.



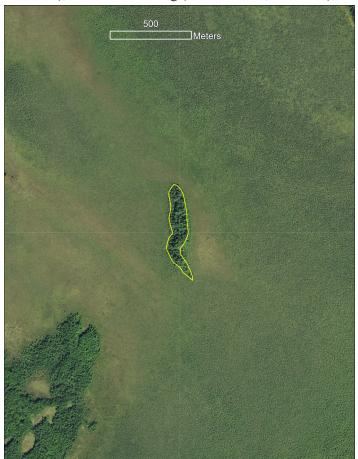
South Creek Barrens pine barrens (EO ID 26198). Photo by Joshua G. Cohen.



2016 aerial photograph of South Creek Barrens pine barrens (EO ID 26198).

Roscommon Compartment 84

Surveys targeted three known element occurrences within the compartment: dry-mesic northern forest (EO ID 18783), muskeg (EO ID 18785), and poor fen (EO ID 18787). The element occurrence ranks for Nine Mile Pines (EO ID 18783, BC Rank), Nile Mile Muskeg (EO ID 18785, AB Rank), and Nine Mile Fen (EO ID 18787, AB Rank) were confirmed.



2016 aerial photograph of Nine Mile Pines dry-mesic northern forest (EO ID 18783).



2016 aerial photograph of Nine Mile Muskeg (EO ID 18785)





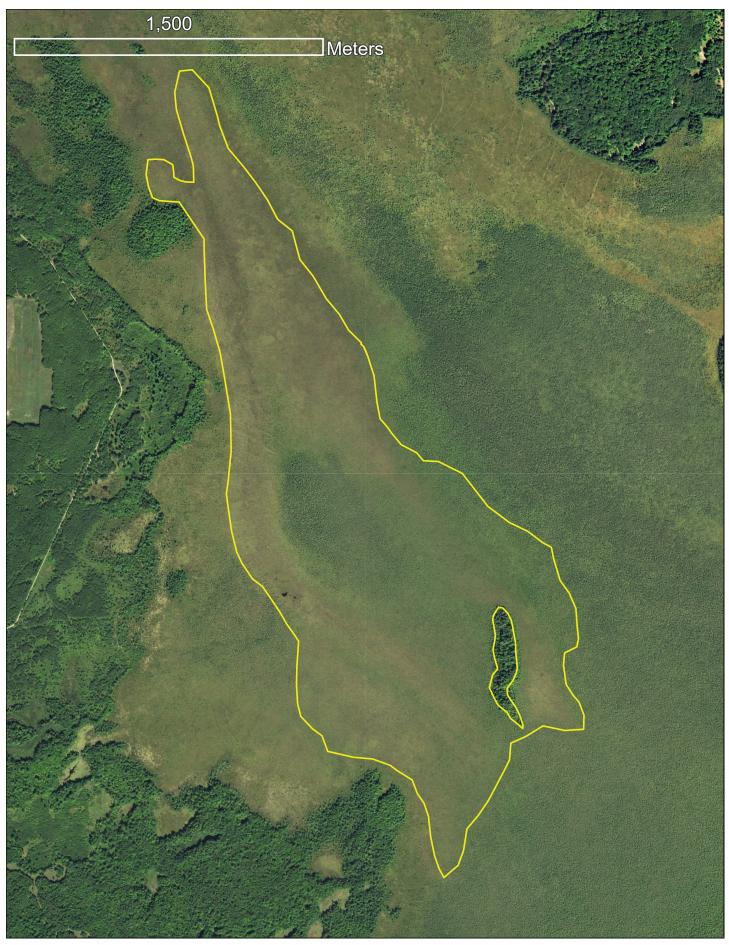
Nine Mile Pines dry-mesic northern forest (EO ID 18783). Photos by Joshua G. Cohen.



Nine Mile Muskeg (EO ID 18785). Photo by Joshua G. Cohen.



Nine Mile Fen (EO ID 18787). Photo by Joshua G. Cohen.



2016 aerial photograph of Nine Mile Fen (EO ID 18787)

Surveys in Compartment 9 on Drummond Island focused on mesic northern forest in Stand 14. Documented a new element occurrence mesic northern forest (EO ID 26212). Spring Pond Woods is a C-ranked mesic northern forest.

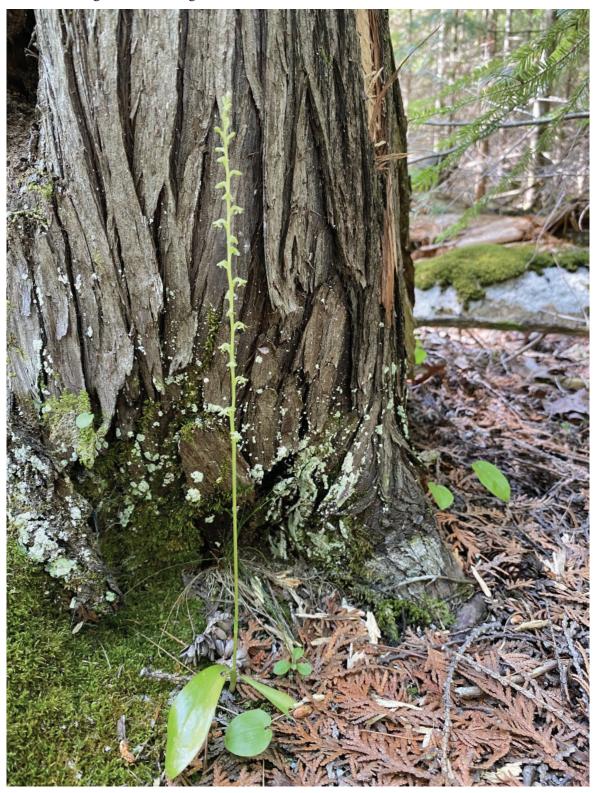


2016 aerial photograph of Spring Pond Woods mesic northern forest (EO ID 26212).



Spring Pond Woods mesic northern forest (EO ID 26212). Photo by Joshua G. Cohen.

Surveys in Compartment 11 on Drummond Island focused on boreal forest and associated rare plants. Reconfirmed an existing population of Alaska orchid (*Platanthera unalascensis*, state special concern) in Stand 19 and updated the corresponding Alaska orchid element occurrence (EO ID 38). In addition, documented a new element occurrence boreal forest (EO ID 26213) and limestone bedrock glade (EO ID 26214). Zeerip Boreal Forest is a B-ranked boreal forest. Black Rock Point Glade is a C-ranked granite bedrock glade.



Alaska orchid (*Platanthera unalascensis*) documented in high-quality boreal forest in Stand 19. Photo by Joshua G. Cohen.



2016 aerial photograph of Alaska orchid (EO ID 38) polygon in Stand 19, Compartment 11.



Zeerip Boreal Forest (EO ID 26213). Photo by Joshua G. Cohen.



2016 aerial photograph of Zeerip Boreal Forest (EO ID 26213).



Zeerip Boreal Forest (EO ID 26213). Photo by Joshua G. Cohen.



2016 aerial photograph of Black Rock Point Glade limestone bedrock glade (EO ID 26214).



Black Rock Point Glade limestone bedrock glade (EO ID 26214). Photos by Joshua G. Cohen.



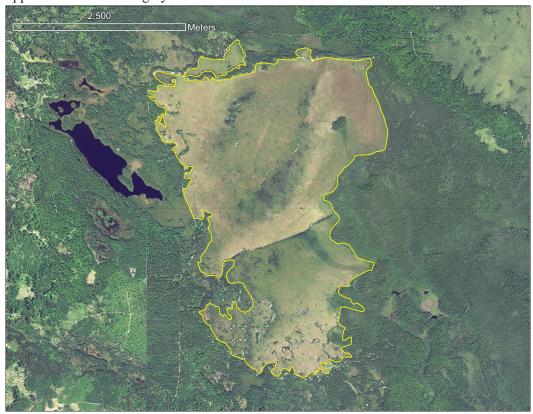
Natural Community Surveys of State Forest Lands 2022 Page-49

Remapped Ryerse Lake bog (EO ID 11717) using current imagery.



2016 aerial photograph of Ryerse Lake bog (EO ID 11717).

Survey targeted Cranberry Lake muskeg (EO ID 18826, B rank) in Compartment 170. Following the 2022 survey, the muskeg was remapped with current imagery and the element occurrence rank of B was confirmed.



2016 aerial photograph of Cranberry Lake muskeg (EO ID 18826).



Cranberry Lake muskeg (EO ID 18826). Photo by Joshua G. Cohen.



Cranberry Lake muskeg (EO ID 18826). Photos by Joshua G. Cohen.



Shingleton - The Lake Michigan Dune and Swale Complex Acquisition

Surveyed new land acquisition in Shingleton Forest Management Unit along northern Lake Michigan shoreline on the Garden Peninsula. Documented eight new natural community element occurrences: boreal forest (EO ID 26206, BC rank), Great Lakes marsh (EO ID 26207, C rank), limestone bedrock glade (EO ID 26209, BC rank), limestone bedrock lakeshore (EO ID 26210, B rank), limestone cobble shore (26211, B rank), northern fen (EO ID 26208, BC rank), open dunes (EO ID 26204, C rank), and wooded dune and swale complex (EO ID 26205, C rank). Documented two new rare plant element occurrences: Pitcher's thistle (*Cirsium pitcheri*, state and federally threatened) (EO ID 26203) and Lake Huron tansy (*Tanacetum huronense*, state threatened) (EO ID 26217). In addition, documented population of dwarf lake iris (*Iris lacustris*, state and federally threatened) and updated dwarf lake iris element occurrence (EO ID 2811).



2016 aerial photograph of Little Sucker Lake boreal forest (EO ID 26206).



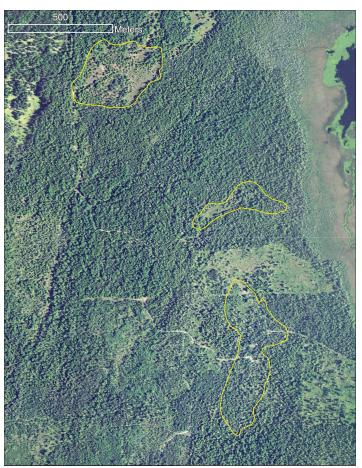
Little Sucker Lake boreal forest (EO ID 26206). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 54



2016 aerial photograph of Little Sucker Lake Great Lakes marsh (EO ID 26207).



2016 aerial photograph of Little Sucker Lake limestone bedrock glade (EO ID 26209)



Little Sucker Lake Great Lakes marsh (EO ID 26207). Photo by Joshua G. Cohen.



Little Sucker Lake limestone bedrock glade (EO ID 26209). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 56



2021 aerial photograph of Little Sucker Lake limestone bedrock lakeshore (EO ID 26210).



2021 aerial photograph of Little Sucker Lake limestone cobble shore (EO ID 26209)



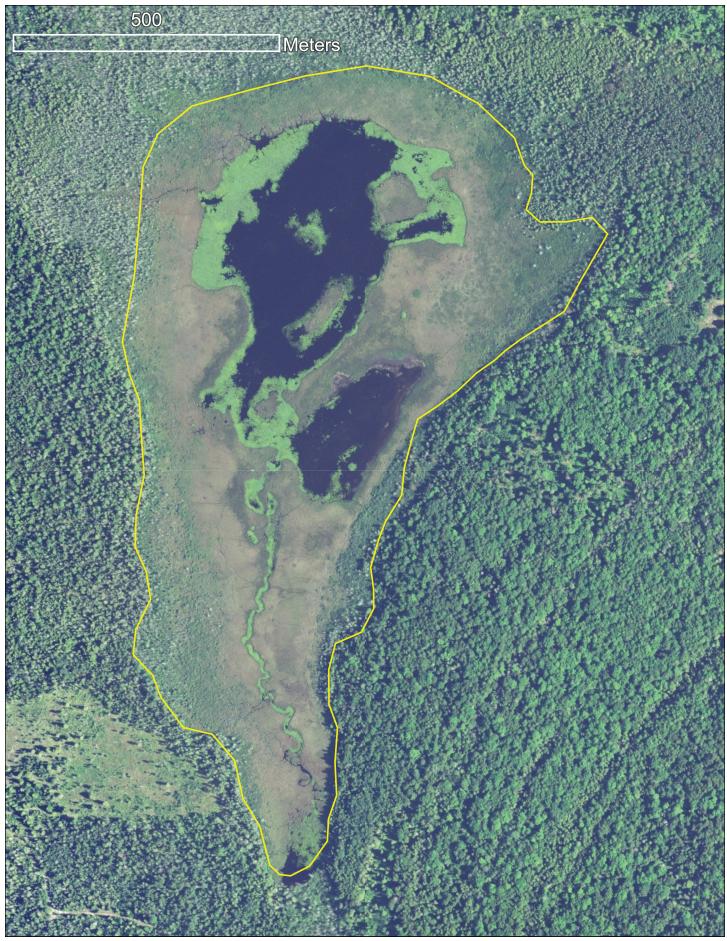
Little Sucker Lake limestone bedrock lakeshore (EO ID 26210). Photo by Joshua G. Cohen.



Little Sucker Lake limestone bedrock lakeshore (EO ID 26210). Photo by Joshua G. Cohen.



Little Sucker Lake limestone cobble shore (EO ID 26211). Photo by Joshua G. Cohen.



2016 aerial photograph of Little Sucker Lake northern fen (EO ID 26208).



Little Sucker Lake northern fen (EO ID 26208). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 60



2021 aerial photograph of Little Sucker Lake open dunes (EO ID 26204).



2016 aerial photograph of Little Sucker Lake wooded dune and swale complex (EO ID 26205)



Little Sucker Lake open dunes (EO ID 26204). Photo by Joshua G. Cohen.



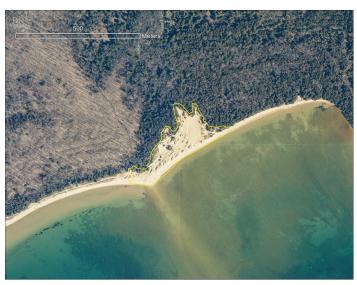
Little Sucker Lake wooded dune and swale complex (EO ID 26205). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 62



2016 aerial photograph of new Pitcher's thistle element occurrence (EO ID 26203).



2021 aerial photograph of new Lake Huron tansy element occurrence (EO ID 26217).



2016 aerial photograph of dwarf lake iris (EO ID 2811) polygon in the Lake Michigan Dune and Swale Complex Acquisition.



Lake Huron tansy (EO ID 26217) was documented in the low foredune. Photo by Joshua G. Cohen.



Pitcher's thistle (EO ID 26203) occurs in the open dunes and along the low foredune. Photo by Joshua G. Cohen.



Dwarf lake iris (EO ID 2811) occuring along the margin of the boreal forest. Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page-65



Dwarf lake iris (EO ID 2811) is also locally abundant in the limestone bedrock glade. Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 66

Traverse City Compartment 119

Survey targeted Flowing Well rich conifer swamp (EO ID 18997) in Compartment 119. Following the 2022 survey, the swamp was remapped with current imagery and downgraded from a BC rank to a C rank.



2016 aerial photograph of Flowing Well Swamp rich conifer swamp (EO ID 18997).



Flowing Well Swamp rich conifer swamp (EO ID 18997). Photo by Joshua G. Cohen.

Traverse City Compartment 124

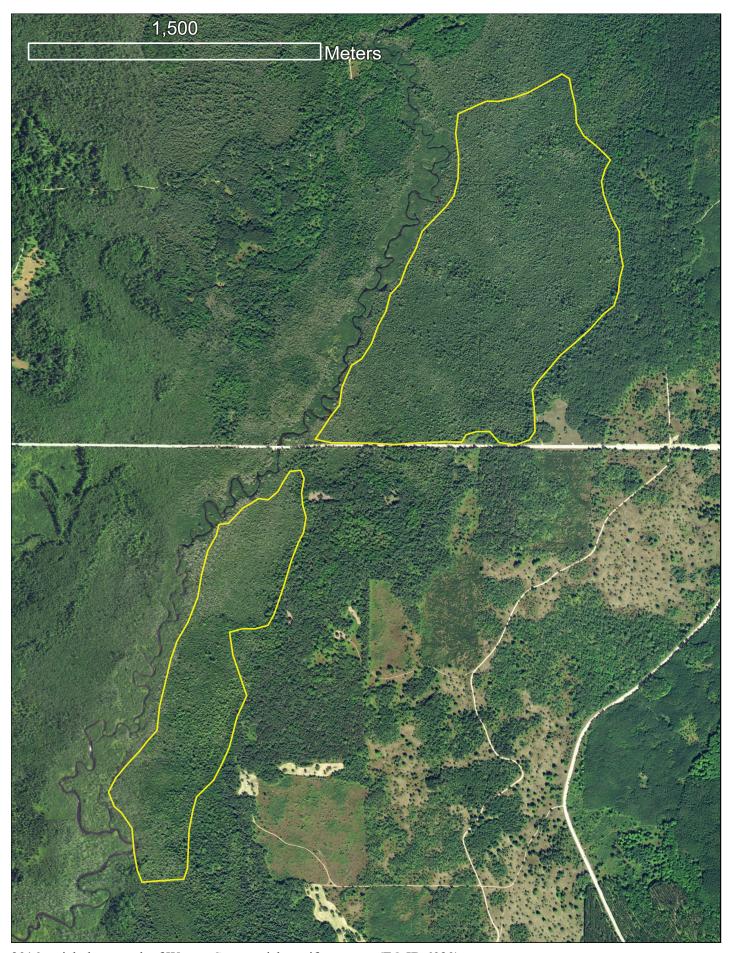
Survey targeted Watson Swamp rich conifer swamp (EO ID 6020) in Compartment 124. Following the 2022 survey, the swamp was downgraded from an AB rank to a B rank.



Watson Swamp rich conifer swamp (EO ID 6020). Photos by Joshua G. Cohen.



Natural Community Surveys of State Forest Lands 2022 Page - 68



2016 aerial photograph of Watson Swamp rich conifer swamp (EO ID 6020).