Forestry Practice Plan for Sparta Mountain Wildlife Management Area (SMWMA)

This practice plan addresses a general activity provided for in year 2018-2019 of the management schedule within the *Sparta Mountain Forest Stewardship Plan*, approved March 13, 2017

Practice Plan Prepared by: Don Donnelly, Forester
New Jersey Audubon Society
1024 Anderson Road, Port Murray, NJ 07865
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Practice Plan being submitted on behalf of the
New Jersey Department of Environmental Protection
Division of Fish and Wildlife, PO Box 420 MC 501-03, Trenton, NJ 08625

Property parcel data below as referenced in the approved Sparta Mountain Forest Stewardship Plan and on the original property deeds.
Some township block and lot designations may have since changed.

Sparta Township Sussex County	Hardyston Township Sussex County	Borough of Ogdensburg Sussex County
Block 1, Lots 1.02, 1.03 & 2	Block 35, Lot 18	Block 1, Lot 1
Block 2, Lot 1	Block 59, Lot 1	Block 1, Lot 3
Block 3, Lots 1, 12, 13, 14 & 21	Block 60, Lot 1	Block 11, Lot 35
Block 7, Lots 2, 2.01, 16,17 & 90	Block 60, Lot 1.03, 2.01, 2.02, 3.02, 17	

Purpose

Using the same management objectives that were outlined in the approved SMWMA Forest Stewardship Plan (FSP) and in all prior operational plans (i.e. *practice plans*) for this property, the purpose of this project is to regenerate patches of maturing forest by opening the canopy sufficiently for intolerant and mid-tolerant vegetation that is associated with the central hardwood oak-hickory forest type to germinate. Of primary importance is the development of early seral stage vegetation other than trees, including a variety of shrubs, sedges and forbs. The increased plant diversity and low-level structure will promote biodiversity and sustain a complexity of habitat types in the region while helping to perpetuate species that co-evolved with the ephemeral nature of stand replacement natural disturbances. Many such species have become increasingly uncommon in the northeast as a consequence of land use changes following European settlement, along with other subsequent anthropogenic influences on the forest. The early successional habitat being targeted as an outcome of this project will provide necessary breeding and/or foraging habitat for over 60 different bird species, including the state endangered golden-winged warbler, which is a focal species for recovery by many governmental agencies

including the NJDEP Division of Fish and Wildlife. Other mammals and reptiles are also expected to benefit under these objectives.

This project is located within Stand 8 of the master FSP, and the overall size of the treatment area falls within the acreage range prescribed in the FSP management schedule. The specific location for this project was selected through a series of steps to minimize conflicts with other resources. An initial screening was completed by a NJDEP Endangered and Non-game Species Program (ENSP) biologist using the NJDEP biotics database to buffer rare plant locations in accordance with distances agreed upon by the Office of Natural Lands Management (ONLM). That was followed by placing a transition area buffer along all mapped wetland edges to be avoided. The remining land mass within Stand 8 was then evaluated to determine the best access points to avoid creating new roads to reach the project site. This yielded three potential polygons amounting to roughly 12-acres each. Those polygons were shared with outside parties like the Highlands Coalition, who requested to participate in the planning phase of the project. The Coalition selected the southernmost polygon adjacent to the Rock Lodge Road extension as their preferred choice to implement this year's project. Although no supporting information was given for why they chose that location, that polygon was used in the spirit of cooperation. The project boundary was then delineated inside that polygon with adjustments made to maintain an approximate 50' uncut buffer along the access road that serves dual purpose as part of the Highlands hiking trail, while also maintaining a roughly 100' buffer to remnants of an old foundation where a spring seep occurs. The final project area covers nine acres of appropriate vegetation for cultivating the desired habitat type. The project boundary is defined in the field by orange paint marks on the boundary trees facing into the harvest block. Within the project area are *leave* trees that are also designated with orange tree paint visible from all directions.

Project Site Description

Location:
The project area is within Sparta Township situated approximately one mile west of Lake Stockholm and roughly a half mile north of Ryker Lake. The exact site is about 100' south of the municipal boundary with Hardyston Township (see attached project location map).

Size:
The project area is 9.1 acres (see attached maps).

Access:
The project will be accessed from Rock Lodge Road in Hardyston Township, which is a public thoroughfare. At the end of Rock Lodge Road is a cul-de-sac where a pre-existing dirt road continues into the woods, eventually meeting the project site (see attached access map). Utilizing this road will alleviate the need to construct new access or to cross through any sensitive or regulated features. This method of access was used in 2015 to complete a similar project on the adjacent NJ Audubon property. In that instance, logs were transported from the project site to a

staging area located alongside the cul-de-sac where the blacktop ends. That log staging area is within the SMWMA boundary, and is the same area proposed for this project. When used in 2015 to complete a similar size project, the access road and log staging area resulted in zero complaints by the local community of conflicts or problems.

This dirt road, like many in SMWMA, is visible in the 1930s aerial images and has remained generally stable throughout years of use because of the high rock content in the soil. Since the road has not been formerly maintained, there are minor sections that have been recently rutted or damaged by vehicle use. It may be possible to repair these degraded sections during the project by installing minor water diversions to improve drainage and lessen ongoing erosion issues. A stone tracking pad will be installed at the interface between the cul-de-sac and the woods road to eliminate excessive mud being transported onto the pavement.

Topography and Soils:
The project sits on a predominantly north facing hillside with slopes <10%. As per USDA Natural Resources Conservation Service (NRCS) soil mapping, the primary soil type is Chatfield-Hollis-Rock Outcrop Complex (ChkC), with lesser amounts of Rockaway Chatfield – Rock Outcrop Complex (RokD). These are moderately productive soils that contain a relatively high proportion of stone fragments of variable sizes, which helps to mitigate the erosion and compaction hazards that can arise when using equipment (see attached soil map). There are no prominent ridges or coves where soil depth would change dramatically. There are several old charcoaling pits visible within the project boundary, providing some evidence of the prior tree harvesting and resource extraction activities that occurred in the area.

Equipment to be Used:

1) Skidder and/or mechanical felling equipment similar in size to typical construction equipment such as a backhoe or excavator. The equipment will be offloaded from a trailer at the cul-de-sac on Rock Lodge Road at the beginning of the project, then left on-site during the project and hauled out on a trailer at the end of the project. Additionally, a tractor sized forwarder may be utilized to transport logs to the staging area instead of skidding them on the access road.
2) Log transportation away from the staging area will be done using a truck that complies with municipal and NJ Department of Transportation (DOT) requirements; similar in weight capacity to the other vehicles commonly encountered on public roads such as garbage trucks, moving trucks and heating oil delivery vehicles. In total, log trucks will transport approximately 194 cords, or roughly 19-20 truckloads of logs, out of the access road onto Rock Lodge Road over the course of 2-12 months. All transportation vehicles and operators will be aware of and follow weight restrictions and operating rules for the roads they travel.

Wetlands:
The project boundaries were compared against NJDEP GIS 2012 wetland mapping, and the nearest mapped wetland is more than 150' away, which exceeds the maximum transition area buffer for *Exceptional Resource* wetlands. The entire project was also physically walked to field verify if unmapped wetlands exist within the boundary, and none were found. This project will have no effect on wetland resources (see attached access map for wetland locations).

Vernal Pools:
NJDEP GIS vernal pool data was also compared to the project boundaries. There are no certified vernal pools in the vicinity, and the nearest mapped potential vernal pool is greater than 400' from the project boundary to the south. The entire project was also physically walked to field verify if unmapped vernal pools exist, and none were found. This project will have no effect on vernal pools (see attached access map for vernal pool locations).

Streams and Water Bodies:
The project boundaries were compared against NJDEP GIS stream and water body layers, and there are no classified or unclassified water bodies within 300' of the project, which is the maximum width of a regulated riparian zone. Similarly, the project does not intersect with a flood hazard area. There are occasional points of concentrated water flow collecting along the access road, particularly during periods of high precipitation or after snow melt when ground water levels are elevated. Except in those specific locations identified by the ONLM where rare plants might be impacted by roadside disturbance, water diversions or other minor modifications will be done to improve drainage away from the roadbed when possible. A biologist from ENSP will clarify where the ONLM areas of concern are prior to the project commencing. Other than road improvements, this project will have no effect on water resources (see attached access map).

Rare Plants:
This author has no knowledge of rare plant locations as they pertain to this project. However, the project location and general activity parameters have already gone through the NJDEP Land Management Review (LMR) process, and as part of that process, the ONLM has determined that rare plants are buffered appropriately and will not be affected by the project. As stated above, a biologist from ENSP will clarify where the ONLM areas of concern are along the access road so that these locations can be protected during all phases of the project.

Rare Wildlife:
This author has no knowledge of rare wildlife locations as they pertain to this project. However, the project location and general activity parameters have already gone through the NJDEP Land Management Review (LMR) process, and as part of that process, the ENSP has determined that rare wildlife will not be affected by the project as long as the tree felling occurs between November 15th to March 31st.

Project Vegetation Description

The vegetation within the 9-acre project area was re-inventoried in January 2020 for site-specific data. Eight inventory plots were measured using a 10 BAF prism, and the resulting data was processed using a 90% confidence. The mean basal area is 116.3 plus or minus 16.9 square feet per acre (14.5% of mean). The area in question is part of a mixed upland oak stand and the project site is dominated by red oak in the co-dominant size class. It is considered a small – medium sawtimber size stand with co-dominant stems ranging from 12"-20" DBH. The average medial diameter is 13.9 inches. Red oak accounts for 68% of the stocking, and other tree species that are present include sugar maple, chestnut oak, hickories (mixed spp.), serviceberry, black oak, red maple, black birch, white oak, sassafras, white ash, yellow birch and hop hornbeam. The sapling size classes is mostly serviceberry, mixed maples and hickory. The effective stand age is 80 years old. Predominant shrubs found here are witch hazel and huckleberries, and the overall shrub component is not very diverse. Because this inventory was conducted in the dormant season, a comprehensive ground cover evaluation was not entirely possible. The forest floor is covered with the current year leaf-drop without much other vegetation visible. Occasional patches of sedges and sporadic woodland ferns were the only species encountered with any regularity. Common wintergreen was the only other herbaceous plant noted. Stocking tables for the project are included on pages 7-11.

Treatment Description

As per the approved FSP, the sequential treatment for Stand 8 during this period calls for implementing a seed tree harvest to create early successional habitat. This will be accomplished by retaining an approximate average of 20 sq. ft of BA/acre across the 9-acre site and removing the remaining stems. This will translate to retaining roughly 10 trees per acre, which will primarily be co-dominant or dominant trees that are of good vigor. In some instances, trees that are of poor vigor but have high wildlife value will be retained (i.e. stems with advanced decay and cavities). Species that are underrepresented in the stand may also be retained for diversity purposes even if they are of poor vigor and unlikely to have extended longevity on the site. Additionally, white ash stems that do not already exhibit characteristics of EAB infestation may be preserved to retain genetic diversity in the event those individuals are resistant to the insect.

The 9.1-acre project is delineated in the field using orange dots of paint on the boundary trees facing the project interior, and these trees will not be harvested. All stems within the harvest block other than the leave trees that are also designated with orange paint, will be harvested and or girdled using chainsaws and/or a mechanical feller. All existing dead stems that do not present a hazard to workers will be retained even when not marked with orange paint. Branches, slash and some entire trees will be left on the ground for wildlife cover, while other trees may be removed and sold by the contractor at their discretion. Dense slash piles that may present a hazardous fuel concern will be lowered so as not to exceed the height limit recommended by NJ Forest Fire Service. Tree felling is expected to be completed prior to April 1, 2020 but may resume after November 15, 2020 if needed. Only one non-native plant (a single Japanese

barberry bush) was noted already within the project area (although other herbaceous species like Japanese stiltgrass may be present but not visible at this time of year). The barberry plant was manually removed, and the site will be monitored into the future to remove any undesirable plants that arise.

Harvesting and log removal equipment will be confined to the seed tree area and to designated points connecting it to the access road. Logs may be temporarily staged within the project before being transported to the staging area at the end of Rock Lodge Road. At the close of the harvest, road sections that were impaired by the equipment will be re-graded and water diversions installed as needed. Areas that may be prone to erosion will be temporarily stabilized with an annual seed mix.

The project will produce an estimated 3,156 board feet of sawtimber per acre and 16 cords of firewood grade material per acre. The project totals are 28,404 board feet of sawtimber and 144 cords of firewood.

Maps

Maps that were referenced throughout this document are attached following the stocking tables.

Overstory Summary: (2020 inventory data)

Composition - BA, percent BA, trees per acre											
	all species	**all oaks**	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
Total BA	**116.3**	**91.3**	78.8	15.0	10.0	5.0	2.5	1.3	1.3	1.3	1.3
Percent BA	**100**	**78**	68	13	9	4	2	1	1	1	1
Trees per acre	**239**	**84.7**	68.1	52.5	12.7	23.2	71.6	2.3	3.6	3.6	1.6

Diameters and Ages - inches, years											
	all species	**all oaks**	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
Medial diameter	**13.9**	**15.5**	15.9	8.7	13.0	9.5	3.0	10.0	8.0	8.0	12.0
Quadratic mean diameter	**9.4**	**14.1**	14.6	7.2	12.0	6.3	2.5	10.0	8.0	8.0	12.0
Effective age	**77**	**80**	80	61	87	76	0	67	40	53	80

Relative density - percent											
	all species	**all oaks**	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
Rel. Density	**79**	**55**	43	15	10	4	3	1	1	1	1
AGS only	**54**	**37**	34	11	3	1	3	0	0	1	0

Volumes and Values (per acre) - Scribner Log Rule											
	all species	**all oaks**	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
Net Total Cords	**27.5**	**23.7**	20.7	2.5	2.5	0.7	0.0	0.3	0.2	0.2	0.3
Net Firewood Cords	**18.9**	**15.3**	12.7	2.5	2.0	0.6	0.0	0.3	0.2	0.2	0.3
Net Board-foot	**4894.7**	**4795.5**	4547.2	0.0	248.3	99.2	0.0	0.0	0.0	0.0	0.0

Basal Area

Basal area (live trees only)										
	all species	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
2	**1.3**	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
4	**3.8**	0.0	1.3	0.0	1.3	1.3	0.0	0.0	0.0	0.0
6	**5.0**	0.0	3.8	0.0	1.3	0.0	0.0	0.0	0.0	0.0
8	**8.8**	2.5	2.5	1.3	0.0	0.0	0.0	1.3	1.3	0.0
10	**11.3**	5.0	5.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0
12	**15.0**	6.3	1.3	5.0	1.3	0.0	0.0	0.0	0.0	1.3
14	**21.3**	18.8	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
16	**18.8**	16.3	0.0	1.3	1.3	0.0	0.0	0.0	0.0	0.0
18	**12.5**	11.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
20	**16.3**	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	**1.3**	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	**1.3**	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAPS	**5.0**	0.0	1.3	0.0	1.3	2.5	0.0	0.0	0.0	0.0
POLE	**25.0**	7.5	11.3	1.3	1.3	0.0	1.3	1.3	1.3	0.0
SM SAW	**55.0**	41.3	2.5	7.5	2.5	0.0	0.0	0.0	0.0	1.3
MD SAW	**30.0**	28.8	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**1.3**	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**116.3**	78.8	15.0	10.0	5.0	2.5	1.3	1.3	1.3	1.3
Percent		67.7	12.9	8.6	4.3	2.2	1.1	1.1	1.1	1.1

Basal area (live trees only) acceptable growing stock only										
	all species	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
SAPS	**2.5**	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
POLE	**12.5**	2.5	8.8	0.0	0.0	0.0	0.0	0.0	1.3	0.0
SM SAW	**38.8**	31.3	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0
MD SAW	**30.0**	28.8	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**1.3**	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**85.0**	63.8	11.3	3.8	2.5	2.5	0.0	0.0	1.3	0.0

Number of trees

Number of trees (live trees only)										
	all species	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
2	**57.3**	0.0	0.0	0.0	0.0	57.3	0.0	0.0	0.0	0.0
4	**43.0**	0.0	14.3	0.0	14.3	14.3	0.0	0.0	0.0	0.0
6	**25.5**	0.0	19.1	0.0	6.4	0.0	0.0	0.0	0.0	0.0
8	**25.1**	7.2	7.2	3.6	0.0	0.0	0.0	3.6	3.6	0.0
10	**20.6**	9.2	9.2	0.0	0.0	0.0	2.3	0.0	0.0	0.0
12	**19.1**	8.0	1.6	6.4	1.6	0.0	0.0	0.0	0.0	1.6
14	**19.9**	17.5	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
16	**13.4**	11.6	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0
18	**7.1**	6.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
20	**7.4**	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	**0.5**	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	**0.3**	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAPS	**100.3**	0.0	14.3	0.0	14.3	71.6	0.0	0.0	0.0	0.0
POLE	**71.2**	16.3	35.4	3.6	6.4	0.0	2.3	3.6	3.6	0.0
SM SAW	**52.4**	37.1	2.8	8.4	2.5	0.0	0.0	0.0	0.0	1.6
MD SAW	**15.0**	14.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**0.3**	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**239.2**	68.1	52.5	12.7	23.2	71.6	2.3	3.6	3.6	1.6
Percent		28.5	22.0	5.3	9.7	29.9	1.0	1.5	1.5	0.7

Number of trees (live trees only) acceptable growing stock only										
	all species	**NRO**	**SM**	**CO**	**H**	**SVB**	**BO**	**RM**	**SB**	**WO**
SAPS	**71.6**	0.0	0.0	0.0	0.0	71.6	0.0	0.0	0.0	0.0
POLE	**36.2**	5.9	26.8	0.0	0.0	0.0	0.0	0.0	3.6	0.0
SM SAW	**33.0**	25.7	2.8	2.1	2.5	0.0	0.0	0.0	0.0	0.0
MD SAW	**15.0**	14.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**0.3**	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**156.2**	46.2	29.5	2.8	2.5	71.6	0.0	0.0	3.6	0.0

Net firewood cord volume

Net firewood cord volume (live trees only)

	all species	NRO	SM	CO	H	SVB	BO	RM	SB	WO
2	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	**0.6**	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
8	**1.6**	0.5	0.5	0.2	0.0	0.0	0.0	0.2	0.2	0.0
10	**2.5**	1.1	1.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0
12	**3.6**	1.5	0.3	1.2	0.3	0.0	0.0	0.0	0.0	0.3
14	**3.8**	3.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
16	**2.7**	2.4	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
18	**1.7**	1.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
20	**2.0**	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	**0.1**	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	**0.2**	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAPS	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POLE	**4.7**	1.6	2.0	0.2	0.1	0.0	0.3	0.2	0.2	0.0
SM SAW	**10.2**	7.3	0.6	1.6	0.4	0.0	0.0	0.0	0.0	0.3
MD SAW	**3.8**	3.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**0.2**	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**18.9**	12.7	2.5	2.0	0.6	0.0	0.3	0.2	0.2	0.3
Percent		67.3	13.5	10.7	3.0	0.0	1.5	1.3	1.1	1.6

Net firewood cord volume (live trees only) acceptable growing stock only

	all species	NRO	SM	CO	H	SVB	BO	RM	SB	WO
SAPS	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POLE	**2.3**	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0
SM SAW	**6.5**	5.1	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.0
MD SAW	**3.8**	3.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**0.2**	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**12.7**	9.4	2.1	0.6	0.4	0.0	0.0	0.0	0.2	0.0

Net board-foot volume, Scribner

Net board-foot volume, Scribner (live trees only)

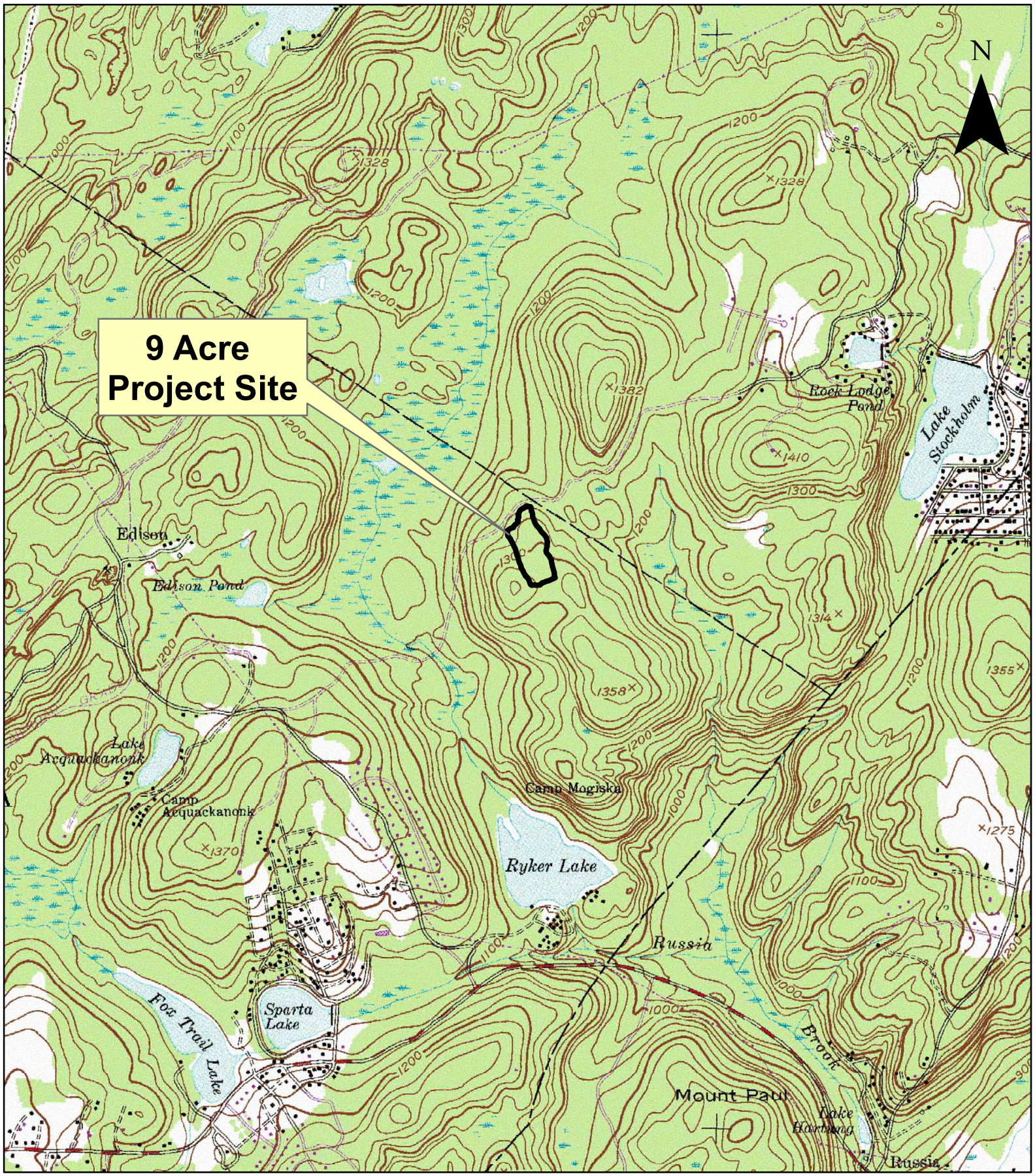
	all species	NRO	SM	CO	H	SVB	BO	RM	SB	WO
2	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	**864.4**	796.3	0.0	68.1	0.0	0.0	0.0	0.0	0.0	0.0
16	**1252.4**	1079.2	0.0	74.0	99.2	0.0	0.0	0.0	0.0	0.0
18	**1005.2**	899.0	0.0	106.2	0.0	0.0	0.0	0.0	0.0	0.0
20	**1494.8**	1494.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	**150.2**	150.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	**127.6**	127.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SAPS	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POLE	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SM SAW	**2116.8**	1875.5	0.0	142.1	99.2	0.0	0.0	0.0	0.0	0.0
MD SAW	**2650.2**	2544.0	0.0	106.2	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**127.6**	127.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**4894.7**	4547.2	0.0	248.3	99.2	0.0	0.0	0.0	0.0	0.0
Percent		92.9	0.0	5.1	2.0	0.0	0.0	0.0	0.0	0.0

Net board-foot volume, Scribner (live trees only) acceptable growing stock only

	all species	NRO	SM	CO	H	SVB	BO	RM	SB	WO
SAPS	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
POLE	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SM SAW	**1955.1**	1713.8	0.0	142.1	99.2	0.0	0.0	0.0	0.0	0.0
MD SAW	**2650.2**	2544.0	0.0	106.2	0.0	0.0	0.0	0.0	0.0	0.0
LG SAW	**127.6**	127.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**4733.0**	4385.5	0.0	248.3	99.2	0.0	0.0	0.0	0.0	0.0

Sparta WMA Stand 8, 2020 Project Location

1 inch = 1,743 feet



Map created by using NJDEP GIS Layers

0 1,500 3,000 6,000 Feet

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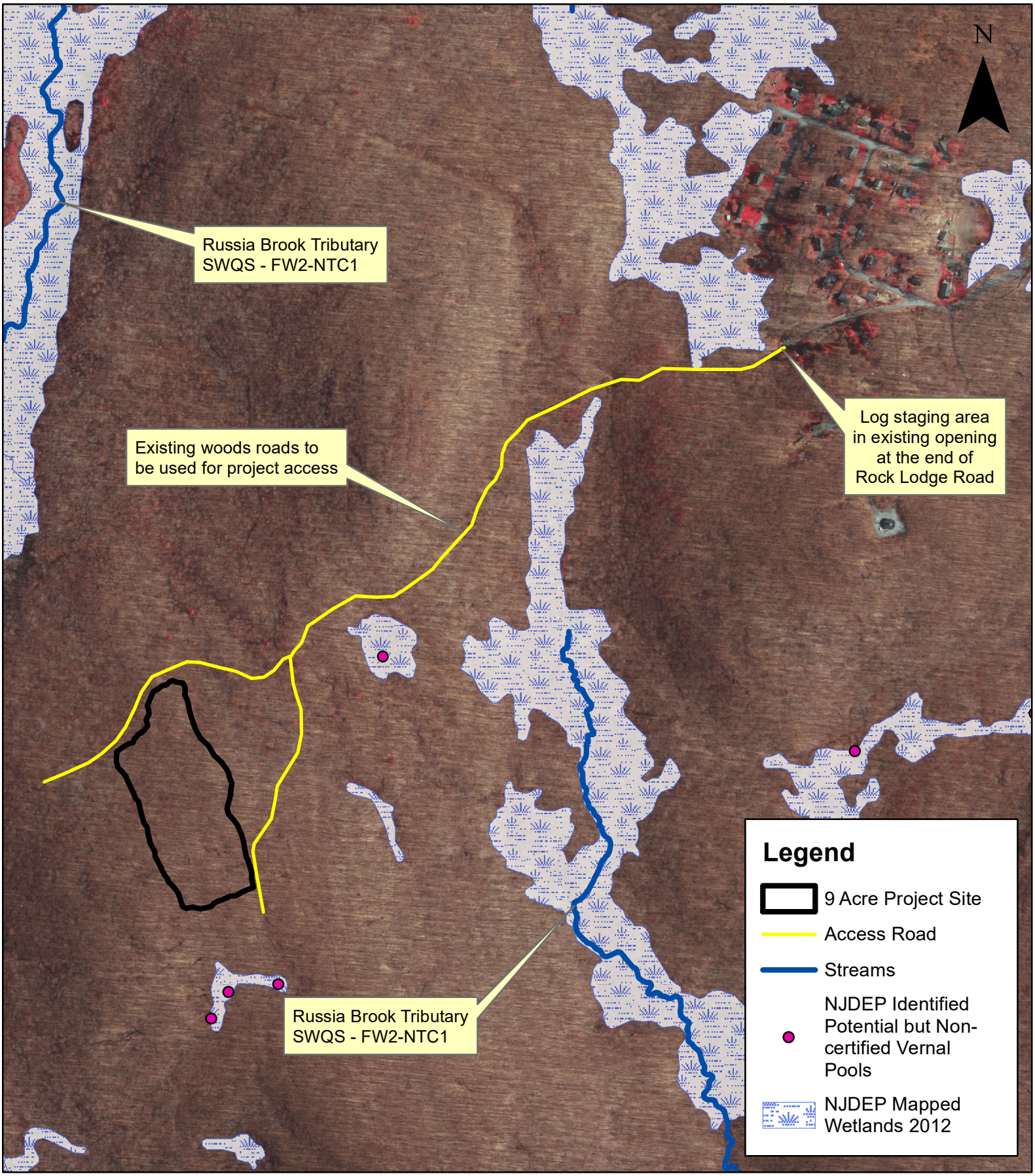
Sparta WMA Stand 8, 2020 Project Access

1 inch = 606 feet



Map created using NJDEP GIS Layers

0 500 1,000 2,000 Feet

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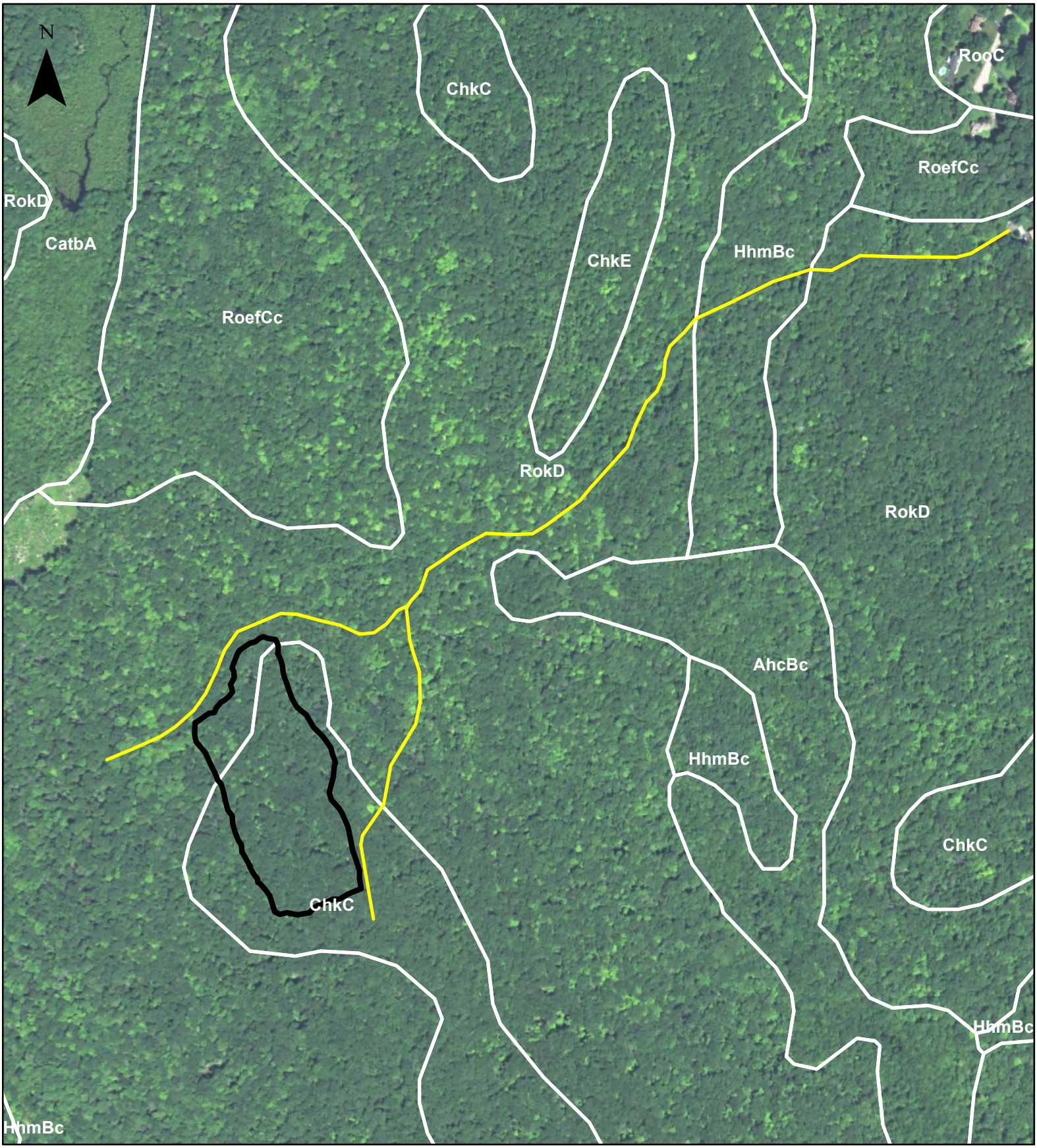
Sparta WMA Stand 8 Project Area 2020, Soils Map

1 inch = 500 feet



Map created using NJDEP GIS Layers

0 375 750 1,500 Feet

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