



Department of
Environmental
Conservation

SUNDOWN WILD FOREST

And

VERNOOY KILL STATE FOREST

Unit Management Plan



NYS DEC, REGION 3, DIVISION OF LANDS AND FORESTS

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MEMORANDUM

TO: The Record
FROM: Basil Seggos
SUBJECT: Sundown Wild Forest and Vernoooy Kill State Forest Unit Management Plan

The Sundown Wild Forest and Vernoooy Kill State Forest Unit Management Plan has been completed.

The Plan is consistent with Environmental Conservation Law, and Department Rules, Regulations and Policies and is hereby approved and adopted.



Basil Seggos
Commissioner
New York State Department of Environmental Conservation

Date: 10/8/19

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Sundown Wild Forest Unit Management Plan

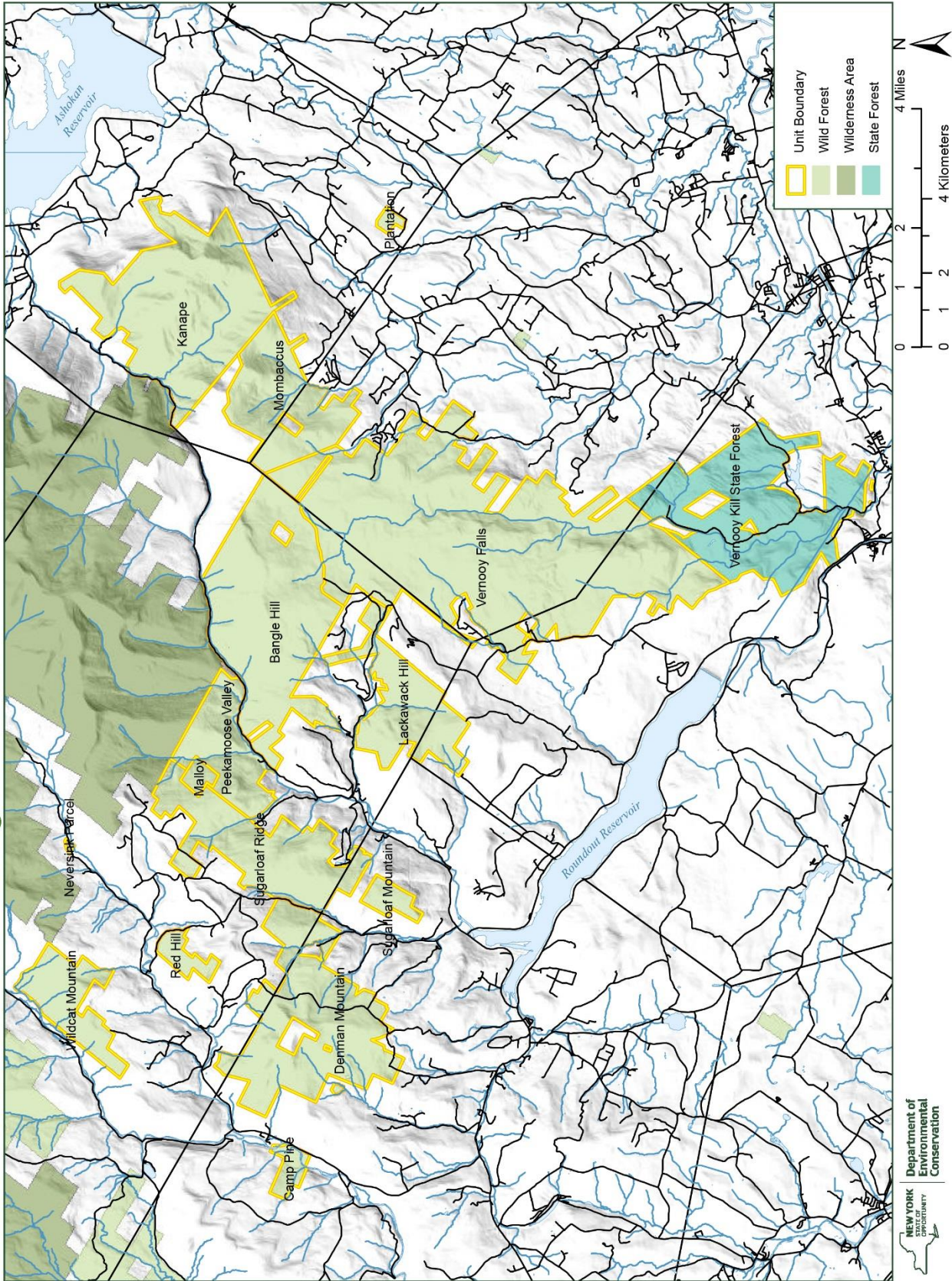


Figure 1 Unit Overview Map

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Preface

The combined Sundown Wild Forest (SWF) and the Vernooy Kill State Forest (VKSF) draft Unit Management Plan (UMP) has been developed by the New York State Department of Environmental Conservation (Department or DEC) pursuant to, and is consistent with, relevant provisions of the New York State Constitution, Environmental Conservation Law (ECL) and its implementing regulations, Executive Law, the Catskill Park State Land Master Plan (CPSLMP), the Strategic Plan for State Forest Management (SPSFM), Department policies and procedures and the State Environmental Quality Review Act.

This unit includes approximately 34,568 acres of land, forms a portion of the southeasterly border of the Catskill Park, and is comprised of two different land classifications which include Forest Preserve lands and State Forest Reforestation lands. The portion known as the Sundown Wild Forest is within the Catskill Park and consists of about 30,882 acres of lands classified as Forest Preserve (some of which were previously covered in the Peekamoose Valley Wild Forest Unit Management Plan, adopted in October, 1990). The portion known as the Vernooy Kill State Forest contains approximately 3,686 acres of land that is contiguous to the Sundown Wild Forest but outside the Catskill Park Blue Line and is classified as a State Forest Reforestation Area.

This plan has the dual purpose to protect the Forest Preserve portions as directed by Article XIV of the New York State Constitution, under the guidance of the CPSLMP, and to manage the Vernooy Kill State Forest as directed by the SPSFM. This combined unit of land contains varied topography and an impressive mix of natural features, including mountains, valleys, waterfalls and gentler topography. These features continue to attract increasing numbers of public land enthusiasts seeking various forms of outdoor recreation.

This unit management plan identifies the natural and man-made resources which make up this unit, and some of the historical and cultural influences which have shaped the region. Issues and constraints affecting the unit are identified, and goals and objectives have been developed to govern the area's future management. Accomplishing the goals, objectives and proposed projects in this draft plan will depend on adequate budget appropriations and staffing. Although much of the information contained within this plan was developed by Department staff, public input will be essential in the decision-making process.

Purpose and Need

Without a UMP, the management of these public lands can easily become a series of uncoordinated reactions to immediate problems. A written plan stabilizes management despite changes in personnel and integrates relevant legislation, rules and regulations, policies and area specific information into a single reference document. In view of tight budgets and competition for financial resources, plans that clearly identify needs have greater potential for securing necessary funding, legislative support, and public acceptance.

This document provides a comprehensive inventory of natural resources, existing facilities and uses, while identifying the special values that justify the protection of this area in perpetuity for future generations. The process involves the gathering and analysis of existing uses and conditions, regional context and adjacent land considerations, future trends, and the identification of important issues. Ordinarily, the plan will be revised on a ten-year cycle but may be amended when necessary in response to changing conditions or administrative needs. Completion of the various management actions proposed within this UMP will be dependent on adequate manpower and funding. Where possible, the Department will work with volunteer groups, local communities, town and county governments, and others to accomplish some of the proposed projects and maintenance.

Organization of the Plan

This UMP is intended to be a working document, used by both State personnel and the public. The content of each section is briefly summarized below.

I. Introduction

Section I introduces the planning area and provides a general description with information on size, location and topography of the lands within this unit. A brief chronology of the history of the area which includes past and present human influences within the unit is provided. Access points to the unit are defined and descriptions of existing easements and right of ways are provided.

II. Inventory, Use and Capacity to Withstand Use

Section II provides an inventory of the natural, cultural, and scenic resources, as well an inventory of man-made facilities. An assessment of the local economic impacts, levels of public use and carrying capacity of the unit is described. Adjacent land uses and

impacts are also discussed. Policies and procedures that guide the public use of State lands for events as well as partnership opportunities and volunteer policies are included at the end of Section II.

III. Management and Policy Overview

Section III provides an overview of administrative responsibilities of the various divisions within the Department as they relate to the implementation of this UMP. This section also includes descriptions of the relevant master plans, legal constraints and issues affecting the planning area, Department policies, past management activities and Americans with Disabilities Act of 1990 (ADA) requirements. The application of the limits of acceptable change process and its impact on the management of existing and future facilities within this unit is provided at the end of Section III.

IV. Management Recommendations, Goals and Objectives

Section IV provides present condition assessments and descriptions of existing infrastructure and assets found throughout the unit. Goals, objectives, and specific management actions as they relate to natural resources, uses, or facilities are outlined for both Sundown Wild Forest and Vernooy Kill State Forest. Goals include general descriptions of management direction reflecting legal mandates and general conditions sought to be achieved or maintained in this unit. Once articulated, the goals for the management of the Sundown Wild Forest and Vernooy Kill State Forest will shape management objectives, which are statements of more specific conditions whose achievement will be necessary to assure progress toward the attainment of established goals. Objectives will in turn serve as criteria for deciding what management actions are needed.

All proposed actions in Section IV are consistent with the management guidelines and principles in the CPSLMP and the SPSFM and will be based on information gathered during the inventory process, through public input and in consultation with the planning team. The circumstances that led to designation of the Peekamoose Riparian Corridor and the special regulations that accompanied the designation are described. The current regulations for the Peekamoose Riparian Corridor are provided at the end of Section IV.

V. Sundown Wild Forest Projected Use and Management

Section V identifies specific management proposals as they relate to natural resources, uses and facilities on the seven geographically distinct Forest Preserve parcels discussed in Sundown Wild Forest. These proposed actions will be consistent with the management guidelines and principles established in the CPSLMP and will be based on information gathered and needs and issues identified during the inventory process. Map inserts are included in Section IV to depict proposed project locations.

VI. Vernooy Kill State Forest Projected Use and Management

Section VI provides a description of the Department's management approach, goals, proposed projects and timber harvest schedule for Vernooy Kill State Forest. The Department's goals and project proposals outlined in Section VI are consistent with the sustainable forestry practices necessary to maintain green certification under the most current Forest Stewardship Council® (FSC®) and Sustainable Forestry Initiative® (SFI®) standards. Indicators, criteria and management practices for sustainable forest management are included in this section. The maps provided in Section VI depict information concerning the locations of proposed projects, special management zones, recreation infrastructure, soils, current forest types and management direction for Vernooy Kill State Forest.

VII. Implementation and Budget

A schedule for project implementation for the proposed projects in Sundown Wild Forest and Vernooy Kill State Forest is included in Section VII. The budget requirements necessary to carry out the work and management actions proposed in this UMP are also included.

VIII. Bibliography and Appendices

At the end of the text, there is a bibliography and various technical appendices. This section also contains a glossary of terms, wildlife information, soil series descriptions, water classification information, NYS Forestry Best Management Practices, and CPSLMP Management Guidelines for Wild Forest.

What the Plan Does Not Do

The proposed management actions identified in this plan are primarily confined to the Sundown Wild Forest and Vernooy Kill State Forest lands and waters. Activities on adjacent State lands or private property are beyond the scope of this document but may be discussed as they relate to uses and impacts to Sundown Wild Forest and Vernooy Kill State Forest. In addition, this UMP cannot suggest changes to Article XIV, Section 1 of the New York State Constitution or conflict with statutory mandates or Department policies. All management proposals and actions must conform to the guidelines and criteria set forth in the CPSLMP and the SPSFM.

State Environmental Quality Review Act (SEQRA)

The State Environmental Quality Review Act of 1975 (SEQRA) requires that all agencies determine whether the actions they undertake may have significant impact on the environment. The guidelines established in the CPSLMP and the SPSFM for developing unit management plans express these same concerns. Any development within the Sundown Wild Forest and the Vernooy Kill State Forest presented in the plan must take into consideration environmental factors to ensure that such development does not degrade the environment. The overall intent of this UMP is to identify mitigating measures to avoid or minimize significant adverse impacts to the natural resources of the State within the unit. Any reconstruction or development within the confines of this unit will take environmental factors into account to ensure that such development does not degrade the resource. The recommendations presented in this UMP are subject to the requirements of SEQRA. All proposed management activities will be reviewed and significant environmental impacts, along with any alternatives, will be assessed.

The DEC maintains this policy to provide guidelines for the design, location, siting, size, classification, construction, maintenance, reconstruction and/or rehabilitation of dams, fireplaces, fire rings, foot bridges, foot trails, primitive camping sites, road barriers, sanitary facilities and trailheads. Other guidelines used in the administration of Forest Preserve and State Forest lands are provided through Attorney General Opinions, Department policy memos, and Regional operating procedures.

SEQRA requires the consideration of environmental factors early in the planning stages of any proposed action(s) that are undertaken, funded or approved by a local, regional or State agency. A Long Environmental Assessment Form (LEAF) is used to identify

and analyze relevant areas of environmental concern based upon the management actions proposed in the Forest Preserve portion of this UMP. For the Forest Preserve portion of the plan, SEQRA review has been initiated with the preparation of the LEAF. Upon review of the information contained in the LEAF, it was determined that there will not be any large or important impacts associated with any of the proposed management actions, and therefore there will not be a significant impact on the environment. At this time, a Negative Declaration will be prepared for the proposed management actions on Sundown Wild Forest. Any changes that are made in this plan, based upon public comments, will be considered in the LEAF and in the Determination of Significance when the final plan is drafted. Based on the scope of the current management proposals, the Department has made a tentative determination that a Negative Declaration for the proposed management actions on Sundown Wild Forest will be issued upon completion and adoption of this plan.

The Strategic Plan for State Forest Management serves as the Generic Environmental Impact Statement (GEIS), regarding management activity on Vernoooy Kill State Forest. The SPSFM establishes SEQRA analysis thresholds for each category of management activity. Furthermore, the SPSFM establishes the environmental impact thresholds that would trigger future SEQRA reviews of proposed management activities requiring a more detailed or site-specific assessment of potential impacts. None of the management activities proposed in this plan exceed specific thresholds established in the SPSFM, and therefore, additional SEQRA review is not required for the Vernoooy Kill State Forest portion of this plan. Potential environmental impacts, resource protection, visitor safety, vehicle use and enjoyment of natural resources, interests of local communities and groups, as well as short and long-term effectiveness are important considerations in selecting any proposed action that will be included in the final plan.

No-Action Alternative or Need for a Plan

From a legal perspective, the “no-action” alternative of not writing a UMP is not an option. The Department is required to prepare a management plan for the Sundown Wild Forest pursuant to the CPSLMP under Executive Law §816. The Department is also required to produce a UMP for individual units of real property within the scope of the Forest Stewardship Council/Sustainable Forestry Initiative certificate to fulfill the Green Certification Standard requirements for State Forest lands. In addition, a UMP serves as a mechanism for the Department to study and identify potential areas for providing access to the Sundown Wild Forest and the Vernoooy Kill State Forest for persons with disabilities in accordance with the ADA. The UMP also serves as an

administrative vehicle for the identification and removal of non-conforming structures as required by the CPSLMP.

Public Participation

Department staff have clear mandates for the management of several issues that can affect Wild Forest lands and State Forest lands. To obtain assistance with land management decisions, Department managers invite the public to participate in the development of UMPs. In the effort to set a management direction for the Sundown Wild Forest and Vernooy Kill State Forest that strikes a proper balance between recreational use and the protection of natural resources and ecological processes, Department staff seek to supplement an understanding of Forest Preserve and State Forest management guidelines and available research in conjunction with consultation of organizations, local governments and individuals. The Department will provide a public informational meeting along with a comment period so that interested individuals and stakeholders can comment on the proposed management goals and objectives outlined in this UMP.

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Acknowledgments

Andrew Cuomo, Governor

Basil Seggos, Commissioner, NYSDEC

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I. Introduction

A. Planning Area Overview

The Sundown Wild Forest and Vernooy Kill State Forest Unit Management Plan consists of both Forest Preserve and State Forest lands in the towns of Denning, Olive, Rochester, and Wawarsing in Ulster County, and the Town of Neversink in Sullivan County. These lands are in the New York City West-of-Hudson watershed. The unit is comprised of several contiguous, as well as non-contiguous, parcels which each belong to distinctive geographic areas detailed below in Table 1. This unit lies within the south-central part of the Catskill Park and is near large metropolitan areas such as New York City and Albany.

The Sundown Wild Forest portion of this UMP is bordered to the north by the 47,442-acre Slide Mountain Wilderness and to the west by the 15,572-acre Willowemoc Wild Forest. Adjacent to the planning area, and not subject to this UMP, are privately-owned lands. There are also several private “rod and gun” clubs with small to moderate land holdings adjacent to or within the unit.

New Acquisitions

There have been three land acquisitions in recent years that will be formally classified as wild forest land belonging to the Sundown Wild Forest Unit through the adoption of the Final Sundown Wild Forest UMP, and in accordance with the criteria set forth in the Catskill Park State Land Master Plan. These lands provide recreational opportunities in the unit and include the following parcels:

- 1,314 acres of the former Lundy Estate acquired in 2000, lying within the Blue Line of the Catskill Park (Towns of Rochester and Wawarsing). The remaining 3,686 acres of the Lundy Estate outside the Park were classified as a reforestation area, creating the Vernooy Kill State Forest.
- The 231-acre former Camp Pine property along the Neversink River that was acquired in 2011;
- The 136-acre inholding known as the Malloy property in the Peekamoose Valley and acquired in 2015. Expanded recreational facilities including hiking, fishing and mountain biking for these parcels is addressed in this draft plan.

I. Introduction

Table 1 Acreages of Properties within the Unit

	Name	State Forest Reforestation Area (Acres)	Forest Preserve (Acres)	External Boundary (miles)
1	Kanape/Ashokan - High Point		4,080	14.4
2 a)	Mombaccus-Big Rose Bone		1,920	8.6
b)	Krumville Plantation		81	1.7
3	Vernooy Kill Falls		9697	34
4	Bangle Hill-Spencers Ledge		3,355	9.4
5 a)	Lackawack Hill		1,771	12.4
b)	Sugar Loaf Ridge		2,408	14.8
c)	Sugar Loaf Mountain South		254	3.4
6 a)	Denman Mountain		3,394	18.5
b)	Red Hill		279	3.3
c)	Wildcat Mountain South		1,060	7.9
d)	Neversink River		16	0.65
e)	Camp Pine		231	2.9
7	Peekamoose Valley		2,200	1.5
a)	Malloy Property		136	0*
8	Vernooy Kill State Forest	3,686		24.7
Total		3,686	30,882	158.2
*The Malloy Property was an interior inholding that is surrounded by Forest Preserve. No boundary line maintenance is required now that has been acquired by the state.				

1. General Location

This unit begins near the Ashokan Reservoir in the northeast, stretches to the Rondout Reservoir in the south, and is bisected north to south by the Rondout Creek and the East Branch of the Neversink River. These lands are part of the Hardenburgh (Great Lots 5 and 6), Marbletown, and Beek patents and are accessible from many county and town roads shown on the location and access maps found throughout the plan.

Some of the area's notable landmarks are:

1. Ashokan High Point (3,080 feet), overlooking the Ashokan Reservoir (Town of Olive)
2. Vernooy Kill Falls (Town of Rochester)
3. Denman Mountain and the Hog Rocks (Town of Neversink)
4. Red Hill Fire Tower (Ladleton)
5. The Peekamoose Valley, including the Blue Hole and several notable waterfalls and pools
6. Portions of the former Lundy Estate including the Vernooy Stone House and the remnants of a private airstrip.
7. The Long Path, a continuous hiking trail managed by the NY/NJ Trail Conference which originates in Fort Lee, New Jersey and extends to Windham in the northern Catskills, traverses the Sundown Wild Forest, the Slide Mountain Wilderness, and the Vernooy Kill State Forest, providing a foot trail connection between all 3 units.

In addition to notable landmarks there are a few supporting facilities near the unit which include:

1. Kenneth L. Wilson Campground - 76 sites, open May through Columbus Day, located on Wittenburg Road in Mount Tremper.
2. Mongaup Pond Campground - 163 sites, open May through Columbus Day, located in Debruce on Fish Hatchery/Mongaup Road, west of the unit.
3. Woodland Valley Campground - 72 sites, open May through Columbus Day, located near the end of Woodland Valley Road, outside the village of Phoenicia.

2. Acreage

The unit encompasses approximately 34,568 acres of State Land consisting of 30,882 acres of Forest Preserve, and 3,686 acres of State Forest

3. Topography/Terrain

The topography of this unit ranges from relatively flat or rolling terrain in some of the lower areas, such as parts of the Vernooy Kill State Forest (part of the former Lundy Estate) and the Krumville Plantation, to very steep-sided valleys dissected by the swift and clear rushing waters of streams such as the Rondout Creek and its numerous tributaries in the Peekamoose Valley. In their quest to reach the Rondout, many of these tributaries traverse glacially formed hanging valleys, forming waterfalls; some of

I. Introduction

these waterfalls are quite spectacular and add to the unique atmosphere of the Peekamoose Valley. Much of the topography consists of mountainous regions, some of which contain spectacular views such as those attained from Ashokan-High Point and the Red Hill Fire Tower.

This unit contains some rugged areas characterized by high mountain ridges, steep sided valleys, dense thickets of mountain laurel, numerous brooks, streams and wetlands as well as some open areas found within the Vernooey Kill State Forest. Elevations range from a high of 3,080 feet above sea level on Ashokan High Point at the northern end of the unit where it abuts the Slide Mountain Wilderness area, to a low of 360 feet above sea level in the Vernooey Kill stream valley, within the Vernooey Kill State Forest, along the southern boundary. Many of the streams have made a significant impact on the area. Arising from the Slide Mountain massif to the north, the Rondout Creek enters the eastern end of the unit at about 1,375 feet above sea level and travels the length of the Peekamoose Valley. This stream descends some 300 feet over about 4 miles before making its way to Sundown, the Rondout Reservoir and eventually the Hudson River. The Rondout Creek provides the setting for camping, swimming, fishing and other recreational pursuits more fitting the milder terrain of the valley than some of the steep sided ridges found within and around the unit.

Several mountains and/or ridges which rise 2,000 feet or more in elevation within the unit:

Ashokan High Point	3,080
Denman Mt.	3,053
Little Rocky (<i>only part of summit on State land</i>)	3,015
Red Hill	2,990
Wildcat Mt. Ridge South	2,865
Mombaccus Mt.	2,840
Samson Mt.	2,812
Bangle Hill	2,350
Big Rosy Bone	2,220
Cherrytown Mt.	2,000

B. General History

1. Towns of Neversink, Denning, Rochester, and Wawarsing

Modern Catskill history started when a large piece (nearly 2 million acres) of the Catskills was granted to Johannis Hardenburgh and 6 other men in 1708 by Queen Anne of England in a grant known as the Hardenburgh Patent. Chapters 7 and 8 of "The Catskills" by Alf Evers (1972) gives an excellent description of the granting of this patent. Ulster County was once much larger and included Sullivan County and portions of Orange, Greene and Delaware counties. Likewise, the Town of Rochester also included Wawarsing, Neversink, portions of Gardiner, and Delaware County at one time.

Since most of the present-day Catskill Forest Preserve has been heavily influenced by people, historical information helps us understand the changes that occurred through development. For example, the tanbark industry had a great effect on vegetation. Forest Preserve lands provided the natural resources for the valley towns whose fortunes ebbed and flowed throughout the centuries. This area is wilder today than it has been for more than 200 years; however, it is classified as Wild Forest and not Wilderness. Very few of the original trees are left standing and most areas still bear signs of repeated attempts by man to gain a foothold.

Cornelius Vernooey appears to be the first person in the area who lived on land he himself owned. According to historical documents, Vernooey and his wife and child left Holland in 1664. He bought 400 acres in 1702 from Anna Beek Phenix (the land was part of the Beek Patent granted in 1685). The Beek Patent was bought from a Native Tribe (1684) with duffels (a coarse cloth of the time) and other clothes, and confirmed under the royal authority of Thomas Dongan, Governor General of New York (Terwilliger, 1977). From the early 1700s until 1809, settlers from the Grahamsville area would bring their grain to Peter Vernooey's Mill near present day Vernooey Falls in Wawarsing for grinding. Some carried the grain on their backs (Quinlan, 1873). This grist mill was the first in the Town of Wawarsing. In places, the old road from Yagerville to Cherrytown Road can still be followed.

William Denman emigrated from England in the late 1790s and settled 3 miles from Grahamsville on what today is Denman Mountain, the second highest peak in Sullivan County. His family was praised for probity, thrift, good sense and respectability

I. Introduction

(Quinlan, 1873). His name survives to the present in the form of a local trail, road, and mountain.

Because this area was so far removed from any settlement, the solitude of this region's hillsides remained undisturbed for more than a hundred years before the hemlocks attracted the bark peelers. Migration was south and west resulting in the easterly segments of Marbletown being settled first (Terwilliger, 1977). Quinlan (1873) notes that except for the few families in the Lackawack Valley, there were no white residents of the [Town of] Neversink prior to 1788. Notwithstanding, the farms of the southern Catskills were more fertile than farther north, and 50 years earlier the Town of Neversink produced more sheep and apples than any other town in Sullivan County.

With the coming of the tanneries in about 1812, and the business of peeling bark from the hemlocks for use in the tanneries, tremendous amounts of hemlock bark (and rarely, oak bark) were removed. One cord of bark (4 by 4 by 8 feet) would tan 10 hides (3-10 trees were needed to obtain one cord). The bark was removed from the butt to the first limb. The trees were very slow to rot, so many of the people who settled the lands burned them. A few were cut into lumber to provide the first good roads, the plank turnpikes (Sullivan County Civil War Centennial Commission, 1963).

In the Peekamoose Valley, a plank road was laid out from Sundown to Napanoch. This led to the gradual settlement of the valley. Not only were the hemlocks responsible for the initial settlement of the valley, but they also were responsible for the settlement's name. It seems that at one time the area was heavily forested with very tall hemlocks so that not much sunlight reached the valley floor. Bathed in a green gloom, the sun always seemed to be down, hence the name Sundown.

There was never a tannery in the valley. The hemlock bark was probably initially taken to Grahamsville. In later years (1850s) bark was brought to the Metropolitan Tannery just over the Denning line in Watson Hollow, and to the Samson Tannery in Samsonville. Although some hemlock wood was used for bridge planking or other local uses, it is estimated that 95 percent of the debarked, fallen trees were left in the woods (Kudish 1971).

The War with Mexico in 1846 gave a powerful boost to the tanning industry by raising profits high enough to attract new capital and energy (Quinlan, 1873). The tannery started by Palen and Hammond in Samsonville (then Palentown) in the Town of Rochester was among those who benefitted. After passing through several owners, it became the property of Zaddock Pratt and Henry A. Sampson, a Brigadier General in the Civil War (Davis, undated; Van Steenbergh Sickler, 1973). These tannery owners built a road across the Rondout running well up Peekamoose Mountain (Elias, 1993).

The Town of Denning was formed from part of the Town of Shandaken in 1849. William Denning bought the central part of today's Town of Denning from a Philadelphia land grant corporation that failed to pay its taxes. He bought it for less than a cent per acre. By 1841, William H. Denning had bought land from the Denning heirs and others until he owned over 24,000 acres. John Bush (1830s) and Anthony Schwab of Red Hill (late 1840s) were among the earliest settlers recorded in what would eventually become the Town of Denning. Early maps of Denning show eight sawmills and turning mills operating in the Sundown Valley (Elias, 1993).

In the mid-1850s, Francis F. Potter built a sawmill downstream on the Vernoooy Kill. Quite a settlement of people followed until 1870, when the mill burned and Potter's family moved away. Only the name Potterville and remnants of some foundations remain today. All surviving structures were removed prior to the State's acquisition of this area, commonly known as the former Lundy Estate, in 2001. This ghost town once had a man-made lake fed by the Vernoooy Kill Stream. West of Potterville, at the base of westerly facing slopes, residents report that several stone pens were used during the earlier part of this century to trap bears. Remnants of a steam engine sawmill and 2 logging camps can still be found along a nearby wetland. James Eldridge Quinlan wrote, "There's an old saying, 'The Civil War was won with the boots tanned in Sullivan County'." In 1860, \$7,034,438 worth of tanned leather was manufactured in the Catskills; Sullivan County accounted for half. In 1860, the Town of Neversink had 2,180 people, by 1963 only 1,555. Grahamsville (Neversink), Claryville and Dewittville (Denning) all had tanneries. The Claryville Tannery, built 1848, employed 50 men and made 30,000 sides of leather each year. Founded by Colonel Gideon E. Bushnell, this tannery eventually came to be known as the Bushnell and Snyder Tannery. At one time Claryville had 2 tanneries (the other was the DeWitt and Reynolds tannery), a couple of sawmills, a grist mill, and 2 hotels for overnight guests (New York State Water Resources Institute, 1992; Elias, 1993). A tannery chimney remains today and can be seen from the road as one heads toward Claryville. The Palen tannery, on the falls of the Neversink, had 40 workers, making 25,000 sides of leather each year. Hemlock bark harvested from the headwaters of the upper Rondout Creek was taken to the Metropolitan Tannery in Watson Hollow, Denning (NYS DEC 1990; NYS DEC, 1993; Purcell, 1978). Before this tannery opened, hemlock bark was probably taken from Peekamoose Valley to Grahamsville. A man and his oxen were paid 75¢ for a half day's work in 1829 (Sullivan County Civil War Centennial Commission, 1963). An excellent short history of Claryville and Sundown is provided by Elias (1993).

"On Denman Mountain, opposite the monolith of the Bushnell Tannery Tower in Claryville, a score of virgin white pines tower against the skyline. On the east slope of Red Hill, a handful of red spruce were left, too isolated to cut down. Except for a few

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elderly apple trees, practically every tree has grown over the past 130 years. In 1860, Sullivan County had 39 tanneries, more than any other in the State (Ulster County had 30)" (Sullivan County Civil War Centennial Commission, 1963).

In March of 1870, a "great windfall" was caused by a heavy gale which blew northwest from Lackawack toward Delaware County throughout the night. Under the weight of snow and ice, timber was blown down over thousands of acres. For many years afterward, lost hunters could find their way by traveling parallel with the track of the great windfall (Quinlan, 1873).

By the late 1880s, all but the most inaccessible hemlock stands had been cut and the tanneries were forced to close. Some of the tanneries operating in the Greene County Catskills moved southward; others left the State for the hemlock forests in Pennsylvania. Faster growing, more light tolerant hardwood species invaded areas where the hemlock had once dominated. While hemlocks can still be found in scattered stands, they do not form the vast forests they once did. While the hemlock bark tanning of leather was ending, the lumber industry was just getting started, and soon there were several sawmills in the area. In New York's Forest, Fish and Game Report for 1900, a sawmill at Bull Run owned by S. M. Aldrich, was reported producing 10,000 board feet of spruce, 25,000 board feet of hemlock and 50,000 board feet of hardwoods. Ladles, scoops, piano bars, butter trays, furniture, shingles, planking, and barrel hoops were produced at many sawmills throughout the region (NYS DEC, 1990). Typical was a turning mill like the one built by Isaac Hamilton in 1878, which produced most of the products listed above. Two (2) other sawmills in this area operated along Bear Hole Brook (Banta, 1988).

By the First World War, the hemlock bark had played out along with the tanneries. The slopes left uncovered by the excessive removals of the tanning industry resulted in a series of severe floods never experienced in the Catskills. After the slopes had been cut by the tanneries and other lumber industries, spring floods became an annual event, culminating in the particularly destructive flood of 1928 (New York State Water Resources Institute, 1992). Depopulation, the declining lumber industry and more responsible logging practices have allowed re-growth while erosion and flooding has subsided (New York State Water Resources Institute, 1992).

By the turn of the 20th century in the Town of Denning, "lumbering was the leading industry, although even in this roughest town in the county the farmer had managed to grow a few crops" (Clearwater 1907). Indeed, even in the roughest part of the roughest town in the county, farming was important for a time. Esther G. George, in her book "A Short History of Sundown" notes that when her family settled in Sundown (1931) the

dairy industry was very important and just about everyone had a herd of dairy cows. Farms were not limited to the valley bottom either. Stone walls, old foundations and scattered apple trees can be found on many ridges and hillsides in the area. Mounds and columns of stones piled to occupy the smallest area of farm fields are scattered throughout meadows and second growth forests within this unit. Changes in the dairy industry after World War I eliminated most of the hill farms (New York State Water Resources Institute, 1992).

While the valley has sporadically attracted bark peelers, lumberjacks and farmers in the past, it has consistently attracted outdoorsmen. Two (2) groups, the Peekamoose Club and the Peekamoose Lodge, are of note. The Peekamoose Club had its origins in a 1,400-acre estate originally owned by an outspoken lady named Cecelia E. Wentworth, known locally at the time as "one of the most noted artists of the world." Mrs. Wentworth, her husband, and their onetime friend, famous Sculptor J. Q. A. Ward, operated the estate at the foot of Peekamoose Mountain as a hunting and fishing preserve and an artist's retreat. The Wentworths and the Wards were the chief movers in founding the Peekamoose Fishing Club. In about 1885, Ward renovated a quaint stone cottage near Wigwam with "Viking" style decorations including fanciful gables and elegant barge boards, transforming it into a "picturesque fishing lodge." Alf Evers, in his book, "The Catskills...From Wilderness to Woodstock", describes best what happened next:

"When Mrs. Wentworth discovered that a little spring on a cliff above the lake possessed what seemed to be miraculous curative powers, she built a chapel on the spot and invited kindly, scholarly Michael A. Corrigan, Archbishop of New York, to consecrate it. Protestant Mr. Ward was shocked at the prospect of seeing secluded Peekamoose Lake becoming "an American Lourdes" with daily deputizations of hopeful pilgrims and with the steep mountainside which plunges so romantically down to Peekamoose Lake decorated with avalanches of discarded crutches. He called together his supporters at the club and had them elect him president of the organization. Wentworth assembled his forces and was also elected president. Sculptor Ward then appealed to the courts for relief. The case entertained readers of metropolitan newspapers for years. Local statisticians estimated that it required the abilities of thirty-two lawyers to keep the case alive for a combined fee near \$100,000."

After Mrs. Wentworth's demise, the buildings and property were sold to a small, private fishing club composed of Kingston gentlemen. During this period, the house was referred to, for a short time, as "Peekamoose Lodge." It was now also, around 1903, that the U.S. government was conducting a geodetic survey of the area and thus put this name on their maps. This has resulted in some confusion between the

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Peekamoose Club and Peekamoose Lodge. The Peekamoose Club property has since changed hands and is now owned by Mr. Howard M. Pack. It is private property and not open to the public.

The real Peekamoose Lodge also dates to the turn of the century and is a small, rustic log cabin located on private property some 3 miles west of Peekamoose Lake. In May of 1907, a sportsman's club organized and constructed the club house, which at times was run by a family named Anderson. While never embattled in a controversy akin to that of the Peekamoose Club, the lodge is noteworthy in that Teddy Roosevelt is said to have once visited there (Adams 1977). The Lodge remains in private ownership and is not open to the public.

New York State began to acquire land in the Peekamoose Valley in 1902, when title to several hundred acres along the Rondout Creek just west of what is now the Pack property reverted to the State due to delinquent tax payments. Some additional lands were purchased around 1920, but the bulk of the lands which now make up the Peekamoose Valley Wild Forest were acquired in 2 major purchases: the Ash property in 1962 and the Morrell property in 1975 (see Figure 1).

The Morrell property was originally the estate of A. W. Dimock, a well-known financier and adventurer (and uncle to Ellen Morrell). In 1910, he built a dam across the Rondout, creating a small pond; however, a stream as powerful as the Rondout was not easily tamed, and in 1928 most of the dam washed away. A few remains of the dam can still be seen today.

In 1920, John Dudley bought the property from Mr. Dimock and presented it to his daughter Ellen as a wedding gift upon her marriage to Franklin W. Morrell, a New York City attorney. The Morrells used the estate as a vacation home. On August 2, 1936, fire destroyed the original house built by A. J. Dimock, and the Morrells replaced it with an impressive colonial style stone house. A log cabin which was built by Mr. Dimock around 1916 was not affected by the fire of 1936, and it and later buildings constructed by the Morrells were still on the property when the State acquired the parcel in 1975. Prior to State purchase, Mrs. Morrell was known to have sold "a lot of logs from the mountain to loggers, who erected 2 sawmills along Bear Hole Brook (Banta 1988)."

2. Town of Olive (Kanape Area)

George Middagh (1740), was one of the earliest settlers recorded in Olive. The "Middagh lot" can still be found on old landowner maps of this area. The Kanape Stream and Valley probably were named after John Jones Canape who, along with

Orson Avery, were the first farmers in the area. The Kanape Woods Road (a short portion of which is now the Freeman Avery Road) once connected Watson Hollow with the Rondout Valley to the east.

Mombaccus Mountain, across from Ashokan High Point, probably got its name from the Town of Mumbakkus, which was issued in the Rochester Patent of 1703 in Queen Anne's name by the governor of what was then the Province of New York. The Patent explained that the inhabitants had purchased the land from the Indians, had improved it, and were in quiet and peaceful possession of it. Life could best be described as "many children to raise, crops to tend with no mechanical help, animals to care for, and spinning and weaving" (Terwilliger, 1977). At one time, up to 8 sawmills operated in Watson Hollow. There were at least 7 mills on the Watson Hollow Stream above the present-day Bushkill Bridge (Davis, undated). All these mills employed many people in sawing, building roads and supplying lumber. The stream in Traver Hollow which runs into the Bush Kill is named after Peter P. Traver, who built a sawmill there. Watson Hollow, through which Ulster County Route 42 (Watson Hollow Road) runs today, is named after Nathan W. Watson (from Canaan, Connecticut), whose tannery in 1855-56 employed about 100 men and could process 100,000 finished hides per year. Men were employed in cutting the virgin timber, peeling the bark, stacking it for drying, and later hauling it to the tannery on wagons with wide bark racks (Davis, undated, Olive Free Library). Along with the resident population in the hollow, there was also a floating population of mostly Irish (Davis, undated).

The Kanape area has had more large fires than any other part of the Catskills. Several large and numerous smaller fires have created distinctive pitch pine-oak-heath rocky summits on Ashokan High Point and the northerly and westerly ridge tops (Reschke, 1990). These summits (including meadows) have been repeatedly burned for over a century. Back in 1891, the Kanape Brook and southeastern slopes of Ashokan High Point were already being burned by berry pickers (Kudish, 1971). Dense, almost impenetrable hardwood thickets cover the repeatedly burned ridge northwest of High Point. The table below summarizes fires which occurred in the area from since 1938.

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Table 2. List of Wildland Fires from the Kanape Area

Acres	Date	Location
125	October, 1946	Hoopole Mt, Ashokan High Point
400	October, 1961	Watson Hollow
1000	Spring, 1969	Hoopole Mt, Ashokan High Point
500	Spring, 1980	Hoopole Mt, Ashokan High Point
2	Summer, 1993	Ashokan High Point

To keep the fires (many of them set by the locals to encourage blueberries) from spreading, the staff of the old Conservation Department used scythes to create firebreaks at intervals on the Ashokan High Point ridge in the 1940s and 1950s. An old fire road starts on Hoopole Mountain.

In 1850, many people in the area worked picking wintergreen leaves and berries. This crop was used in operating a distillery which produced almost 400 gallons of strongly aromatic liquid a year. This low lying, sun loving plant was particularly common in the Ashokan High Point Mountain area. Flax and sheep were often raised on the area's farms and the wool and flax fibers were processed by local carding mills (e.g. Samuel Adams Carding Mill) (Van Steenbergh Sickler, 1976).

Hoop shaving was carried out along with charcoal production. The peak west of Ashokan High Point bears the name Hoopole Mountain. Cooperage, as it was also known, was something of a fine art. The best hoops were made from hickory and ash trees from the second and third growth forests after the original hemlocks were cut for bark. The work was done in fall or winter in a small warm shed or shanty near the trees. Foreign countries sometimes contracted for the hoops. The price for finished hoops was \$3.50 - \$5.00 per thousand. This industry was eventually replaced by more economical means to make hoops (Van Steenbergh Sickler, 1973).

By the 1850s, a vacation anywhere for miles around was considered incomplete without a visit to Ashokan High Point (Davis, undated, Olive Free Library). The following passage is from Alonso T. Clearwater's History of Ulster County (1907, p. 326): "The mountains of Olive are romantic and picturesque ... [from High Point] the view of the south, east and west has been called the finest in the Catskills. On High Point and Round Mountain [i.e. Little High Point], huckleberries abound. The Point is level on to and all about are great flat rocks where names have been cut by visitors, some of the

inscriptions being very ancient. To the north and northwest is a succession of mountains as far as vision extends." (Olive Natural Heritage Society, pers. comm.)

Today, the valleys continue to attract visitors and second homes. Local legends persist, including one describing a small pool of water on the summit of Ashokan High Point ridge which rises and falls with the tides of the distant Hudson River (called "the tidal pool"). Legends were often started by enterprising hotel owners trying to make their area popular. Local people say the anchors on the mountaintop were part of a water tower for a scrapped attempt to build a mountain house "hotel", but not enough water was found on the site and the plan was abandoned. Another local legend reports that a large flagpole on the mountain was once visible for miles. High Point was, however, the site of a U.S. Geological Survey Triangulation Tower because of its prominently visible location.

In Canape [Kanape] Hollow, as elsewhere, the farms have gone back to nature, falling into ruins or burning. In "The Eden of the Catskills: A History of West Shokan," Elwyn Davis summarizes the fate of this area:

"With the burning of the [Watson] tannery about the winter of 1870, the star of Watson Hollow was setting, a temporary makeshift was used to take care of the supply of green hides and bark not destroyed, but the tannery was not rebuilt. Already the surrounding mountains were being depleted of their supply of bark and timber. Many being thrown out of work, with their families left the hollow. One by one the mills were abandoned and fell into decay, making less and less employment, and only the established farmers remained."

Quarrying was an important industry throughout the northern half of this unit. The bluestone was used in cities for sidewalks, curbing and other construction. Henry Davis quarried from the blue stone ledges at the head of South Hollow (Davis, undated). There are still trail remnants and roads to Ashokan High Point through South Hollow. Longstreth (1918) mentions this area with respect to the diggings of "deluded prospectors who thought they at last found gold." There were bluestone quarries at the foot of Ashokan High Point and South Hollow, also Acorn Hill and Krumville (Van Steenbergh Sickler, 1973). The Coons boys operated on the Peekamoose Ridge (perhaps the origin of the name still carried by an old town/woods road near Porcupine Road). The California quarry under Ashokan High Point was another source of bluestone (Davis, unknown). Mine Hollow, which enters Watson Hollow, may have once had a small silver mine (Ulster County Historians, 1983). Today, rock piles in offbeat places are all that remain.

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In 1875, the stone yard of Hewett Boice was the receiving point for much of the region's bluestone. In its later years, until closing in 1907, it was operated by Samuel Coykendall, who at intervals owned land throughout the area (Van Steenberg Sickler, 1976).

3. Historic Origins of Place Names

Part of the land of Kakalarimine, of Cacawolomin, of Moonhoaw and their tribe, the Rondout Valley was probably first used as a hunting ground by these and other Lenape Indians. Impressed by the vastness of the region, they named it Peekamoose, meaning "big place" in their language (Dice, pers. comm.). Other Algonquian Indian tribes undoubtedly used the area.

When the Europeans arrived, they gave their own names to many places. Most roads and mountains through the unit are named after an earlier settler, the first European owner and so forth. Sometimes the origins of names are blurred. For example, another version of the origin of "Peekamoose" is found in the pages of the logbook maintained at Peekamoose Lodge. Per a 1909 entry by H. E. Ennist of Shokan, New York: "Rev. J.W. Hammond boarded with John Bush in 1859 and on Breath Hill, spending a month in the region of the Rondout stream, returning from the dome shaped peak he called it 'Peak-of-Moss.' This was the first name given."

The tiny hamlet of Ladletown was once called Pardeeville (after John Pardee). Ladletown gets its name from a wood turning factory that manufactured commercial ladles, paddles and spoons (New York State Water Resources Institute, 1992). DeWittville, once called Pottersville, was renamed after Abraham Dewitt, co-owner of the Dewitt and Reynolds Tannery and the first Town Supervisor (Elias, 1993).

According to Quinlan, Claryville was named after Clarissa, the wife of Stephen Curry whose father, James Curry, owned the lands where Claryville now stands in 1795 (Quinlan 1873). However, Bob Dice, the Town of Neversink Historian, attributes Claryville to Clary Curry, the wife of farmer Jim Curry who lived across from the Snyder and Bushnell Tannery (Elias 1993).

Sholam, as it is now known, was once called Bruynsville after Edmund Bruyn. Sholam is the Hebrew word for peace (although in Yiddish, the spelling is Sholem). Here, in 1837, a small band of Jewish people bought 500-acres sight unseen to establish the first Jewish agricultural settlement in this country (Terwilliger, 1977). The colony failed by 1842 and the land was repossessed. David Divine took title at that time.

The origin of the name Lackawack is unclear. A few other versions of the same place are Lagewack, Laughawake, and Ragawack. A fort was probably located at Lackawack but is said to have burned in 1781. The fort, constructed in 1779, might have been near Rte. 55 and the Rondout. Sugarloaf Creek was once called the Luren Kill (Terwilliger, 1977).

Sundown takes its name from the area which then was heavily forested with very tall hemlocks so little sunlight reached the forest floor. Bathed in a green gloom, the sun always seemed to be going down. Hence the name Sundown.

C. General Access

Several roads provide access to the unit to the automobile traveling public. Many but not all the above are town and county roads. A detailed description of these roads will not be included here as they are more easily located on the accompanying map on page 18 of this plan.

For additional information, U.S. Geological Survey topographic maps and several excellent Catskill guides, including a series of trail maps from the New York-New Jersey Trail Conference, are available from sporting goods stores or hiking clubs.

Sundown Wild Forest Unit Management Plan

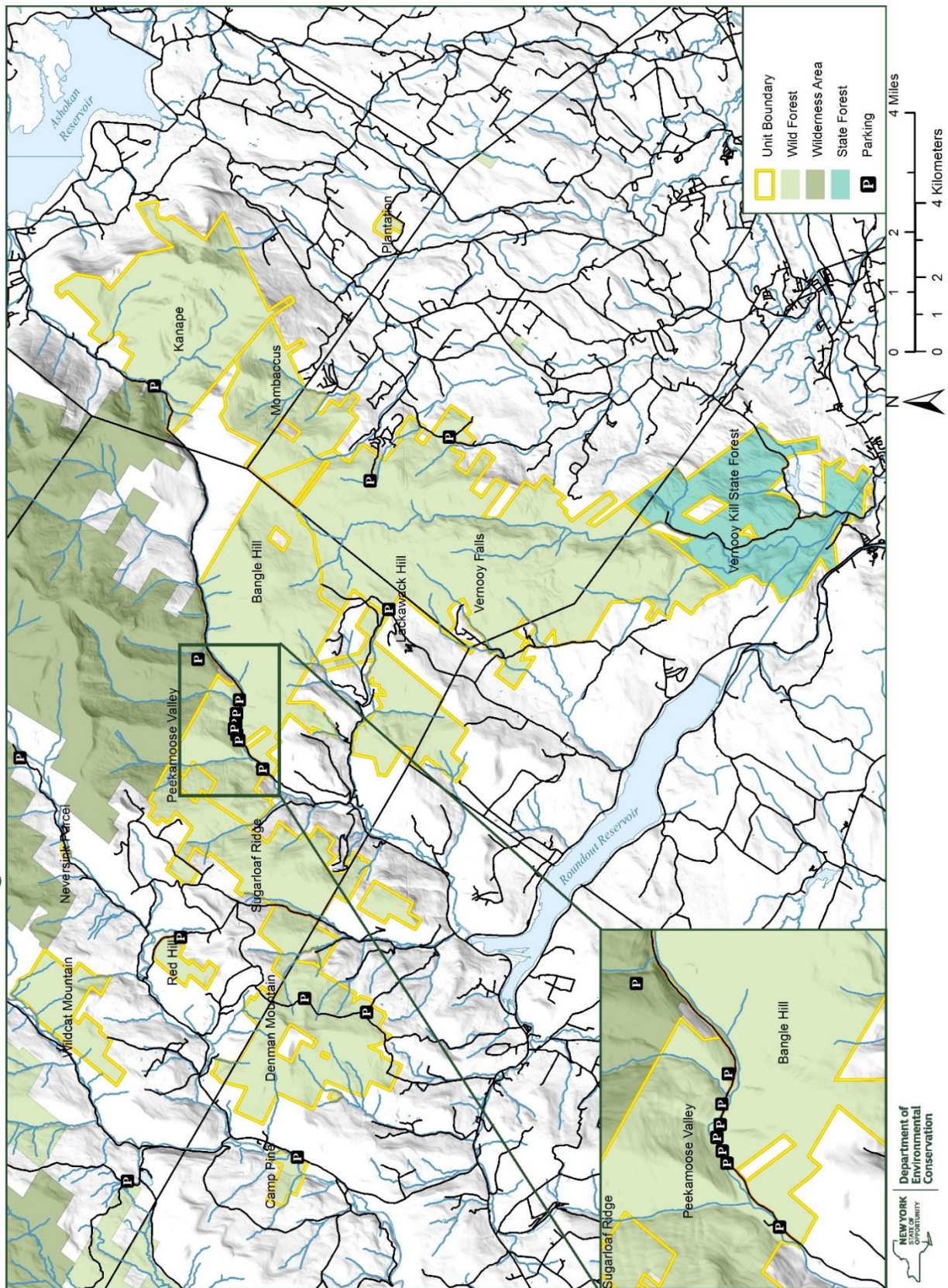


Figure 2. Unit Access Map

1. Existing Easements/Deeded Rights

Over the years, the Department has secured various easements to facilitate safe access to and the administration of the lands contained within this unit. Conservation easements are a viable option for use by the State to acquire interests in real property. They are used when a fee purchase is not desired, not feasible or not negotiable. Each easement is negotiated between the landowner and the State, and subsequently each one is different. The Department utilizes conservation easements to conserve natural resources, limit use and development, limit subdivision and fragmentation, ensure sustainable forestry and provide opportunities for public recreational use. The Department will pursue conservation or public recreational easements from willing sellers as alternatives to land acquisition when and where it is appropriate.

Descriptions of privately and publicly held easements that impact the access and administration of this unit are detailed below. Table 3 provides a summary of actions that will be required to resolve any contested access or right of way issues. Further research and legal review will be required to resolve access issues and clarify and resolve public access through easements or old town roads.

In the interim, the Department will clearly mark all known and established public rights-of-way and easements through private lands with signs informing the public to stay within the roadways. This will reduce or eliminate public trespass on adjacent private lands and unwanted or illegal parking along roads.

a. Private Easements over Public Lands

1. Lackawack Hill (East Mountain) easement over State land in favor of adjoining landowner - 0.31 mile.
2. A 0.5-mile private right-of-way through State land starting at the Vernooy Kill Falls Trail parking lot located on Upper Cherrytown Road.
3. Central Hudson owns a 20-foot wide utility line easement which runs parallel to Peekamoose Road (County Rte. 42), extending from the western bounds of the State land in the Peekamoose Valley area to the east. The utility line easement ends at the Trailer Field, the location of the former Morrell Estate.

b. Public Easement Over Private Lands and Other Access Points

Below is a list of access locations and brief descriptions of any known, unresolved access and right of way issues associated with this unit. The information presented for these 22 locations is a starting point. Some of the research is detailed while some is still in progress. New information from adjacent and affected landowners and town records is always welcome. The Department will work with affected landowners to arrive at a

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clear position on the status of each access location. The information is invaluable for consistent and meaningful planning on public lands.

In all the 22 cases discussed below, and in any that may come up in the future, DEC will not and cannot, constitutionally, supersede private property rights without the existence of a legal right-of-way, easement, or title. DEC will seek a legal determination to clarify rights and reservations on private lands surrounding the unit when necessary.

1) South Hollow Brook Road; Town of Olive

The road is currently used by hunters and mostly residents, who camp at several sites along South Hollow Brook (3 sites are significant). The road continues roughly to the source of the brook and deteriorates as it climbs further up the mountain ridge to the north.

The Department believes public access rights are firmly established at this location. The Department will consider alternatives to provide limited public access and parking and provide signage and camping policy guidance. If necessary, limited purchase of access easements for parking for public use will be sought.

2) Freeman Avery Road; Town of Olive

Based on research conducted on November 21, 1990 by Department staff, it was concluded that use of the road is limited to administrative access only. A brief summary of the determination is included below:

"In conclusion it was found that the "Kanape Road" was laid out as a town road by the Commissioners of Highways of the Town of Olive in the Year 1835, and that the said road was not found to have been filed as being abandoned with said town. The affidavit signed by David Smith dated November 29, 1920 states that "...no roads or lanes are used by adjoining owners or by the general public...." This affidavit predates States ownership of the "Noah Barringer Lot" through which the said "Kanape Road" passes through. On NYSDEC. Map No. 3040 the "Kanape Road" is shown as a truck trail, which was maintained as a fire truck trail by this department until the 1960's. Therefore, it appears that the State of New York would only have an administrative access based upon the fact that the "Kanape Road" was laid as a Town Road and that when it was abandoned from non-use, the public lost the right to travel along such road, but that each individual owner will maintain his right to travel over such road. This right passed to the State of New York when the lands were purchased on which this road previously served."

The Department does not undertake routine maintenance of Freeman Avery Road; however, administrative access including forest fire control continues.

3) Haver Road; Town of Olive

The State has public access rights from the end of the town-maintained portion of Haver Road. According to research conducted by Department staff:

"The State has the right for public access based upon a certain deed between Edgar Palen and Ellen K. Palen to Polle Abramowitz and Richard Oleck filed in the Ulster County Clerk's Office in Liber 512 Cp. 39, dated July 4, 1925, and recorded on July 24, 1925. Said deed states"... Excepting and reserving unto John Beesmer, his heirs and assigns, a right of way over a portion of the premises above described as the same is now used and enjoyed by said John Beesmer..." The above stated right of way leads to the parcel of land that the State purchased from John Beesmer by a certain deed filed in the Ulster County Clerk's Office in Liber 516 Cp. 518, dated March 5, 1926 and recorded on April 19, 1926, known as the "Pine Timber Lot." Though there is no actual mention of the above stated right of way, the appurtenance clause within the deed covers all rights and interest of the parties of the first part in and to said premises, which gives the State the right to use said road as public access."

4) Bear Spring Road; Town of Rochester

This road, a dirt woods road, leads to what is known as the "Rose" Lot on the town line with Olive (Map No. 9003, Project Q-CFP Ulster 113, Proposal No. 1788 - Samuels).

From Liber 1110, Pg. 1068, Jacob Gray to Earl Edgar (1961), public access to State land is assured anywhere along this road. The owners of the 'Rose' Lot, an inholding here, retain a right-of-access on Bear Spring Road. In Liber 1059, Page 425 (1959), Gray gave himself access from the public road to the upper part of the lot when he sold the lower portion. In Liber 1110, Page 1068 (1961), Jacob Gray reserved to himself, his heirs and assigns, the adjoining lot owners, and the public at large a right-of-way in both directions across the small lots which are now owned by the State. To the west of the road, the right-of-way, presently not used, is the only identified viable access to the Gray lot inholding. The right of way to the east of Bear Spring Road could also be used by landowners there. The right of way is defined as: " a strip of land 50 feet in width for the public road which is proposed to cross the northerly portion of the property herein described, for all purposes of ingress and regress over and through the premises herein conveyed as and for a public road."

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According to an assessment done for DEC purchase of the Edgar Property (final purchase in 1989) the road is not a town road.

Currently, a driveway leading from Trails End Road/Spencer Road to the Gray family cabin is being utilized. A Temporary Revocable Permit (TRP), limiting the use of the driveway to a specific 2-week period in the spring or fall, will be required, consistent with Department policy. During this mutually agreed upon period, motor vehicle access for purpose of restocking of provisions to the cabin will be allowed. Except for access via a TRP, the deeded access must be utilized.

5a) Tarantino Access; Town of Denning

No legal Right of Way (ROW) has been identified to allow the operation of motor vehicles through Forest Preserve lands to reach the Tarantino (formerly O'Reilly) cabin from Spencer/Trails End Road. The Tarantinos have been given the option, pursuant to Department Policy, to apply for a TRP to use the existing roadway for a period not to exceed 2 weeks (letter - Judith Ferry to Richard and Deborah Tarantino, August 10, 1993). The State retains the right of administrative access through this inholding.

No deeded access can be found through Lots 5 and 4. Although a deeded access was alluded to through Lots 9, 10, and 11 for Lot 8, no access was found through Lot 12.

5b) Lot 12: Town of Rochester

Lot 12 was sold to the State on October 20, 1975 (Hoar & Murray to New York State, Liber 1345, Pg. 50 - Q-CFP Ulster 101.3). A 2.0 acre, 40-year, occupancy agreement existed on the property until October 20, 2015 for the existing camp:

"EXCEPTING AND RESERVING, however, to the party of the first part, their heirs or assigns, the right to use and occupy, for a period of forty (40) years from the date of title transfer, the existing camp and approximately two (2) acres of land fronting on the northerly side of the road which crosses the extreme southerly corner of the above described premises. Together with any and all existing rights of ingress and egress along said above mentioned road, for the purpose of reaching said parcel."

The "use" so reserved specifically included the right of the sellers, their heirs, or assigns to make major improvements to the existing camp or, at their discretion, to raze same and construct or reconstruct one improvement of similar or better construction. The sellers, their heirs, or assigns further had the option of removing the above-mentioned improvements from the 2-acre use reservation at any time prior to the termination of the above referred to 40-year use period. Any and all improvements which remained upon

the "use parcel", on the termination date of the use period, became the property of the State of New York, with no further compensation.

6) Van Aken Access; Town of Denning via Dymond Road

This woods road provides what appears to be public access to State lands (L 1307, Pg. 720) without any significant limitations:

"AND ALSO THAT TRACT OR PARCEL OF LAND, situate, lying and being in the said Town of Denning, being one quarter of the Lot of land purchased by Sylvester Bartholmew of Pratt and Samson of Gulian C. Verplank and known as subdivision one of the same lot as No. 16. Containing 25 acres more or less. Excepting and reserving a road on the south side, being the south and west corner of the said lot and situate as aforesaid.

TOGETHER with the right and privilege of all times hereafter and for all purposes to use the road known as the road leading to the Dean lot for the purpose of ingress and egress which said road is located wholly or partly upon the premises of the party of the first part and leads to and from the above described premises."

7) Holly Road; Town of Rochester (Yagerville)

From 1875 Beers and Co. maps, it appears that the road leading through Yagerville, known as Holly Road (which now does not continue past the "Humphrey Farm"), at one time connected with the woods road on State land (near the corner). State land at this location is about 600 feet from the current end of Holly Road (which once led along or through a re-vegetating field) and less than 100 feet from a recently created subdivision road called "Blueberry Hill Road." Holly Road was once the main road connecting this area and the Vernooy Falls Mill/Pottersville/etc... (Beers, 1875 and others). The State retains at least administrative access to the State lands at this point. The woods road is in good condition and, except during minor blow-downs, can be driven for 1 to 2 miles. It appears to be lightly used by hunters and has been cleared of smaller obstructions.

8) Private Access through Krumville Plantation via Browns Road; Town of Olive

A woods road traverses the parcel in the northeast corner connecting Browns Road with 3 cabins/houses on adjacent lands. Although part of the road was once an access to the property's former farmhouse, it now continues northerly to the three other houses. The use of State lands to access private lands by motorized vehicles or equipment needs clarification (Project is John Vandemark Lot, Map #3540; 1949).

I. Introduction

Forest Ranger Captain Wood (retired) of the Forest Rangers, New Paltz, and file correspondence indicates that in the 1950s, a logging operator illegally added a new road spur to the existing road and was fined. However, since the new road was less steep and in better shape than the old, a temporary revocable permit (TRP) was issued for the limited duration of the logging operation. Subsequently, it appears the adjacent owners continued using the road. The situation was again researched in the late 1970s when a large truck was needed by an adjacent landowner for construction and a TRP to clear and widen the new road was requested. The application to construct a new road as well as the widening of the existing road was denied. This research concluded that abutting landowners have rights over the old road but not over the newer section now being used. Therefore, the landowners using this road can maintain and repair the original roadway at the width indicated on the 1949 map (less than 15 feet wide). The road may not be widened.

Currently, the landowners appear to be using both the new spur and the old road. The use of the new spur, if granted through a temporary revocable permit, will be for a limited time under special circumstances. This spur will be blocked with a gate to prohibit unauthorized motor vehicle access.

Additional research is needed. DEC is not authorized to grant access rights to undeveloped properties farther to the north unless clearly deeded in the past.

9) Mancuso Road; Town of Wawarsing

When the State bought the strip of land known as the Kosser Lot along upper Mancuso Road, it guaranteed public access. At that time, a level parking pull-off was created along the road and signs posted including "Parking" and "No Motorized Vehicles Beyond This Point". These signs will be maintained. The road is in poor condition going up the last steep pitch and should be improved. It is a dirt road which can only be accessed by 4-wheel drive vehicles. Mancuso Road has since been abandoned by the town before it reaches State land. However, the public right of access to State land is firmly established at this location.

10a) Lackawack Road; Town of Wawarsing

Reverse side of Mancuso Road (Southwesterly access to Lackawack Hill). The public has a right of access to State land (Liber 1474, Page 652, Ulster County portion of Lots 575, 576, Great Lot 5).

"ALL THAT CERTAIN PIECE OR PARCEL OF LAND situate, lying and being in the Town of Wawarsing, County of Ulster and State of New York, forming a portion of Lots

575 & 576, Great Lot 5, Hardenburgh Patent, and is more particularly bounded and described as follows:

BEGINNING at a pile of stones at the southeast corner of lands formerly of Cornelius Osterhoudt and runs thence along said lot, N. 47° E. 11 chains and 65 links to the center of the Public Road; thence along said road the following 9 courses and distances: (1) S. 30° E. 7.00 chains; (2) S. 41° E. 8.00 chains; (3) S. 40° E. 4.00 chains; (4) S. 30° E. 6.00 chains; (5) S. 15° E. 5.00 chains; (6) S. 6° E. 2.00 chains; (7) S. 12° E. 3.00 chains; (8) S. 24° E. 4.00 chains; and (9) S. 30° E. 1.57 chains to lands now or formerly owned by Robinson Hill; thence S. 47° W. about 9.00 chains to a pile of stones on a ledge of rocks; thence N. 16° W. about 21.00 chains to a pile of stones; thence N. 49° W. 21.75 chains to the place of beginning."

10b) Lackawack Hill (Private Easements Liber 975, Page 82); Ulster County

"ALSO A RIGHT OF WAY, in the Town of Wawarsing, Ulster County, New York, across premises formerly of Rufus Brooks and one rod wide, the following line being the center of the road:

BEGINNING at the road running across the premises of the said party of the first part and now districted and numbered 117 about 4 rods north of his south line and runs 11.70 degrees E. 1 chain, thence S. 72 degrees E. 2 chains; thence S. 84 degrees E. 3 chains and 50 links; thence S. 59 degrees E. 1 chain 50 links; thence S. 47 degrees E. 3 chains; thence S. 60 degrees E. 1 chain 50 links; thence S. 61 degrees E. 2 chains 15 links; thence S. 74 degrees E. 1 chain 55 links; thence S. 56 degrees E. 3 chains 8 links; thence S. 42 degrees E. 2 chains 8 links; thence S. 54 degrees 2 chains 54 links to the lands of John Amthor. Now the intention of this instrument is not to convey away the title of the land, but to grant a privilege to the said party of the second part, him, his heirs or assigns forever to work upon, travel over or use in any way in which any public highway is used. It is also further agreed that there shall not be more than 3 gates made and kept in repair by the party of the second part."

Traverse of ROW originally granted Aug, 1861 (Bk 233, Page 493).

10c) Lackawack Hill Road, Town of Neversink/ Wawarsing

Lackawack Road once connected to East Mountain Road off Route 153 (to the west). A road still almost reaches State land here (to nearby private lands). Any access which might exist at this location will likely not be utilized. Additional research is necessary to determine the status of this road in relation to potential public access.

11a) East Branch Rondout Creek, Town of Denning

(Q-CFP - Ulster 216, Town of Denning, Great Lot 6, Regional File 3-096.)

The People of the State of New York do not have access over the intervening lands connecting State lands to the east branch of Rondout Creek. In this area, the only access is over lands owned outright by the State. There are no plans to develop additional access in this area. The area near the Kosser Lot (Q-CFP Ulster 216) has no access based on October 24, 1986 letter/findings of J. Doherty, Associate Attorney, Dept. of Law to James West, Real Property Services; as follows:

"Since that was so, and the fact that the abstract of title revealed no express provision for access, I had Mr. Dunham run title back to the common owners of the various tracts looking for express provision for such access, but none was found. Since it is almost impossible to have a truly "landlocked" parcel, we sought to establish access on a theory of necessity. The attached "Proof of Access" found such access.

Since the State is already the owner of abutting parcels to the east and west, which each have frontage on the legally opened highway, Sundown Road, the necessity aspect of the access easement is removed, and therefore, under the rule of strict necessity adhered to by New York courts, the access over intervening lands of others is extinguished and terminated. All of Ulster 216 must from the date of vesting find its access over other State lands to the east and/or west."

A grant of access from Kanegis and Williams was drafted at the recommendation of the Law Department to clarify access problems during acquisition, but these grants were never executed. There is no indication that any attempt was made to approach the owners of the adjoining properties.

11b) A right-of-way to State land exists as described below; however, it is usable only for the removal of timber, which is not permitted on Forest Preserve lands. This right is not limited to the 27.13 acres since other State lands adjoin the parcel. Administrative access by DEC personnel may be asserted through this deed.

"...the express, record timber removal grant of access in favor of the more northerly northwest 27.13 acres (Parcel C of the deed to Westkill Tumble Weed Ranch, Inc.) as created in Liber 1205 of Deeds, page 367, the deed to Westkill's immediate grantor in 1958. It recites:

"TOGETHER with a fifty (50) foot right-of-way and easement for purpose of ingress, egress and regress leading to the premises above described from the Sundown-Greenville Schoolhouse Road, said right-of-way and easement crossing lands

belonging to the party of the first part as the log hauling road and skidding area now exists but in no event to be less than fifty (50) feet in width. The aforesaid easement and right-of-way shall be perpetual in nature, shall run with the land, but shall be limited to the purpose of removing timber from the premises herein above described and which are being conveyed to the party of the second part.”

It is the position of the Department of Law (Doherty, 1986) that the right to remove timber, over this right-of-way, carries with it the right to use the expressly granted right-of-way as access for the protection of the timber in the areas of fire, vandalism, illegal cutting, etc., even in the face of "forever wild". Therefore, administrative, as distinguished from public, access should be asserted to this "woods road". However, not only are these rights limited in the scope of activity allowed, but geographically to the 27.13 acres.

12) Access to Property South of Sugarloaf Mountain, Town of Neversink, Sullivan County

(East of Sugarloaf Road, Town of Neversink, Sullivan County, acquired May 2, 1930 from Hazel Low and Ada Sheeley and described on Page 472 of the Twentieth Annual Report [1930] of the Conservation Department). This property is made up of the easterly half of Lot 544, the westerly half of Lot 547, about 1/4 of Lot 543 and less than 1/2 of Lot 548.

The Attorney General's office has been successful in obtaining 2 correction deeds as follows:

1. Hazel M. Low and Ada Cross Sheeley to the State, dated September 30, 1958, recorded in Sullivan County Clerk's Office on February 19, 1959, in Book 576, page 294.
2. Kathleen Barkley Wise to the State dated December 15, 1958, recorded in Sullivan County Clerk's Office on February 19, 1959, in Book 576, page 298."

A correction was made. Map #2184 and 3753, taken in conjunction with a December 1884 deed between A and P Law and Judson Tompkins, indicates that the access to this State land was through Lots 535 and 544 (E. Smith, Low) and still exists today. A search in county deeds/map located the Euphratus Smith Farm. From this map and deed it appears that the right-of-way is that road shown on the old 1923 U.S.G.S. topographic map extending southwest to northwest just north of Lowes Corners. Administrative (and likely public) access is preserved.

I. Introduction

13) (Robert) Van Aken Road, Denning, Ulster County

The 1956 proposed “Road Abandonment Map of the Town of Denning” shows Van Aken Road as a road to be abandoned on July 6, 1956 (from the Robert Van Aken residence to Sugarloaf Mountain). The 1956 abandonment never took place. Since the State was the owner of substantial land holdings at the time of the proposed abandonment, the right of public access is retained.

Currently, the access road on the east side of the ridge is blocked by a farm gate and field. Necessary steps should be taken to clearly reestablish public access rights in this area. The files indicate a history of illegal road closing by the adjacent landowner despite DEC and public objections. The road is still blocked today.

On the west side where Van Aken enters Sugarloaf Road, the woods road has been damaged by an adjacent owner who has repeatedly ditched and dug holes in the roadway to prohibit public access. The woods road provides good access to State land and will be repaired, posted and patrolled to maintain accessibility.

14) Balace Road (a/k/a Ike Cross Road or Main Moe, a/k/a Red Hill Road along High Falls Brook), Town of Denning, Ulster County (Proposal #654, #345, #457) March 1928 (H.P., Great Lot 6 - Denning Tract).

This road is drivable to just short of State land (beyond last house becomes too rocky, although old roadway still visible). Road abandonment was proposed on July 6, 1956 but never took place. Since the State-owned substantial land holdings in 1928, the right of public access along this road is still retained. Lots 32, 41 were bought in 1928 (532/35); Lots 40, 33 (530/558) were bought/recorded April 23, 1928.

15) Van Aken Knolls Road, (a/k/a Mike Combs Road) Town of Denning.

Runs easterly from Red Hill Knolls Road to intersect with the access road south of Porcupine Road described under 16. This woods road, which once was more substantial, now looks like a farm road. Two (2) accesses to State land are not needed in this area. The better road is off Porcupine Road (see#16 below)

16) Road south off Porcupine (formerly Woodhall) Road

Also known historically as Stone Cabin Brook Road, Town of Denning, Ulster County (Lots 43, 42, 32, Hard.P., G. L. 6 - Denning Tract).

These roads (Nos. 15 and 16) are again shown on the proposed Road Abandonment Map of the Town of Denning, dated July 6, 1956, which never took place. The State-owned substantial land holdings from April 1928; therefore, the right of public access

along the roads is still retained. The road south of Porcupine Road is used as access by Lot 31, which contains a private inholding.

17a) Red Hill Fire Tower ROW, Forest Preserve Proposal 631.

Liber 528/254, November 15, 1927 gives State access via ROW to Red Hill Fire Tower, but if the fire tower is removed, access is extinguished (Jan 93 memo from R. Burgher to Fred Gerty).

"The right of way was specifically conveyed for the purpose of a "trail and telephone line" to the fire tower. It would be my opinion that the use of this right of way must be limited to gain access only to the fire tower and only until such a time that the tower is removed from Red Hill. Upon removal of the fire tower, this right of way will be extinguished. This right of way cannot be used for general access to the State Forest Preserve lands as that would cause a conflict with the wording of the conveying instrument." (Access is limited for the purpose of visiting the fire tower.)]

17b) Liber 1468/963, June 28, 1982 grants temporary permission for administrative access to the fire tower from Red Hill Road.

"Grantor certifies that he has not given the State of New York written permission to use the Fire Tower Road on said premises and that the State of New York has been using same only by his oral permission on a temporary basis and that this permission can be rescinded at any time. The Grantor further certifies that the Fire Tower Road IS NOT A PUBLIC THOROUGHFARE."

This permission was canceled by the owner in 1995. This property has since been sold. The current owner is DEP who bought this property as part of the 1997 Watershed Agreement to protect lands within the New York City watershed. Although the Red Hill Fire Tower access road is still gated, DEC has a lock on the gate and has been granted permission for administrative access to the fire tower.

18a) Bungalow Brook Road, Town of Neversink, Sullivan County.

The road is indicated on an 1809 map copied in 1932 by Edward West from the office of William George, Liberty, N.Y. (Map #2030). Bungalow Brook Road was, in the 1800s, one of the main access roads to several farms (including Denman, Darling and Westwood). The road is also shown on the Beers Map as well as a copy of an 1830 map "of the east part of Great Lot No. 5 of the Hardenburgh Patent" (#1822) and a 1932 tracing of part of Great Lot 5, Hardenburgh Patent (1809, DEC Map #2030). Bungalow Brook Road, along its "maintained portion" is referenced as Town Road No. 11. An easement was required in a 1987 subdivision to widen Bungalow Brook Road to 50 feet. The Neversink Highway Department, at a 1984 Planning Board Meeting, stated that it

I. Introduction

was responsible for the first 0.25 miles of Bungalow Brook Road. Most of the State lands along this road were purchased around 1931-1932. No evidence of formal road abandonment has been found; therefore, the public retains the right to use the road for access to State lands. State ownership and use by other owners, including inholdings, confirms that the public right of access exists.

18b) There are 2 inholdings within Lot 540, [excluded in 1975: 10-1-2 – Reginald Schillinger 628/131 (200 x 200 feet) and 10-1-3. Clarence & Viola M. Wood 727/732 (200 x 200 feet)] on Denman Mountain (Project Q-CFP Sullivan 68) and one within Lot 518, each approximately one acre in size [10-1-4, Denman Mt. Hunting Club 200 by 200 feet along northern line].

These are shown as Lots B, C and A respectively on DEC Map #9469. All the inholdings and adjacent 2 lots, now State owned, have a right-of-way from the Claryville side of Denman Mountain described as follows:

"Said deed recorded in Deed Record 608 at Page 310 also gives a right of way for a road 3 rods wide to be used for road purposes only. Right of way starts at north west line of lot described in said deed where the old Town Road is located and is to run along said Town Road in a north westerly direction until it crosses the division line of lands of the parties of the first part and the old Leonard Moore Place."

A collapsed old bus cabin is found on the Denman Mt. Hunting Club parcel. A cabin is located on each of the other 2 parcels whose owners apparently access their lands from the direction of Grahamsville. Tree cutting has been observed throughout this area in the past, so intensified patrol and some investigation is recommended to ensure the land is protected. The State land boundary around the cabins and along Lot 528 (and nearby) should be checked, and, if necessary, re-surveyed.

18c) The Denman Mt. Sporting Club, Town of Denning

Originally Beech Mt. Sporting Club in Liber 465, Page 7 for Lot 517 - retains a right of access through State lands to a large inholding containing 122.67 acres based on a survey referenced in 1975 (Q-CFP Sullivan 68.1).

19) Lundy Easement, Town of Wawarsing

Public right-of-way (not limited to use) from Lundy Road to State land (Proposal 880-897 dated 1931) via a traverse indicated on DEC Map R483. ROW is one chain (66 feet) in width, as shown and described on this map, and was deeded as part of lands purchased from Elizabeth H. Day in 1931. The ROW begins at a point in the center of

Lundy Road, about 570 feet south of where there used to be a bridge over the Vernooy Kill at Potterville, and for 2/3 of its distance follows the old road beyond Potterville which parallels the west side of the Vernooy Kill.

The ROW passes through the Vernooy Kill's flood plain and wetlands and is very wet for several hundred feet, even in summer. Due to the State acquisition of much of the former Lundy Estate, the State now owns all of the surrounding lands; therefore, this easement has been extinguished through merger of title.

20) Frank Donovan Road, Town of Neversink, just East/Northeast of Denman, off Sugarloaf Road.

Public can access State land along this road which appears on the proposed 1956 Map of "Roads to be Abandoned" in the Town of Denning, Sullivan County Land Maps and Beers Maps. State ownership (1939) of lands is prior to any attempt at road abandonment, which was never completed. The road once connected through State land to Barnes Road. Though the road is not specifically mentioned in the deeds of Proposal 758, the use of the road by the owners of the inholding through State lands indicates the probable existence of right of public access continuing through the private land to State lands beyond.

21) Wild Cat Road, Town of Denning, Ulster County

Public can access State land along this road which was abandoned after State acquisition at the State land boundary.

Liber 498, Page 223 (Ulster County) references "the easement of a road through said premises (p/o Lots 104,105) for the benefit of owners of adjoining lots. DEC Map No. 3483 (1959) and 2084 (1936), Proposal 1320-A, Liber 173. Page 317 is made subject to having a road constructed through the lot for the benefit of adjoining landowners (Project 458, October 1922). The Wildcat Road stretch, from Ladleton to State land from the east and from County Route 47 (along the West Branch of the Neversink) south, underwent a qualified abandonment on June 22, 1932. The State owned several properties accessed by this road before that time. The road remains an access for the benefit of adjoining lots, including the Wild Cat Hunting Club; however, the woods road currently used by the Wild Cat Hunting Club to access their cabin is not a deeded right-of-way. The use of the woods spur road for auto access, if granted through a temporary revocable permit, will be for a limited time (2 weeks in spring or fall) or under special circumstances.

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22) Old Vernoooy Road (East of Upper Cherrytown Road), Ulster County

In 1957, it was determined that most likely this road was formerly a public highway that had been abandoned due to non-use. The Attorney General's Office issued an opinion that the owner of the lot east of the State land through which the road passes would retain a private easement and would have the right to maintain the road in good usable condition after reasonable notice to the State; however, the owner would have no right to widen the road or cut trees outside of the established path.

A question arose as to whether the current owner can install utility lines along this road where it passes through State land and whether the fact that this road may be an abandoned public highway has a bearing. The Department's position, barring substantial new information, is that the owner does not have the right to mature the access easement through State lands to include utility purposes based on the fact that there has never been a conveyance for this purpose.

Table 3: Summary of Actions Needed on Easements and Access Points.

Easement/Access Road	Action Needed
1) South Hollow Brook Road Town of Olive	Conclude research on public administrative access rights
4) Bear Spring Road Town of Rochester	Resolve use by local owner of Trails End Road to access inholding with TRP. Traditional access off Bear Springs Road. Confirm road Status.
5a) Tarantino Access Town of Denning	Continue to clarify the use by local owner of unnamed woods road through Forest Preserve by TRP
5b) 40 Year Occupancy Agreement along Spencer Road Town of Denning	A 40-year occupancy agreement expired on October 19, 2015. The remaining buildings will be surplus and scheduled for demolition and removal by the Department.
7) Holly Road Town of Rochester	Clarify administrative/public access rights on this historic crossing of the Vernoooy Kill Falls
8) Krumville Plantation Access Town of Olive	Allow the landowners to maintain only the original roadway width. Continued use of the recently built spur if granted, can only be through a TRP for a limited time under special circumstances. The spur will otherwise be closed.

Easement/Access Road	Action Needed
10b) Lackawack Hill private easement Towns of Neversink and Wawarsing	Monitor condition/use of the road and compliance with an access easement
10c) Lackawack Hill Road Towns of Neversink and Wawarsing	Once connected to East Mountain Road. Further research is needed.
12) Sugarloaf Mountain South Access Town of Neversink	Confirm exact location and status of access to property.
13) Van Aken Road Town of Denning	Conclude research into public access to State land from the east and west sides of the Wild Forest. Take a clear position to resolve the issue, even if a decision is made not to use the access in this UMP.
14) Van Aken Knolls Road a/k/a Mike Combs Road and Stone cabin Road (off Porcupine Hill) Town of Denning	Clarify road rights and access rights to confirm DEC intent to close Van Aken Knolls Road on State land.
17a) Easement to Red Hill Fire Tower Town of Neversink	Easement will cease if fire tower is ever removed. The easement runs along the private boundary.
18a) Bungalow Brook Road Town of Neversink	Clarify status of road to and through State land on Denman Mountain. Monitor use of the road by the 4 inholdings
20) Frank Donovan Road Town of Neversink	Clarify access rights to State lands beyond inholding.
21) Wildcat Road Town of Denning	The current use of the woods road is by a hunting club off wild Cat Road is not a deeded right-of-way. Continued use of this road for motor vehicle access requires a TRP for limited time under special circumstances.
22) Old Vernoooy Road Town of Rochester	Monitor use of private easement consistent with Forest Preserve requirements.

c. Utility Easements

Utility lines along roadways are an issue in several parts of this unit. In general, State Highway Law says roads can be 3 rods (49.5 feet wide), but an easement or right of way in fee must be granted by adjacent landowners. Since the New York State Constitution does not authorize the Department to grant such easements on Forest Preserve lands, new facilities cannot be located on Forest Preserve. The Department is

I. Introduction

responsible for ensuring conformance to the terms of existing utility easement terms. Monitoring and enforcement of utility easements is done via routine inspections by the Department.

Existing utility lines found on Forest Preserve in which the utility company does not own an easement or right-of-way may not be upgraded and alternative locations must be found within the road rights-of-way or on adjacent private land for this purpose. In addition, as in the case of Denman Mountain Road, where a permit was granted for installation of electric poles within the bounds of the highway (road) in 1947 but the line was actually installed off the road and 50 feet into Forest Preserve lands contrary to the permit, a line relocation must occur such that the line falls within the narrow right-of-way of this seasonal road. Otherwise, alternate routes over private land must be sought. Existing utility line easements include:

An approximate $\frac{3}{4}$ -mile-long phone line runs up to the Red Hill Fire Tower. This line no longer services the fire tower.

Utility lines are found along Sugarloaf Road through Forest Preserve lands.

Within the Peekamoose Valley area, Central Hudson has a power line crossing about 1.4 miles of Forest Preserve land starting at the southwest unit boundary line along Peekamoose Road and continuing to the Trailer Field.

Central Hudson has a transmission line through the Vernooy Kill State Forest which enters near Cutler/Philips Roads and traverses the unit north and then west, exiting near Meckler Road in Sholam.

Along Watson Hollow Road (Ulster County Rte. 42), Central Hudson utility poles are on Forest Preserve lands outside of the road right-of-way on the east (Kanape) side of the road. DEC must be notified of all work done on existing utility poles within these areas.

Table 3. Summary of Utility Easements and Issues	
Utility Easements	Status/Action Needed
Denman Mountain Road Town of Denning	All lines must be within the limits of the public highway. No cutting of trees permitted outside the highway right-of-way. Trimming will be minimized.
Sugarloaf Road/Dymond Road Town of Denning	New or additional occupancy of Forest Preserve lands not permitted. Cable facilities and poles not within the highway right-of-ways are contrary to Article XIV of the New York State Constitution and must be removed.
Watson Hollow Road (County Rte 42) Town of Olive	Cable facilities and poles not within highway right-of-ways are contrary to Article XIV of the New York State Constitution and must be removed.

I. Introduction

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II. Inventory, Use, and Capacity to Withstand Use

A. Natural Resources

1. Physical Resources

a. Geology

A general understanding of the geology of the Catskill Mountains, and the specific forces which shaped them, is important in understanding the unique nature of this unit.

About 350 million years ago, southeastern New York and New England were dominated by relatively high mountains. To the southwest loomed a shallow sea. The Catskills were nothing more than a large, slowly sinking delta upon which the rivers from the mountains to the east were spreading gravel, sand and mud. This sediment accumulated to a depth of several thousand feet before deposition slowed as the mountains were worn low. Then, some 200 million years ago, the delta as well as the surrounding sea-bottom of sedimentary rock began to rise to a level higher than the region of New England from which its constituents were derived. What followed was a period of erosion which is responsible for the present shape of the Catskills.

The sea bottom rock (sandstone and shale), derived from much finer sediments than that of the delta, were less resistant to erosion and gradually eroded away. The delta, being composed of cemented gravel or conglomerate, especially in the upper beds, was very resistant to erosion. Thus, the Catskills, especially the eastern Catskills where the coarsest of gravel from the ancient river delta was deposited, were able to withstand the forces of erosion and maintain their elevation. To the west, as the sediments from the ancient ocean become finer and finer, the resulting plateau was more susceptible to the forces of erosion, and consequently the mountains were worn down.

The Peekamoose Valley was most certainly within the ancient river delta, as is evidenced by the high elevation of the surrounding mountains (Peekamoose Mountain at 3,843 feet, Table Mountain at 3,847 feet, and Van Wyck Mountain at 3,206 feet) and preponderance of conglomerate rock. The valley itself was formed during the last ice age. J. L. Rich, in his book "Glacial Geology of the Catskills" writes, "A powerful stream working for a long time must have been required to cut a rock gorge so large and deep

II. Inventory, Use, and Capacity to Withstand use

as Peekamoose gorge[sic]." Rich theorizes that the Esopus Creek was once dammed by a glacier to form a large lake. This lake grew as ice lay banked up against Ashokan High Point, above the level of Wagon Wheel Gap, until the waters found a place to drain through Watson Hollow and Peekamoose. This resulted in the formation of a powerful stream which cut deeply into the erosion resistant conglomerate rock of the mountains. Today, small tributary streams cascade over the sides of the Peekamoose Gorge forming numerous waterfalls as they join the Rondout Creek. Some of the larger tributaries, such as Stone Cabin Brook (1.1 miles), have cut narrow gorges of their own. Today's Rondout Creek descends about 300 feet over about 4 miles before making its way to Sundown.

Rich (1934) explains:

"As the ice banked against the east side of [Ashokan] High Point melted down, it eventually uncovered a part of the slope lower than Peekamoose gorge [sic] [described above]. The outlet of Peekamoose lake [sic] was then immediately transferred to this new position where it cut a deep gorge now known as Wagon Wheel gap [sic]. The gorge must have been started at an elevation of about 1,600 feet, but its present bottom is a talus slope at about 1,320 feet, and it is estimated that the rock bottom of the gorge is 1,300 feet. This fixes, approximately, the lowest level of the corresponding lake (Shandaken Lake) in the Esopus Valley. At the south end of Wagon Wheel gap [sic], large fossil waterfalls and cataract basins are still preserved. When the stream first started flowing through the gap, the ice pushing in from the southeast forced it southwestward past Sampsonville, where it turned southeastward toward Liebhardt and Mombaccus. The channel that it cut at this time is large and distinct... with 2 fossil waterfalls in the bed of the channel."

The ice margin at this time stretched along the ridge from the Vernooy Kill in Wawarsing to Ashokan High Point. On the western side of the unit, on the east slope of Denman Mountain, the ice tongue was low and didn't push over the ridge at Red Hill into the Neversink Valley. Instead, it came from the southeast, up the Rondout Valley, an interesting example of the influence of topography on the direction of ice flow (Rich, 1934). The area of the upper Sugarloaf Brook was only lightly influenced by the glaciers and today remains a high plateau.

Intense natural forces have produced appealing natural features such as waterfalls, tranquil swimming holes, steep mountain valleys, broad rock terraces and cliffs, and some spectacular views along the ridge from Ashokan High Point to the Vernooy Kill. These features create a very attractive setting for hiking, picnicking, camping, hunting and other recreational uses.

b. Soils

Soils provide the foundation, both figuratively and literally, of all forested ecosystems. They support an immense number of microorganisms, fungi, mosses, insects herptofauna and small mammals which form the base of the food chain. They filter and store water and provide and recycle nutrients essential for all plant life.

Most of the soils in the Sundown Wild Forest and Vernooy Kill State Forest are derived from glacial till and belong to the Arnot-Oquaga-Lackawanna Association. These soils are extensive throughout the Catskills and in general tend to be acidic, unstratified, non-homogeneous sediments that lie on steep, terraced slopes in depth alternately shallow and deep. They are predominantly coarse textured and moderately well drained. Rocky outcrops are not unusual.

The narrow valleys include thin wedges of alluvial soils associated with rivers (riparian lands). The Willowemoc-Mongaup-Lewbeach soils in the Sullivan County section of this unit range from nearly level to steep. They are moderately well drained and confined to the uplands of the Catskill Mountains (USDA Soil Conservation Service, 1989) where most of the State lands are located.

Whether there are existing trails or new trails are proposed, best management practices (BMPs) will be utilized to ensure that the impact to the area is minimized. Public use of wetlands, wooded swamps, poorly drained areas, steep slopes, and lands near open water is discouraged. Trails and facilities will be routed to avoid such areas. In areas where this is not possible, trails and facilities will be designed to reduce erosion and minimize impact to the surrounding area.

Additional soil series description information for the unit is included in the Appendix F of this plan.

c. Water

There are many streams found throughout this unit as well as several small ponds. Some of the major water courses include the Rondout, the east and west branches of the Neversink River, the Vernooy Kill, the Bushkill, Mettakahonts Creek, Maltby Hollow Brook and the Kanape Brook. A more extensive listing of streams and their watershed codes can be found in Section II. I (4) "Fisheries Resources" within this section of the plan.

Many of these streams flow into New York City Department of Environmental Protection's (DEP) water supply reservoirs. These reservoirs supply New York City, as well as many towns along the way, with a tremendous volume of fresh water from the Catskill Mountains Region. State lands, including those found within this unit, are managed to maintain and, when possible, improve the water quality of the watersheds. The construction and management of recreational

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facilities on State lands, including such amenities as parking areas, trails, camping sites, lean-tos, and pit privies must be addressed in unit management plans which will describe the use of BMPs currently available to help minimize any impact these facilities might have on the area.

Several ponds, rivers and streams can be found within the Vernooy Kill State Forest area. A man-made pond is located just south of the old air strip in Brownville. This pond is about 2.8 acres and is fairly shallow; a concrete dam impounds the water on the east side of the pond. Slightly downstream of this dam there appears to be an older stone impoundment as indicated in the Historical Research Study, Lundy Estate, Towns of Rochester and Wawarsing, Ulster County, NY- prepared by Cragmoor Consultants (August 2000). There are also several small beaver ponds located on the east side of Lundy Road near the remains of what was once the Terwilliger farmstead.

The wetlands within this unit are concentrated in the Vernooy Kill Falls/Sundown Wild Forest area as well as the Vernooy Kill State Forest area. These valuable wetland communities require special attention for protection against over use/ degradation and all proposed management actions will reflect this objective. Small wetlands associated with stream and river banks are scattered throughout the unit. A few examples of wider stream associated wetlands or wet meadows are found on the Kanape Brook, Vernooy Kill, and Pepacton Brook (Denman Mountain).

2. Biological Resources

a. Vegetation

This unit, which contains forests, fields, re-vegetating farm fields, spruce and pine plantations, second growth northern hardwoods (NYS DEC, 1990) or slope forests (Kudish, 1971), is similar to other parts of the Catskills. The dominant trees are sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), hemlock (*Tsuga canadensis*), white ash (*Fraxinus americana*), red oak (*Quercus rubra*), yellow birch (*Betula alleghaniensis*), basswood (*Tilia americana*), occasionally (and sometimes locally abundant) black cherry (*Prunus serotina*), black birch (*Betula lenta*), white pine (*Pinus strobus*) and chestnut oak (*Quercus prinus*). Understory species include striped maple (*Acer pennsylvanicum*), American hornbeam (*Carpinus caroliniana*), hophornbeam (*Ostrya virginiana*), witchhazel (*Hamamelis virginiana*), witch hobble (*Viburnum alnifolium*), sugar maple, American beech and American chestnut (*Castanea dentata*). Some of the trees found along floodplains include sycamore (*Platanus occidentalis*), elm (*Ulmus* spp.), quaking aspen (*Populus tremuloides*) and red maple (*Acer rubrum*).

White pine, Norway spruce (*Picea Abies*), Scotch pine (*Pinus slyvestris*), and red pine (*Pinus resinosa*) have been planted at various locations in the Vernooy Kill State Forest

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part of the unit in the past. A small red pine plantation occurs along the ridge just east of Bear Hole Brook in an old pasture about 1,700 feet above sea level. This was planted in 1929 by Edward West, former Superintendent of Land Acquisition for the New York State Conservation Department. Several white pine seedlings were planted along County Route 42 (Peekamoose Road) by the Department in the late 1970s. Several small plantations containing red pine, Scotch pine, and Norway spruce are found along Rouge Harbor Road in the town of Wawarsing within the Vernooy Kill State Forest. In addition, a Norway spruce plantation is located at the southern end of the air strip in Brownsville.

Fires have affected more than 1,000 acres of Denman and Cherrytown Mountains over the last 20 years and have substantially altered the forest composition and appearance of the Hoopole - High Point Ridge near the Kanape and South Hollow for at least 200 years where hundreds of acres have burned repeatedly. Recurrent fires, set mostly by blueberry pickers, were already common by 1891. In 1891, about 100 acres, mostly scrub, burned on the southeast slopes of Ashokan High Point (Kudish, 1971). These repeated fires have stopped succession, creating the unique pitch pine-oak-heath rocky summits (without pitch pines) which are discussed earlier in the history section of this unit management plan.

Tanning hides using hemlock bark, charcoal production, hoop manufacturing (cooperage), farming, water powered mills (saw, carding, and tanning), bluestone quarrying, berry picking, and even wintergreen oil production have all altered the face and character of most of the Forest Preserve lands in this unit. On the Kanape, these past practices have created and helped perpetuate some of the more unique natural communities in the Catskills. A good example of a mature northern hardwood forest (beech-maple mesic forest) is found in the South Hollow Brook Ravine between elevation 1,440 and 2,650 feet (about 100 acres). The beech-maple mesic forest is ranked G4, S4, unprotected, which means this is a "high quality" example of a plant community quite common in New York State and the world.

The High Point massif (High Point-South Hollow-Kanape Brook) has been identified as an area of noteworthy biodiversity. Some of the species found in this area include the boreal bearberry (*Arctostaphylos uva-ursi*), three-toothed cinquefoil (*Potentilla tridentata*), hyssop skullcap (*Scutellaria integrifolia*), three-bird's orchid (*Triphora triantophora*), Bush's sedge (*Carex bushii*) and orchids (*Platanthera* spp.). The common raven (*Corvus corax*) breeds within this area. These species require a diverse habitat ranging from wetland and wet meadow to dry and fire prone lands; all can be affected by overuse, a strong indication that public use and its effects on the landscape should be monitored throughout this area.

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Some important exceptions to this mostly forested unit are the open fields found along the Rondout Creek in the Peekamoose Valley as well as along the Vernooey Kill in the southern end of this unit. These fields were associated with past development such as farming, sawmills and family estates. Four (4) principle fields exist in the Peekamoose Valley area of this unit and are in various stages of succession, ranging from barren ground at heavily used campsites to dense blackberry and raspberry patches where an occasional aspen or other pioneering tree species has invaded. In the Vernooey Kill State Forest area, several fields are found along or near the Vernooey Kill and along Rouge Harbor Road and are also in varying stages of succession. Some of these were farm fields, others pasture and still another large area was a private air strip which was maintained for nearly a century.

b. Wildlife

The distribution and abundance of wildlife species on the unit is determined by physical (e.g., elevation, topography, climate), biological (e.g., forest composition, structure, and disturbance regimes, available habitat, population dynamics, species' habitat requirements), and social factors (e.g., land use). It is important to note that wildlife populations occurring on the unit do not exist in isolation from other Forest Preserve units, State Forests or private lands. The physical, biological, and social factors that exist on these other lands can and do influence the abundance and distribution of wildlife species on the Sundown Wild Forest and Vernooey Kill State Forest. With the exception of New York Natural Heritage Program (NYNHP) surveys, comprehensive field inventories of wildlife species have not focused specifically on the Sundown Wild Forest or Vernooey Kill State Forest.

Statewide wildlife survey efforts conducted by the DEC have included two Breeding Bird Atlas projects (1980-1985 and 2000-2005) and the New York State Amphibian and Reptile Atlas Project (1990-1999). The Bureau of Wildlife collects harvest data on several game species (those that are hunted or trapped). Harvest data is not collected specific to Forest Preserve units, but rather on a town, county, and wildlife management unit (WMU) basis. Harvest data can provide some indication of wildlife distribution and abundance and is sometimes the only source of data on mammals. This unit is located within the Catskill Peaks and Neversink Highlands ecological zones.

The physical structure of the unit's forests has a significant effect on the occurrence and abundance of wildlife species. While some species prefer mature forests, many others occur in lower densities on Forest Preserve and State Forest lands than they do on private lands characterized by a greater variety of habitat types. Natural forest disturbances including wind storms, ice storms, tree disease and insect outbreaks, fire,

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and beaver activity influence forest structure and wildlife habitats by creating patches of earlier successional stages within a larger matrix of mature forest. Private lands adjacent to public lands may provide some habitat for species that prefer early successional habitats, depending on land use and the silvicultural practices conducted.

The wildlife species found within this unit are like those found in other areas of mature northern hardwood forest in southeastern New York State. The northern hardwood forest favors late successional species such as black bear, porcupine, gray squirrel and wild turkey. Species that use earlier successional stages, such as white-tailed deer, cottontail rabbit and ruffed grouse occur at lower populations in the higher elevation northern hardwood forests but can be locally abundant, especially in the lower elevation areas in the Vernooy Kill State Forest, where flatter terrain and more diverse vegetation can be found.

Deer were more numerous than sheep in the 1800s (as they are again today), and moose were often shot. Peter C. Hall made a skin from a moose killed 6 miles above Claryville (Quinlan, 1873). Wolves were also very common in this area. In 1701, New York State Law permitted the County to award 9 shillings to, "whatsoever Christian shall kill a grown wolf" (Purcell, 1978). As late as 1841, a man named Richard C. Dewitt found a den with 6 wolf cubs which he turned in for a bounty of 75 dollars (Quinlan 1873).

Today, this area is part of Deer Management Units (DMU) 3A and 3C. Deer populations are probably at or slightly above the carrying capacity in most of the unit. However, deer density can be a factor in the failure of forest regeneration where populations are higher. In some areas, high deer densities can inhibit forest regeneration and can have a significant impact on the intermediate shrub and tree layer due to overbrowsing. Winter habitat, especially in Deer Management Unit 3A, is one of the more critical factors in determining population size. Deer winter concentration areas are usually found on southern or southeastern facing slopes. Quality of current winter habitat is considered fair to poor. For more information, refer to Wildlife Section IV. C. (6).

This unit forms the southeastern edge of the Catskill bear population. Overall, it is estimated that between 2,500 and 4,000 bears live in this 1,200-square mile region. The Sundown Wild Forest and Vernooy Kill State Forest are both considered good bear habitat and contain many potential den sites. Male bears have a Catskill home range of about 25 square miles, females about 15. About 75 percent of dens occur in rock formations at about 2,300 to 2,900 feet in elevation on north facing slopes.

Fisher (*Martes pennanti*) were reintroduced into this area in the late 1970s and are now firmly established. Fisher are the only species which actively hunt porcupines. This area

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is also home to 13 other species of furbearers including: beaver, coyote, fox, mink, raccoon and bobcat - just to name a few (See Appendix B). Wildlife Management Unit 11 presently has a beaver occupancy objective of 0.30 (30 out of 100 potential habitat sites are occupied by beaver). This occupancy rate translates into approximately 0.3 active beaver colonies per square mile, or about 35-40 active colonies within the Sundown Wild Forest. The average size of beaver ponds found within this area is about 2-4 acres. Beaver alter habitat by damming streams and flooding wooded areas. Trees are cut down by the beaver or die from the flooding. As the food supply diminishes, the beaver leave, the dam breaks up, and the habitat becomes a meadow. Over time, succession begins with the establishment of brush and saplings, followed by the eventual return of a mature forest, so long as the beaver don't re-inhabit the location.

Beaver impoundments are used by many other species. A study conducted in Central New York found that over 100 species of birds use beaver impoundments in the spring (Grover, 1993). Beaver altered habitat is also important for river otter, mink, muskrat, frogs, salamanders, turtles and most other animals that live in the forest.

Coyotes (*Canis latrans*) started returning to the area in the 1950s, and by the 1970s were firmly established. Their home range is 10-15 square miles per family unit (adult pair with 4 to 5 young). Coyotes were here originally but disappeared because their habitat changed as forests were cleared for farming. Hunting played a secondary role in their disappearance. Today, the coyote population is once again thriving. Their unmistakable howl can add to the wild forest experience of the recreationist who hears it. This unit provides nesting habitat for Neotropical Birds. Forest interior and area-sensitive species including the red-eyed vireo, black-throated blue warbler, black and white warbler, Canada warbler, Louisiana water thrush, scarlet tanager, and rose-breasted grosbeak can be found within this unit. Recent research indicates that these species require large areas (7,500 ± acres) of undisturbed forest for optimal breeding habitat (Robbins et. al., 1989). Breeding species of birds include the pileated woodpecker, yellow-bellied sapsucker, red-breasted nuthatch, eastern phoebe, ovenbird, sparrows and warblers (see Wildlife Inventory, Appendix C-3).

Except for the "Atlas of Breeding Birds in New York State" (Andrle and Carroll, 1988), a formal inventory of animal life has not been undertaken in recent years. However, in "Integrating Timber and Wildlife Management" (1983), Chambers compiled an extensive listing of wildlife presumed to be in this ecological subzone. Based on his work, 22 species of amphibians, 19 species of reptiles and 51 species of mammals possibly reside in the unit. Based on Chambers (1983) and Andrle and Carroll (1988), there are 135 species of birds that may nest in the unit or use the unit during migration.

c. Endangered, Threatened and At-Risk Species

New York has classified species at risk into three categories, endangered, threatened, and species of special concern (6 NYCRR Section 182). The following sections indicate the protective status of some vertebrates that may be in the unit:

Endangered: Any species that is either native and in imminent dangers of extirpation or extinction in New York; or is listed as endangered by the US Department of the Interior.

Threatened: Any species that is either native or likely to become endangered within the foreseeable future in New York; or is listed as threatened by the US Department of the Interior.

Special Concern: Native species not yet recognized as endangered or threatened but for which documentation concern exists for their continued welfare in New York. Unlike the first two categories, they receive no additional legal protection under the Environmental Conservation Law; but, they could become endangered or threatened in the future and should be closely monitored.

The presence of at-risk species and communities in the unit has been investigated to inform appropriate management actions and protections. This investigation was conducted in development of this UMP and the associated inventory of State Forest and Forest Preserve resources. A more comprehensive and focused assessment will be undertaken before undertaking specific management activities in sensitive locations.

This unit contains habitat for timber rattlesnakes, a Threatened Species. There are several timber rattlesnake dens on or near this unit, as well as habitat for foraging, basking and breeding. The snakes are concentrated in the wetlands and wooded swamps of the Vernooy Kill area as well as the oak-heath rocky summits of Ashokan High Point and rocky slopes. These features are not commonly found in the Catskill Region. Disturbance in the wetlands and near rattlesnake dens will be avoided. The heath meadows (or balds) and summits are a result of the thin soils on the flat summit of Ashokan High Point's massive sandstone cap and repeated fires.

Although no endangered or threatened plants or communities have been identified in the unit, northern monkshood, a Threatened Species, may likely be present. The wetlands and wooded swamps of the Vernooy Kill area as well as the oak-heath rocky summits of Ashokan High Point and rocky slopes where rattlesnakes (a Threatened Species) concentrate are features not commonly found in the Catskill Region. Disturbance in the wetlands and near rattlesnake dens will be avoided. The heath meadows (or balds) and summits are a result of the thin soils on the flat summit of Ashokan High Point's massive sandstone cap and repeated fires. The unique plant

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community here is resilient, but sensitive. This plant community depends on fire disturbance, but changes have been noticed in high pedestrian traffic areas (Bierhorst, [1995], pers. comm.). If fire is eliminated, this area will slowly be replaced by oaks and eventually the shade tolerant trees common throughout the Catskills. Kudish (pers. comm.) mentions the largest stand of American chestnut he has observed in the Catskills is between 2,500 and 2,700 feet on the westerly slopes of Ashokan High Point. He reported prolific sprouting during his visit in 1984, after the 500-acre fire of 1980.

According to the "Atlas of Breeding Birds in New York State" (Andrle and Carrol, 1988), the red-shouldered hawk, a Threatened Species, was confirmed breeding on or near the unit between 1980 and 1985. However, the Natural Heritage Program has no current records of the hawks in or near the unit. Andrle and Carrol (1988) list the bald eagle, an Endangered Species, as a possible breeder in or near the unit. There are no known bald eagle nesting sites in the unit, although there is one nearby. According to Chambers (1983), the peregrine falcon and bog turtle, both Endangered Species, may reside in the unit, but there are no known falcon eyries or bog turtle populations in the unit. Peregrine falcons, as well as many other birds, may travel through the area during migrations.

The eastern bluebird, common nighthawk and vesper sparrow, as well as the small-footed bat, spotted turtle, wood turtle, eastern hognose snake, Jefferson salamander, blue-spotted salamander and spotted salamander are all "Species of Special Concern" which may reside in this unit. Special Concern species are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category, while existing in DEC rules and regulations, does not in itself provide protections.

d. Fisheries

Fisheries resources within the UMP primarily consist of remote small streams with wild brook, brown and rainbow trout, as well as a limited number of streams supported by stocked trout. Fisheries resources within the area will be managed at the discretion of the Bureau of Fisheries for the purposed of maintaining and creating quality angling opportunities. Specifically, this will be accomplished by implementing fishing regulations (season, size, and creel limits) and stocking policies, as well as management actions that promote angling access opportunities.

The Department monitors the effectiveness of angling regulations and stocking policies by conducting periodic biological and water chemistry surveys. Based on analysis of these survey results, angling regulations may be changed as necessary to protect the

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fish populations within the management area or their connected waters. Statewide angling and special angling regulations provide the protection necessary to sustain or enhance natural reproduction where it occurs.

The following is a description of the fisheries resources and concerns in the Sundown Wild Forest and Vernooy Kill State Forest area. Listed below is an inventory of the major fisheries resources by quadrangle map name. Past fisheries management has been primarily limited to the stocking of brook, brown and rainbow trout. All waters within this unit are subject to the Statewide general fishing regulations, with no special harvest regulations imposed. Most of the water resources within this area flow directly into some of the major fisheries resources of the Catskills. The Rondout Creek, the Ashokan, Rondout and Neversink Reservoirs, and the East and West Branches of the Neversink River all share the water from this area (Francis, 1983 and Van Put 2007). Many of the small streams that run through this unit and connect to these resources are intermittent and therefore limited in their potential for fishing. Some of the streams are undoubtedly important as spawning streams in the fall for brook and brown trout and in the spring for rainbow trout in the Ashokan Reservoir tributaries. Landlocked Atlantic salmon also ascend the Neversink River upstream of Neversink Reservoir to spawn in the fall. Very limited information has been gathered from many of the small streams in the area. However, fairly good information is available for some of the larger fisheries resources within and nearby the unit.

The Rondout Creek is the most prominent aquatic resource within the unit. It is a medium gradient, freestone stream of good habitat quality which is typically well shaded and characterized by cold water temperatures all year. The water in the Rondout Creek is quite soft (total alkalinity 7-10 ppm), slightly acidic (pH 6.5 - 7.0) and quite infertile.

The Rondout Creek has been the subject of a number of fish surveys dating back to 1936, and the results of these surveys are remarkably consistent over time. The following fish species were collected during those surveys: brook trout, brown trout, rainbow trout, white sucker, blacknose dace, longnose dace and slimy sculpin. Of the above-mentioned species, those that would be most typical of the 4-mile section of the Rondout Creek which traverses the Peekamoose Valley area of the Sundown Wild Forest would be brook trout, brown trout, blacknose dace and slimy sculpin. Brook trout are found throughout the Rondout Creek, from the Rondout Reservoir to the source, while brown trout tend to prefer the lower reaches of this section. Rainbow trout, which were once stocked here, are most likely only incidentally present today.

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Claryville Quadrangle

The West Branch Neversink River (D-1-83) sees a brown trout and landlocked Atlantic salmon spawning run in the fall from the Neversink Reservoir (P60-D). Where barriers are not present, these fish will move into the tributaries near the unit. The upstream barrier to salmon passage in the West Branch is just upstream of Fall Brook at an area known locally as Leroy Pool. This is located downstream of one part of the unit. Atlantic salmon were first stocked in the Neversink system in the 1950s. The current State stocking program started in 1975. Brook trout are native to the Catskills and occur in the river. Public fishing access above the Neversink Reservoir is limited, but this area is rich in angling tradition and additional access to the stream in this section would be desirable.

Below is a list of streams and rivers in or adjacent to the unit, with brief descriptions and comments on key fisheries resources.

Table 4. Peekamoose Mountain Quadrangle		
Watershed Code	Common Name	Description/remarks
D-1-82	E. Br. Neversink R.	Wild brook and brown trout: A small detached parcel surrounds the river. This stream has historically shown signs of impacts due to acid deposition, but recent studies by USGS indicate water chemistry has improved over the last 10 years.
D-1-83	W. Br. Neversink R.	Wild brook and brown trout
H-139-14-35	Vernooy Kill	Stocked and wild brook and brown trout, natural barriers to fish movement exist in the form of small waterfalls.
H-139-14-53	Sundown Creek	Wild brook and brown trout
H-139-14	Rondout Creek	Primarily a quality brook trout fishery with stocked ad wild trout present. The occasional brown trout can also be caught
H-139-14-53-2	Unnamed	Permanent and intermittent sections
H-139-14-53-1	Unnamed	Intermittent with wild brook trout
H-139-14-49	Sugarloaf Brook	Wild brook and brown trout. The headwaters are located within unit
H-139-14-54	Unnamed	Intermittent
H-139-14-55	High Falls Brook	Wild brook trout
H-139-14-58c, 58d, 58e	Unnamed	Intermittent

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Table 5. Rondout Reservoir Quadrangle		
Watershed Code	Common Name	Description/Remarks
H-139-14-44	Trout Brook (Creek)	Brook, brown and rainbow trout are located within the upper headwaters within the unit. A barrier to fish migration from the Rondout Reservoir exists, but brown trout from the reservoir do spawn in the lower sections of this stream. A survey from 2016 found only onewild brook trout present.
H-139-14-35-1	Unnamed	Wild brook and brown trout
H-139-35-4	W. Br. Vernooy Kill	Wild brook and brown trout
H-139-35-4-1, 2, 5b	Unnamed	

Table 6. West Shokan Quadrangle		
Watershed Code	Common Name	Description/Remarks
H-139-14-20-7	Mettacahonts Creek	Wild brown trout. Barrier falls and dam below the unit.
H-139-14-20-7-6	Unnamed trib.	Wild brown and brook trout
H-139-14-20-2	Sapbush Creek (a.k.a. Mill Creek)	Wild brown trout
H-171-P848-5	Bush Kill	Wild brown and rainbow trout. Important stream for spawning fish from Ashokan Reservoir. This stream has a following of anglers, fishing clubs and camps. And may receive some private fish stocking.
H-171-P848-5-2	Maltby Hollow Brook	Wild brook, brown and rainbow trout.
H-171-P848-5-3	South Hollow Brook	Wild brook trout.
H-171-P848-5-4	Mine Hollow Brook	Wild brook, brown and rainbow trout.
H-171-P848-5-6	Kanape Brook	Wild brook, brown and rainbow trout.

Unique aspects of this area include the Atlantic salmon run in the West Branch Neversink River. This is the only run of its kind within the region.

* Fish stocking projects must follow the Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation dated December 1979.

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e. Invasive Terrestrial and Aquatic Species

Non-native, invasive species directly threaten biological diversity and the high-quality natural areas in the Catskill Park. Invasive plant species can alter native plant assemblages, often forming mono-specific stands of very low-quality forage for native wildlife, and drastically impacting the ecological functions and services of natural systems. Invasive plants have the potential to spread - undermining the ecological, recreational, and economic value of the Park's natural resources.

The Catskill Regional Invasive Species Program (CRISP) coordinates invasive species management functions including coordinating partner efforts, recruiting and training citizen volunteers, identifying and delivering education and outreach, establishing early detection monitoring networks and implementing direct eradication and control efforts in the Catskill Forest Preserve.

Infestations located within, and in proximity to, the Sundown Wild Forest and Vernooey Kill State Forest may expand and spread to uninfected areas and threaten natural resources within this unit. Thus, it is critical to identify infestations located both within and in proximity to the unit, assess high risk areas and prioritize Early Detection Rapid Response (ED/RR) and management efforts. Invasive species management strategy information can be found in Section VI. Vernooey Kill State Forest Management and Projected Use. A list of confirmed present terrestrial invasives can be found within the unit can also be found in Section VI.

The invasive insects of most concern in New York State are: Emerald Ash Borer, Asian Longhorned Beetle, Hemlock Woolly Adelgid, Gypsy Moth, and the Sirex Woodwasp. If allowed to spread to the Forest Preserve, these species could bring devastating effects.

f. Critical Habitat

Critical habitat contains, or contributes to the preservation of, species listed as rare, threatened or endangered by the Department in 6 NYCRR Part 193. According to DEC's Natural Heritage Program records, this unit provides critical habitat for the Eastern timber rattlesnake (*Crotalus horridus*). All management activities for this unit will consider the probability that this species may be present in, or utilize portions of the unit.

This area is part of the Catskill black bear range and provides necessary habitat for that species. One deer wintering area has been identified adjacent to the unit. Activities which substantially diminish the quality or characteristics of the site should be avoided but this does not mean that human use is always detrimental. Pass through trails and other recreational uses can be compatible with deer wintering areas if they are carefully

considered. Trout spawning occurs throughout the entire section of the Rondout Creek found within this unit and is likely to occur in all of the perennial tributaries within the unit as well. The Eastern rattlesnake is prolific in this area, utilizing this unit for denning, basking, breeding and foraging. Care must be taken to protect this Threatened Species.

B. Cultural and Historic Resources

The term cultural resources encompass a number of categories of human-created resources including structures, archaeological sites and related resources. The Department is required by New York State Historic Preservation Act (SHPA) (PRHPL Article 14) and SEQRA (ECL Article 8) as well as Article 9 of Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law to include such resources in the range of environmental values that are managed on public lands.

As part of the inventory effort associated with the development of this plan, the Department arranged for archaeological site inventories maintained by the New York State Museum and the Office of Parks, Recreation and Historic Preservation to be searched to identify known archaeological resources that might be located within or near the unit. The two inventories overlap to an extent but do not entirely duplicate each other. The purpose of this effort was to identify any known sites that might be affected by actions proposed within the unit and to assist in understanding and characterizing past human use and occupation of the unit.

The Red Hill Fire Tower- Sundown Wild Forest

The Red Hill Fire Tower and Observer's Cabin sit atop the 2,990-foot-tall Red Hill Mountain in Claryville, New York and has been listed on the National Historic Lookout Register. The fire tower was built in 1921, has 9 flights of stairs, and stands 60 feet tall. The tower was used to spot forest fires until 1990, when the last observer in the Catskill Mountains ended his watch. The tower now stands as a historic and tourist-based attraction. There is a historical marker that can be found on Peekamoose Road that introduces the Forest Preserve lands to visitors of the valley.

Vernooy Stone House- Vernooy Kill State Forest

The Vernooy Stone House is a Dutch-American stone house dating to ca. 1760-1780, located on the west side of Lundy Road, north of the intersection with Rogue Harbor Road. According to the Historical Research Study for the Lundy Estate (Cragmoor Consultants 2000), "When this structure was built, the area lay along the frontier

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demarcating the division between settlement and wilderness and was thus subject to raids by Native Americans.” Its significance was noted during the 1969 Historic American Buildings Survey and is included among the Ulster County entries as inventory number 11 (Junior League of Kingston, New York, Inc. 1969).

The first occupant of the house was Peter Vernooy (1738-1813), the great-grandson of Cornelis Vernooy who purchased a 400-acre tract of land in 1702 and constructed a grist mill on what is now known as the Vernooy Kill. Remains of this mill can be seen just downstream of the foot/snowmobile bridge at Vernooy Falls. During the Revolutionary War, Peter and Mary (wife) were among a group of Wawarsing residents who were attacked by Tories and Native Americans during a raid of the village on August 12, 1781. An eyewitness account of the attack was handed down by Mary to her grandson, Edgar Vernooy, and it was subsequently transcribed by local historian Thomas Benedict (1913a) (Cragmoor Consultants 2000).

As part of the Vernooy Farm, the Vernooy House was occupied by 4 generations, ending with Silas in 1939. In 1939, Silas sold the property to Frederick William Irving Lundy, the proprietor of F.W.I. L. Lundy Brothers Restaurant in Sheepshead Bay (Lundy continued to acquire property along the Vernooy Kill until his death in 1977).

Upon acquisition of the former Lundy Estate, an assessment was made by both the State Preservation Officer and a private consulting firm of the buildings found on the estate property. The Vernooy House along Lundy Road was determined to have some historical significance. This structure is the only building remaining on the State-owned portion of the former Lundy Estate, now called the Vernooy Kill State Forest. The Vernooy House is believed to have been built sometime between 1760 and 1780 and is considered significant because of its Dutch-American stone construction. It is believed to have been built by Cornelis Vernooy (third generation Cornelis descended from original settler, Cornelis Vernooy, who built the grist mill at what is now known as Vernooy Falls) for one of his sons, Peter, likely as a wedding gift. This house is all that remains of the Vernooy Farm, which consisted of about 400 acres and was listed in the 1855 New York State census agricultural schedules as having produced 20 pounds of maple sugar, the only Lundy tract farmstead listed as producing this product (Cragmoor Consultants-2000).

1. Historic and Archaeological Site Protection

The historic and archaeological sites located within the unit, as well as additional unrecorded sites that may exist on the property, are protected by provisions of the New York State Historic Preservation Act (SHPA-Article 14 PRHPL), Article 9 of

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Environmental Conservation Law, 6 NYCRR Section 190.8(g) and Section 233 of Education Law. No actions that would impact known resources are proposed in this UMP. Should any such actions be proposed in the future, they will be reviewed in accordance with the requirements of SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of Environmental Conservation Law and Section 233 of Education Law. In some cases, additional protection may be afforded to these resources by the federal Archaeological Resources Protection Act (ARPA).

2. Archaeological Research

The archaeological sites located on this unit, as well as additional unrecorded sites that may exist on the property, may be made available for appropriate research. Any future archaeological research to be conducted on the property within this unit will be issued only after consultation with the New York State Museum and the Office of Parks, Recreation and Historic Preservation. Extensive excavations are not contemplated as part of any research program in order to assure that the sites are available to future researchers who are likely to have more advanced tools and techniques, as well as more fully developed research questions.

Fire towers within the unit have been the subject of considerable public interest over the last decade. Most surviving fire towers have been found eligible for listing on the State and National Registers of Historic Places, and several them were formally listed in 2001. For a State agency, a determination that a structure is eligible for listing has the same significance as formal listing, in that the agency is obligated to treat the structure appropriately and required to follow special procedures should it be necessary to remove or modify the structure.

C. Unique Resources

1. Blue Hole

A large pothole in the streambed rock of the Rondout Creek is found within the unit, just east of the Peekamoose Mountain Trailhead. Formed by sand and gravel swirling in an ancient eddy, the Blue Hole is a rather unique natural feature that has become a popular destination in the summer and a curiosity year-round. Some 15 feet deep and 40 feet in diameter, the water takes on a deep blue color as it passes through the hole. Summer visitors will insist that it is not the water's color that inspired the name, but rather the color of their skin upon emerging from the hole after a brief swim. Special

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regulations for the Peekamoose Riparian Corridor have been developed and adopted by the Department to address natural resource impacts and public safety concerns and are provided in section in the following section. A no-fee permit system was introduced in the summer of 2018 to control use of the area. Additional details on the Peekamoose Riparian Corridor and the associated regulations and permit system can be found in Section IV F. Special Regulations.

2. Vernooy Kill Falls

The Vernooy Kill negotiates a series of steps on its way to the Rondout Creek, setting the stage for a relaxing summer day at the Vernooy Falls and is in Sundown Wild Forest on Forest Preserve land. This area is popular year-round with summer visitors who go for a dip in the cool waters, fall visitors who enjoy the back drop of autumn foliage over the falls, winter users who observe the ice formations, and spring visitors who wet a line during trout season. A tall stone wall, the remnants of a mill which once utilized the power of the Vernooy Kill, rests along the trail just below the bridge at the falls.

3. Adjacent Unique Areas: Buttermilk Falls

Buttermilk Falls is considered the most impressive waterfall in the Peekamoose Valley, where waterfalls are relatively common due to the geologic forces that shaped the area. The falls are in the Slide Mountain Wilderness Area on Buttermilk Falls Brook, on the north side of Peekamoose Road, 1.8 miles west of Peekamoose Lake. The brook flows over the walls of Peekamoose Gorge, cascading down about 30 feet into a pool.

4. Peekamoose Road Falls

Another beautiful waterfall can be found one mile east of Buttermilk Falls, on the north side of Peekamoose Road. The water, fed by an intermittent stream, flows nearly 50 feet down a rock wall which is covered with mosses and liverworts. Although the waterfall is on private property, it can be viewed from Peekamoose Road.

D. Scenic Resources

There are several panoramic vistas found within this unit. Several are found along the top of Ashokan High Point and offer a panoramic view of the Ashokan Reservoir. Views are also found within the burned area of Cherrytown Mountain (looking at Ashokan High Point), Mombaccus, and Big Rosy-Bone Knob.

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The fire tower on Red Hill offers an unsurpassed, 360-degree view of the surrounding area, with views of the Catskill High Peaks to the west and north, and the Rondout Reservoir to the Southeast. There are also many areas that lack a panoramic vista but offer the viewer remarkable glimpses of natural beauty. Such glimpses include many plunge falls found in the Peekamoose Valley, the step falls found at Vernooy, many rock outcrops, open fields, and wetlands.

- a) From fields on Ashokan High Point and Hoopole Mountain south and west through Watson Hollow and toward the Slide Mountain Range. Additional views along woods road west from Ashokan High Point toward South Mountain.
- b) From Ashokan High Point summit to the east.
- c) From end of State land along the ridge northeast of Ashokan High Point Mountain, of the Ashokan Reservoir and east toward the Shawangunk Ridge
- d) From Spencers Ledge, east of the High Point to Cherrytown Mountain Range.
- e) From large fire burn sites on Cherrytown Mountain.
- f) From points near summit of Denman Mountain.
- g) From fire tower on Red Hill (360-degree view from the fire tower).
- h) Limited views of Peekamoose Valley from open fields on State land south of Porcupine Road (Town of Denning), mainly in winter.

E. Facilities

Facilities within this unit are of a primitive nature. The various facilities, such as trails, campsites, boat launches, fishing access sites, pit privies, bridges, and parking areas are designed for the safety of the public and to protect the resources of the area. The condition of these facilities varies considerably, which is to be expected given the mix in ages and levels of use of the facilities. A summary of the facilities in the unit:

- Administrative Roads, Forest Preserve Roads and private rights of way: 32.91 miles
- Tent Sites: 50
- Lean-Tos: None
- Barriers (gates and rocks): 21
- Trailheads: 8
- Trail Registers: 5
- Information Kiosks: 8
- Buildings: 4
- Bridges: 7
- Dams: 6

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- Developed Springs: 3
- Horse/Snowmobile Trails: 18.2 miles
- Foot Trails: approximately 20.9 miles
- Fishing Access Sites: 1

Objectives and management actions for these facilities are described in detail in Section IV. Proposed Management Recommendations Section IV. E. Man-Made Facilities.

F. Relationship Between Public and Private Land

The lands within this unit border both private lands and other Forest Preserve units. The private lands are a mixture of undeveloped forest parcels and residential lots. Together, these areas provide a broad range of recreational opportunities for visitors of varying tastes and abilities, while providing critical connectivity in the landscape for many wildlife species. The Sundown Wild Forest and the Vernooy Kill State Forest enhance the wild character of the surrounding lands and represent a significant portion of the viewshed of surrounding towns. Having views of the mountains or forests within this unit can increase property values, as can having property adjacent to State land or near trailheads.

The developed private lands adjacent to the unit have various impacts on Sundown Wild Forest and Vernooy Kill State Forest. The more developed this private land is, the greater the impact on the unit. There can be impacts to the wildlife, plant communities, and recreation of the area. Adjacent developed private property also impacts the administration of the area. An example is increasing the importance of boundary line maintenance to discourage encroachments.

G. Local Economic Impacts

Besides its many intrinsic values, the State lands within this unit are an important economic asset for the region. Both indirectly, as a powerful attraction to tourists and a positive influence on private land values, and directly in terms of property tax payments to local governments, State lands make a substantial contribution to the local economy. While some visitors to Sundown Wild Forest and Vernooy Kill State Forest are serious hikers, hunters and anglers who spend all of their time on State land, most are day users who consider a hike on the lands within the unit as just one of the many reasons to take a trip to the Catskills. They combine a walk on a trail with visits to local shops

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and restaurants and an overnight stay at an inn or motel. Others are drawn to the area simply to enjoy the impressive mountain scenery. Though these visitors may never set foot on a trail, the contribution that they make to the local economy considerable.

The pursuit of wildlife provides substantial economic benefits to the State and local communities throughout New York. The expenditures of sportsmen who hunt, fish or trap are important to New York's economy. Research specific to Sundown Wild Forest and Vernooy Kill State Forest has not been conducted. However, expenditures by those who hunt, fish and/or trap within the unit for licenses, equipment, firearms, ammunition, gasoline, lodging, meals and a variety of other purposes infuse money into the local economy. Besides the value for hunting and trapping, wildlife attracts people for a variety of other uses, such as hiking, bird watching and photography

Local economic benefits directly conferred on the region occur through the payment of property taxes. Property taxes which the State pays on Forest Preserve and State Forest lands to local jurisdictions are an important revenue source to many communities (refer to Table 8). The undeveloped Forest Preserve and State Forest lands place little demand on many of the services local government provide, especially education, increasing the value of the taxes paid.

The State government pays the same rate of taxes on undeveloped forest lands as private landowners pay on their undeveloped forest lands. State government land holdings are assessed by local government assessors. The tax rate that is established by each local government jurisdiction is applied to the assessment and determines the tax liabilities on the affected parcels. This procedure is the same for private land owners. The property tax on State lands must be comparable to rates on similar private lands.

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Table 7 provides an estimate of the real property taxes that were paid by New York State based on the 2017 Assessment Roll for the towns of Denning, Olive, Wawarsing, Rochester and Neversink. These values were calculated by the Office of Real Property Services using approved assessments and tax rates. (*Note- these values are for all Forest Preserve lands in the towns listed; this includes Forest Preserve units other than the SWF).

Table 7. 2017 Property Taxes on State land paid per Town			
Town	Acres 2017 (approximate)	Total Taxes 2017	Average Taxes/acre 2017
Denning	42,157	\$2,176,727.54	\$51.63
Olive	8,123	\$296,765.23	\$36.53
Rochester	8,560	\$273,097.50	\$31.90
Wawarsing	6,806	\$206,228.23	\$30.30
Neversink	7,231	\$317,565.11	\$43.91
Total	72,877	\$3,270,383.61	\$38.85

1. Economic Impact on Adjacent Private Land

Private lands adjacent to State lands are usually very desirable. Landowners seeking privacy and solitude feel protected from development. The State lands provide a "backyard", affording the adjacent owner access to a vast outdoor experience at no expense.

The indirect effects on tourism and private land values in the Catskill region that result from the existence and use of the Forest Preserve and State Forest lands are substantial. In fact, a recent study entitled "ECONOMIC IMPACT AND OPPORTUNITIES FROM OUTDOOR RECREATIONAL ACTIVITIES FOR THE PUBLIC LANDS OF THE CENTRAL CATSKILLS", (2012) commissioned by the Catskill Center for Conservation and Development (CCCD), Catskill Mountainkeeper (CMK), and Catskill Heritage Alliance (CHA), estimated visitor totals and the economic impact for surrounding communities generated by outdoor recreational activities in the Central Catskills. Prior to this study, there had never been a comprehensive analysis conducted to determine the number of annual outdoor recreational visitors to the Catskills. The

findings of the study concluded that outdoor recreational activities that rely on public and protected lands attracted a total of 1,717,927 visitors. These visitors had an estimated economic impact on the region's economy of \$46,207,000.

Well-designed trails and access points on State lands that are linked to local villages and communities can have a very beneficial economic impact. Trails tied to towns and major tourist travel corridors may contribute to reduce impacts on the Forest Preserve by allowing people to use the existing facilities of a town such as stores, lodging facilities, campgrounds and parking.

2. Economic Impact of Adjacent Private Lands on State Lands

Private holdings generally have little economic impact on adjacent State lands. To prevent timber trespass, the encroachment of structures and motor vehicle trespass, boundary lines must be marked and maintained. Nearby homes and housing developments often increase the danger of fire, while compounding its consequences. Thus, stricter fire suppression, prevention and monitoring are necessary. Sometimes, costly steps to block off woods roads and parking lots with boulders or gates, the posting of additional signs and increased patrols become necessary to discourage illegal use of State lands.

Access to private inholdings, of which there are several in this unit, requires clear delineation of right-of-way corridors and use limitations to avoid confusion between State managers and landowners and to maintain the integrity of the State lands. Sometimes, Temporary Revocable Permits (TRPs) are necessary to clarify/define the private landowner's use of State land. Many TRP applications include requests for the use of a road traversing State land which may be the only access to the private land holding. In many of these cases, a TRP may be issued for 2 weeks per year to allow a private landowner motorized access across State land for purposes of restocking his/her camp with provisions for the year. TRP requests are often denied because of legal interpretations. Occasionally, such interpretations lead to litigation which can pose a significant cost to the State in expenditure of resources and staff time, limiting the amount of time available for completing other management objectives.

H. Public Use

A wide variety of activities are permitted on the unit. The public use the Sundown Wild Forest and the Vernooy Kill State Forest for a variety of primitive recreational programs,

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which include hiking, hunting, fishing, backpacking, camping, snowshoeing, cross-country skiing, mountain biking and historical enquiry. Public Use within this unit is heavily concentrated in a small number of areas and dispersed evenly throughout the remainder of the unit as observed by Forest Rangers and Department personnel.

Average yearly trail use is one of the best indicators available to compare overall visitor pressure on Catskill Forest Preserve and State Forest lands. Overall visitor pressure is a good indicator for potential impacts that may occur on areas susceptible to overuse.

1. Recreational Opportunities for Persons with Disabilities

The federal ADA, along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973, have important implications for the management of all public lands, including this unit. An explanation of the ADA and its influence on management actions is provided under Section III D.2.

In 1997, the Department adopted Commissioner's Policy #3 (CP-3), Motor Vehicle Access to State Lands under Jurisdiction of the Department of Environmental Conservation for People with Disabilities, which establishes guidelines for issuing temporary revocable permits, allowing qualified people with disabilities to use motor vehicles to gain access to designated routes on certain State lands. There are no existing CP-3 routes in the Sundown Wild Forest and Vernooy Kill State Forest planning area.

2. Levels of Use

Trail registers provide an estimate of the number of people using an area for future planning and management purposes. However, because use of trail registers is voluntary, a correction factor is necessary to determine actual use. The data collected, despite many variables and limitations, can indicate trends in use and prompt land managers to take the appropriate corrective action.

Management activities used to mitigate undesirable impacts may include: providing sanitary facilities; implementation of trail improvements such as tread hardening, installation of water-bars and bridges; vegetation management for erosion control; and possibly limiting public access into the affected area by direct actions such as instituting a permit system or by indirect actions such as limiting the amount of parking for an area.

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Overall, about half of the recorded Forest Preserve visits in the Catskills are in Sullivan and Ulster Counties. Throughout the Sundown Wild Forest, camping is most popular in July and August and on major holidays from Memorial Day to Columbus Day. Day use occurs year-round and is the predominant use during the winter months.

In general, most people visit the Catskill Forest Preserve on weekends and holidays. In the part of the Catskills falling within DEC’s Region 3, which consists of both Ulster and Sullivan Counties, 51,330 people signed trail registers in 2012 and 75,992 people signed trail registers in 2016. This figure is the **actual** number of sign-ins at the trail registers. It is estimated that perhaps at least twice as many recreationists use the Forest Preserve in Region 3 each year.

Currently, in the Ulster and Sullivan County portions of the Catskill Park, use is concentrated in the Slide Mountain Wilderness Area and the Overlook Mountain Wild Forest. The following table (Table 9) compares the actual trail register tallies for 2016 by unit in this portion of the Catskills.

*At this time, there are no trail registers in Vernooey Kill State Forest.

Table 8. Trailhead and Register Tally within Catskill Forest Preserve Units		
Forest Preserve Unit	Number of Trailheads	Actual Register Tally 2016
Slide Mountain Wilderness*	7	32,455
Big Indian Wilderness	6	6,345
Overlook Mountain Wild Forest	1	10,933
Sundown Wild Forest*	4	7,509
Balsam Lake Mountain Wild Forest	6	8,344
Phoenicia-Mt. Tobias Wild Forest	1	2,967
Bluestone Wild Forest	1	3,467
Willowemoc Wild Forest	3	2,557
Shandaken Wild Forest	1	1,414

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* Since the Peekamoose/Table trailhead is within the Sundown Wild Forest, but most the trail lies within the Slide Mountain Wilderness, the trail register tally information for the Peekamoose/Table trail was used in both units' 2016 trail register tally for this table.

As shown in the above table, the Sundown Wild Forest receives a fair amount of public use for this part of the Catskills. Only two units in this part of the Catskill region have more overall visitors to their trailheads, while six have less.

Table 9 only shows visitors who have signed registers at trailheads. These numbers can be misleading because many visitors do not register and many more use parts of the Forest Preserve where there are no trails or trailheads. Units which contain more trails and trailheads where registers are present may show a higher visitor rate than a unit with fewer trails. As a result, registers may not be an accurate indication of rate of use per trail. For example, the Slide Mountain Wilderness tally for 2012 was 22,081 users over 7 trailheads, with an average of 3,154 visitors per trail. Overlook Mountain Wild Forest, on the other hand, only has one trail with 7,491 visitors registered in 2012. Although Slide had more overall users in 2012, Overlook clearly had more users per trail. Not only does DEC have to look at total use of an area, but the rate of use for specific trails and sensitive areas to evaluate whether overuse is occurring.

There are five trail registers located within Sundown Wild Forest. One is located on the Peekamoose/Table trail, a short distance above the trailhead parking area located on the north side of Peekamoose Road (County Route 42), just east of the Peekamoose Valley camping area. Although this register is located within the Sundown Wild Forest, the public use numbers are recorded with the tallies for the neighboring Slide Mountain Wilderness Area since most this trail is within the wilderness. However, for the purposes of this plan, these numbers will also be shown in the following table since visitors must go through the Sundown Wild Forest to get to the wilderness area. A second trailhead register is found on the Ashokan High Point trail at Kanape. A third is located at Vernooey Kill Falls, adjacent to the bridge. This trail register is on a combination hiking-equestrian-snowmobiling trail and is located on a three-way intersection. A fourth register is found at the Red Hill Trailhead on Dinch Road. The fifth register was installed in the winter of 2008, along the Bangle Hill section of the Long Path, located on the South side of Peekamoose Road and adjacent to the Peekamoose Valley Camping Area. The actual number of entries for the first four of the above trail registers over the last 5 years can be found in the following table:

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Trail Head	2012	2013	2014	2015	2016
Peekamoose Mtn	2,219	1,944	2,464	2,866	3,168
Ashokan High Point (Kanape)	1,819	1,822	1,813	1,985	1,846
Vernooy Kill Falls	1,851	1,912	2,061	2,252	3,441
Red Hill	1,058	1,037	1,727	1,807	2,222
	7,019	6,715	8,065	8,910	10,677

Most use within the Sundown Wild Forest is directly related to the trail system, campsites and hunting opportunities.

3. Periods of Use and Distribution Patterns

Use within this unit at any time can be quite variable dependent upon time of day, day of week, or season of the year. Hunters and trappers utilize the area in the late fall and early winter coinciding with respective seasons. Trout fishing typically peaks in intensity in May, June, and July. Weather can have a dramatic effect on the use during a day or weekend. In the past, most recreational activity occurred in the spring or summer and has tended to be heaviest on the weekends and holidays.

Several areas in this unit have proven to be popular destinations with the public:

- 1) The Blue Hole is a depression in the streambed rock of the Rondout Creek, a unique natural feature formed by sand and swirling gravel in an ancient whirlpool. The creek is part of the New York City drinking water watershed. In the summer of 2015, day use of the Blue Hole in Rondout Creek, immediately upstream of the camping area, increased exponentially compared to previous years. This was due in part to social media coverage and numerous websites, including national magazines, touting the Blue Hole as "one of the best swimming holes in the nation." As many as 700 people have crowded into the small area on a weekend day. This dramatic increase in usage has resulted in rampant human waste, refuse, fires, broken glass and an overwhelming of the parking areas which spilled out all

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along Peekamoose Road. The local communities have expressed safety concerns with the road not being passable by emergency service vehicles due to blockage by illegally parked cars and concerns with the sheer number of visitors. Special Regulations and a permit system were developed for this area and additional details can be found in Section IV. of this plan.

- 2) The Peekamoose Valley camping area located near the hamlet of Sundown is possibly the most used (and sometimes abused) area within this unit. This area is extremely popular with campers due to the availability of roadside camping and the added benefit of some open field areas bordered by the Rondout Creek. Many sites have been closed since the 1990 Peekamoose Valley Wild Forest UMP was released to alleviate some of the overuse the area was receiving. The area's overuse resulted in significant detrimental impact to both the campsites and the surrounding area. Once a popular hangout in the 1970s, this area has now become popular with families wishing for a primitive camping experience in the Forest Preserve without having to hike into the back country. This area is now incorporated into the Sundown Wild Forest, eliminating the need for a separate UMP.
- 3) The Ashokan-High Point Trail, accessed via the Kanape Trailhead, is popular year-round and offers views from the top of Ashokan High Point, as well as many opportunities for primitive camping. A kiosk with maps and information, as well as a pit privy, can be found at the Kanape Trailhead to help facilitate public use of the area.
- 4) Denman Mountain receives strong use by residents from the towns of Neversink and Denning, with Grahamsville being the closest community. Seasonally maintained town roads through State land are popular with local snowmobilers and are an integral part of the snowmobile trail established around Denman Mountain, as called for in the 1996 Sundown Wild Forest UMP. These same roads and trails also see significant equestrian use when not snow covered. Camping and picnicking at Hog Rocks and along Denman Mountain Road continue to be popular and, at times, create trash problems and motor vehicle trespass issues.
- 5) The Vernooy Kill Falls area proves to be very popular with hikers and campers due to its proximity to the Long Path. The falls themselves, which consist of a series of steps and pools, attracts swimmers during the summer months. This area has seen its share of forest fires. The most recent fire occurred in May of

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2006, when about 1,000 acres burned. Portions of this same area burned five years earlier, almost to the day.

- 6) The Red Hill section of this unit has become very popular in recent history due to the rehabilitation of the fire tower and care taker's cabin. This tower offers a 360-degree view of the surrounding area and is maintained by the Red Hill Fire Tower Committee under a Volunteer Stewardship Agreement (VSA) with DEC. A foot trail departing from the Dinch Road Trailhead to the fire tower has been completed in accordance with the 1996 Sundown Wild Forest UMP.

The remainder of the Sundown Wild Forest/Vernooy Kill State Forest is used less frequently and usually consists of sportsmen and women and the occasional hiker.

Most camping activity within the unit is regulated by DEC permit and consists of small groups at popular waterfront locations. Camping is not evenly distributed. Some sites are extremely popular and are in use for most of the season while other sites in the same general area may only have sporadic use. An accounting of overnight use includes group camping permits, individual camping permits, and campground permits.

I. Capacity of the Resource to Withstand Use

The management of this unit, which consists of both Wild Forest and State Forest lands, is aimed to allow for public access and recreation so long as the public does not impair or otherwise significantly alter the resource. In addition, the Vernooy Kill State Forest portion will be actively managed for timber, fish and wildlife resources. These resources will be actively managed in accordance with Best Management Practices (BMPs) as recognized by industry and academia, with the goal of attaining long term sustainability (See Appendix F. for descriptions of BMPs). For additional information regarding the specifics of the Vernooy Kill State Forest's capacity to withstand use., please see Section VI. Vernooy Kill State Forest Projected Use and Management.

1. Carrying Capacity Concepts

The lands within this unit cannot withstand ever increasing, unlimited use without suffering the eventual loss of its natural character. This much is intuitive. What is not intuitive, though, is how much use and what type the whole area- or any site within it – can withstand before the impacts that cause serious degradation of the very resource being sought after. The management objectives proposed in this UMP will serve to ensure the carrying capacity of the unit is not exceeded while concurrently providing for visitor use and benefit.

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The term “carrying capacity” has its roots in range and wildlife sciences. As defined in the range sciences, carrying capacity means “the maximum number of animals that can be grazed on a land unit for a specific period without inducing damage to the vegetation and related resources” (Arthur Carhartt National Wilderness Training Center, 1994). This concept, in decades’ past, was modified to address recreational uses as well, although in its application to recreational use it has shown to be significantly flawed when the outcome sought has been the “maximum number” of people who should visit and recreate in each area. Much research has shown that the derivation of such a number is not useful. Essentially, this is because the relationship between the amount of use and the resultant amount of impact is not linear (Krumpe and Stokes, 1993). For many types of activities, for instance, most of the impact occurs with only low levels of use. In the case of trail erosion, once soil starts to wash away, additional foot travel does not cause the impact upon the trail to increase proportionally. It has been discovered that visitor behavior, site resistance/ resiliency, type of use, etc. may be more important in determining the amount of impact than the amount of use, although the total amount of use is certainly and obviously still a factor. (Hammit and Cole, 1987).

This makes the manager’s job much more involved than simply counting, redirecting, and (perhaps) restricting the number of visitors in an area. Influencing visitor behavior can require a well-planned, multifaceted educational program. Determining the resistance/resiliency always requires research (often including much time, legwork and experimentation). Shaping the types of use impacting an area can not only call for education and research and development of facilities, but also the formulation and enforcement of a set of regulations that some users are likely to regard as objectionable.

Nevertheless, the shortcomings of a simple carrying capacity approach have become so apparent that the basic question has changed from the old one, “How many is too many?” to the new, more realistic one; “how much change is acceptable?” The Department embraces this change in approach while recognizing the tasks it calls for in developing the best foundation for management actions. Professionally-informed judgments must be made such that carrying capacity is given definition in terms of resource and social conditions. These conditions must be compared to real life situations, projections must be made, and management policies and actions must be drafted and enacted to maintain or restore the desired conditions. Shaping the type of use impacting an area can call not only for education, research and development of facilities, but also the formulation and enforcement of a set of regulations which some users are likely to regard as objectionable.

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This shift in managers' central focus- away from trying to determine how many visitors an area can accommodate, to trying to determine what changes are occurring in the area and if they are acceptable, is as critical in Wild Forests and State Forests as it is in Wilderness. A central objective of this plan is to achieve an appropriate balance between resource protection and public use of the lands in this unit.

Management and Planning Concepts

The long-term approach for managing the Sundown Wild Forest and the Vernooy Kill State Forest uses a combination of three generally accepted planning and monitoring methods: 1) the goal-achievement process; 2) the Limits of Acceptable Change (LAC) model employed by the U.S. Forest Service; and 3) the Visitor Experience and Resource Protection (VERP) model employed by the National Park Service. Given the distinctly different, yet important purposes of these methods (particularly between the first method and the second two), there are clear benefits offered by employing a blend of these approaches here.

Goal Achievement Process

The goal achievement process provides a framework for proposed management by means of the careful, stepwise development of key objectives and actions that serve to prescribe environmental conditions outlined by the CPSLMP and SPSFM guidelines. The Department is mandated by law to implement actions designed to realize the intent of the guidelines included in the master plans. The goal-achievement framework will be used to organize this management plan to direct the process of determining appropriate management actions through the careful development of goals and objectives.

The goal-achievement framework provides an organized approach to planning that is effective in addressing the full range of issues affecting the lands within this unit. However, the objectives developed in this approach usually do not identify specific thresholds of unacceptable impact on resources or give managers or the public clear guidance as to whether a restrictive management action is warranted in a situation. For significant management issues that require the resolution of conflicting goals, that involve activities that have the potential to lead to unacceptable change and lend themselves to the development of measurable and attainable standards, the Limits of Acceptable Change process will be used.

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Limits of Acceptable Change (LAC) Process and Visitor Experience and Resource Protection Models

These methods both employ carrying capacity concepts, not as prescriptions of the total number of people who can visit an area, but as prescriptions of the desired resource and social conditions that should be maintained to minimum standards regardless of use.

Establishing and maintaining acceptable conditions depends on explicit management objectives which draw on managerial experience, research, inventory data, assessments, projections and public input. When devised in this manner, objectives founded in the LAC and VERP models essentially dictate how much change will be allowed (or encouraged) to occur and where, as well as how to respond to change. Indicators (measurable variables that reflect conditions), are chosen, and standards (representing the bounds of acceptable conditions) are set, so that all management efforts can be effective in addressing unacceptable change.

A standard may be chosen to act as a simple trigger for management action (as in VERP) or it may be chosen to act as a boundary which, given certain assessments, allows for management action before conditions deteriorate to the point of no longer meeting the standard (as in LAC).

Even well-conceived and executed efforts can prove ineffective, but when this is the case, management responses must be adjusted. **Monitoring of resource and social conditions is critical.** Both the LAC and VERP models rely on monitoring to provide systematic and periodic feedback to managers concerning specific conditions. However, since the VERP model was developed to apply only to impacts from visitor use, some management issues in the Sundown Wild Forest (for instance, resource degradation at the Blue Hole, Peekamoose Riparian Corridor) call for an approach that is properly in the LAC vein. Since differences between LAC and VERP are insignificant, choices are left up to managers. These choices are as evident as they need to be wherever this plan, in Section IV, calls for sets of management actions to incorporate them. The Department's approach applies four factors in identifying potential management actions for an area:

- The identification of acceptable conditions, as defined by measurable indicators;
- An analysis of the relationship between existing conditions and those desired;
- Determinations of the necessary management actions needed to achieve
- desired conditions;
- A monitoring program to see if objectives are being met;

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A proposed list of management and planning concepts, for which measurable indicators and monitoring tools can be developed, may be used by the Department for measuring acceptable change on the Sundown Wild Forest and Vernooy Kill State Forest as follows:

- Condition of vegetation in camping areas and riparian areas near lakes and streams;
- Extent of soil erosion on trails and at campsites;
- Non-compliant visitor behavior;
- Noise on trails and in adjacent campsites;
- Conflicts between different user groups;
- Diversity and distribution of plant and animal species;
- Air and water quality.

Recreational Research Findings and Management Implications

Impacts from hiking and camping typically follow a natural progression. Initial and very light use may only damage particularly fragile soils and vegetation. However, even at low levels of use, the ground cover and surface organic litter are damaged. With moderate use, all but the most resistant plant species are lost and mineral soils may be exposed. High use exposes mineral soils to compaction and erosion, which in turn expose the roots of trees. The only way to eliminate adverse impacts of hiking and camping in this unit would be to close the area to all public use. However, a more realistic approach is to minimize impact by managing other factors to help mitigate adverse environmental impacts.

Use-related factors

Many impacts are the result of uninformed or careless behavior. Managers can educate and regulate visitors to reduce high impact behavior (e.g., building fires, chopping trees, cutting switchbacks) and encourage low impact behavior such as the “leave no trace” program. Large groups have a greater potential to damage resources than the same number of individuals in smaller groups. Limits on group sizes can be encouraged or required to minimize resource impacts.

Environmental Factors

Managers can encourage recreational use in impact resistant locations. For example, trails can be relocated to avoid wet areas or steep slopes. Campsites can be located on flat, well drained areas. Knowledge of the relative resiliency (ability to recover) of different vegetation and soil types can be used to select areas which will recover quickly

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following recreational trampling. Sites with high resiliency are also desirable because they usually support dense vegetation, which helps confine use to campsites and trails.

Managerial Factors

Managers of some protected areas have sought to minimize impacts by encouraging visitor dispersal. However, due to the use/impact relationship and several behavioral factors, this impact-minimization strategy has only been successful in areas that receive low use. Therefore, this strategy would not be effective in certain locations within this unit that receive moderate to high levels of use.

Other Considerations

Most visitors prefer hiking on established trails and camping on existing campsites. Many visitors enjoy camping close to trails and other groups for social reasons, while others fear getting lost when away from trails. Areas with rugged terrain and/or dense vegetation may limit the ability of visitors to hike off-trail or the number of suitable camping locations necessary to support a dispersed camping policy. Pre-existing trails and campsites are also more convenient, comfortable, and require less work to use and maintain. Finally, water and other scenic attractions in the backcountry will always attract larger numbers of visitors than less interesting areas. In general, management efforts to alter these natural tendencies will be unsuccessful without substantial and expensive educational and law enforcement programs (Marion, 1998). Therefore, a strategy of closing and relocating campsites in the unit to reduce impact is generally not a realistic way to limit adverse impact. Relocated campsites would have to be constructed in areas that have not been impacted, and it would be difficult to keep the public from continuing to use the old sites.

Recreation research shows that visitor containment, or concentration, in the unit offers a promising strategy for minimizing recreation impacts. Trails, which concentrate use on their treads, represent one form of containment. Similarly, mandating use of designated campsites also contains visitors to sites that have already been impacted. A campsite rotation program has also been considered in the past. However, recovery rates on campsites and trails are considerably lower than initial impact rates, which mean that a rest/rotation strategy will generally be ineffective (Marion, 1998). These management concepts form the basis of the proposed management actions presented in Section IV. This approach will require flexibility, determination and patience.

It will be important to show progress in achieving CPSLMP and SPSFM goals, and in gaining initial managerial experience and knowledge in applying this strategy to some carrying capacity issues. Knowledge gained because of the implementation of this UMP

will be useful in: 1) revising and refining management actions if evaluation shows that desired conditions are not being attained or sustained; and 2) creating a foundation upon which this strategy can eventually be built into a fully-developed, science-based approach to protecting and managing the unique resources of Sundown Wild Forest and Vernooy Kill State Forest

Though LAC will not be fully implemented during the ten-year scope of this plan, the plan is organized according to the goal-achievement framework. It provides substantial resource inventory information, sets goals founded on law, policy and characteristics of the area, identifies management issues and lays out an extensive system of proposed objectives and actions designed to meet management goals. Once it is fully implemented, LAC will provide more detailed guidance to managers and the public in the management of important issues. Ultimately, a monitoring system will be put in place and management actions will be revised and refined over time in response to the results of periodic evaluation to assure that desired conditions will go into the management of the unit as a fully developed, science-based approach to protecting and managing the area's physical, biological and social resources

2. Land Resources

The condition of the land resource can be used as an indicator of the level of use that an area is receiving. The most heavily used areas will usually show the most effects from use. However, there are several factors which can mitigate heavy use or amplify the effects of lighter use. One factor is the conditions at the time that the use occurs. For example, a few people walking a trail when the trail is wet and soft will cause more damage than many people using the same trail when it is dry. Another factor to consider is the skill level and behavior of the users. A large group of experienced hikers may not leave any evidence that they used an area, while a small group or even an individual can, through willful neglect or ignorance, leave an area permanently altered. A third factor to consider is the design and location of the improvement that is being used. A properly designed and located facility will allow for heavy use without having a negative impact on the resource. Poor facility design or location can lead to quick deterioration of the resource.

The heavily used areas of the Sundown Wild Forest and Vernooy Kill State Forest are clearly being negatively affected by the levels of use they receive. This is primarily occurring at unique resource sites such as the Blue Hole or at popular campsites along waterbodies. The main problems resulting from use of the lands and facilities within the unit are erosion, mud, soil compaction, decreased vegetation, litter, improper human waste disposal, and removal of dead wood. It is obvious why most of these impacts are

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problems, however, some people may not understand why removal of dead wood is a problem. It is a problem by land managers because dead wood provides important habitat for a variety of wildlife, slows erosion, and allows nutrients to be recycled back into the soil. In heavily-used areas, dead wood is collected and burned at a faster rate than it is created, this results in an ever-widening area of damage from people gathering wood. Secondary effects of wood gathering include damage to living vegetation and removal of standing dead trees, which is illegal in Forest Preserve areas such as Sundown Wild Forest.

Many land resource problems tend to expand with time if they are not addressed. An example is that muddy sections of trails result in an expansion of the muddy area and loss of vegetation as people, trying to stay dry, walk around the wet areas. Another example is that people who visit a campsite which already has a litter problem are more likely to leave their own trash behind. For this reason, it is important to act when a problem becomes known. Section IV will address courses of action to reduce the problems from visitor use.

Soil characteristics play a major role in an area's ability to withstand use. Soils in this unit can vary significantly, depending on location and elevation. They range from generally well drained in the uplands to wet, poorly drained soils within the wetlands and other low-lying areas. Erosion can be a problem on steeper terrain if proper water diversion devices are not utilized in the construction of trails. Water bars, drainage dips, ditches and other devices will be utilized along with vegetation to help stabilize trails. In valley bottoms, ravines, upland benches and other areas with little relief, drainage can be poor, resulting in ponding, vernal pools, wetlands and seasonally muddy areas. These areas are poorly suited to many types of recreation unless significant drainage and/or trail hardening occur. Trails will be routed to avoid such areas when possible, otherwise the wet areas must be drained, hardened, or bridged to prevent erosion, causing compaction or other adverse impacts to the area.

The ability of this unit to withstand hiking and similar uses in most areas is moderate to high. Areas such as the Ashokan High Point Trail and many miles of hiking/snowmobile trails in the Vernooey Falls area are found on old roads. These roads provide a hardened and stable tread designed originally for vehicle use and have little trouble withstanding significant public use as trails. The Vernooey Kill State Forest section has many roads throughout the area that are conducive to trail building as well as providing access for timber sales, wildlife management and public access.

There are numerous designated campsites found throughout the unit that have been hardened through use and can withstand continued use if users do not degrade the

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area. Baseline data should be collected for existing campsites to aid in monitoring their condition and changes in condition. The Limits of Acceptable Change system developed by the USDA Forest Service should be utilized to determine if or when sites need to be added, removed or relocated as need arises to preserve the character of the area. The ability of this unit to accommodate public demand for primitive camping in other than designated sites is dependent upon compliance with DEC regulations which prohibit camping within 150 feet from any trail, road or water throughout the year except at areas designated by the department. Without strict compliance, soil compaction, erosion, degradation of vegetation, water pollution, and deterioration of the character of the area could result.

3. Wildlife Resources

A variety of wildlife recreation uses occur on the unit, including: hunting, trapping, bird watching, and wildlife photography. Many mammals and birds may be hunted or trapped during seasons set annually by the Department. The Department has the authority to set hunting and trapping season dates and bag limits by regulation for all game species. Whitetail deer and black bear may be taken during archery, muzzleloading, and regular seasons. Antlerless deer harvest is prohibited during the regular firearm season but may be permitted during the archery season. In addition, there is an early season for black bear. There are no known animal species within this unit that cannot tolerate the occasional presence of humans. Therefore, the ability of this unit to withstand non-consumptive use is high.

Whitetail deer are the most commonly harvested species in this unit. Although the actual deer harvest from this unit is not known, the following table gives a breakdown of deer harvested in the five towns in which this unit falls.

TOWN	ADULT MALES	TOTAL DEER
Denning	82	100
Olive	137	216
Rochester	193	308
Wawarsing	243	442
Neversink	213	329

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Black bears are also hunted within this unit. Table 12 gives the breakdown of black bears harvested by town.

TOWN	TOTAL BEAR
Denning	18
Olive	12
Rochester	20
Wawarsing	19
Neversink	13

Turkeys are probably the most hunted small game species in the unit. The average annual turkey harvest by county is shown in Table 13.

COUNTY	TOTAL TURKEY
Ulster	390
Sullivan	480

These numbers represent a moderate harvest when compared to similar and/or adjoining towns. Although wildlife populations are much lower in the Catskills than many other places in the State, the current consumptive use of wildlife by hunters and trappers in this unit appears to have no detrimental effect on their populations. While the impacts on non-game species populations is not well understood now, studies are being conducted to assess what effect, if any, the present use levels have on the wildlife species found within this unit.

4. Fisheries Resources

Department angling regulations are designed to conserve fish populations in individual waters by preventing over-exploitation. Angling regulations can often effectively control impacts of angler use. The Department monitors the effectiveness of angling regulations, fish stocking policies, and other management activities by conducting periodic biological and chemical surveys. Based on analysis of these survey results, angling regulations may be changed as necessary to protect the fish populations within the management

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area or their connected waters. In addition to angling regulations, factors at work in the unit which serve to limit the take of fish include the remoteness of some ponds and streams from roads, the seasonal nature of angling in cold-water ponds and seasonal road closures. When necessary, populations of gamefish are maintained or augmented by the Department's annual fish stocking program.

In evaluating the capacity of the fisheries resources within this unit to withstand use, two aspects must be considered. First, brook trout are the major species of fish found within this unit and are generally considered to be easily caught. An increase in pressure could result in a decrease in the size and quantity of the fish caught. This may also apply to the other species of fish found within this unit. Second, if the level of usage increases significantly, the overall experience of the angler may be compromised in relation to crowding. Presently the fishing pressure in this unit is believed to be low. Fishing pressure is much greater outside this unit in areas where there are larger more accessible waters, such as the Esopus Creek along Route 28. Given the current statewide regulations and the relatively low level of public use in this unit, it is unlikely that the fish populations are being adversely affected by anglers in the Sundown Wild Forest/Vernooy Kill State Forest unit.

However, waters within this unit, as well as within most of the Catskill Forest Preserve, have been identified as being sensitive to acid deposition. This is especially true during spring snow melt when large volumes of water enter the streams and due to the very low buffering capacity of the geology of the region, may contain significant amounts of acid deposition. The buffering capacity of water will determine how much acidity that water can withstand before experiencing a drop in pH. Increased acidity (lower pH) can lower the reproductive potential of and/or be lethal to fish. Over time, decreasing pH can change the abundance and distribution of fish and other aquatic organisms. This situation is being monitored by several organizations, including the Department. In the event that acid precipitation and acid deposition create acidic conditions which threaten fish populations within this unit, a liming policy could be implemented to neutralize acidic waters. Any such program must be consistent with Department policies as well as laws, rules and regulations regarding management of State-owned lands.

J. Partnerships & Agreements

Conservation and stewardship partnerships are increasingly important, especially for public land management agencies. Given the fact that resources will always be limited, collaboration across political, social, professional boundaries is necessary for long term success and sustainability. Forest Preserve and State Forest lands are owned by the

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People of New York State and entrusted to the Department. The Department will in turn encourage public involvement and citizen participation in management of the land. In addition, user groups, such as equestrian or mountain bike clubs will have the opportunity to support Department regulations, help plan for appropriate use and assist in maintenance of trails and other facilities. Public comment is encouraged throughout the management planning process and public input on land management proposals are an integral component of the unit management planning process. This ensures that with Department oversight, the lands within this unit will meet the needs of the people most actively engaged in the use of this land.

1. Temporary Revocable Permits

The Department issues Temporary Revocable Permits (TRP) in its sole discretion for the temporary use of State lands and conservation easement lands for activities that have negligible or no permanent impact on the environment. Historically, TRPs have been issued for lean-to construction, cross country races, forest insect research, wildlife research, town road maintenance and utility line right-of-way work, among many other purposes. Through the TRP review process, DEC avoids conflicting uses of State land and situations that could threaten health, public safety, or integrity of natural resources. TRP authorization does not provide exemption from any existing State laws and regulations. To hold any event, a sponsoring organization must request permission in writing at least 30 days in advance of the date of the proposed activity. The TRP applicant or sponsoring organization must provide proof of liability insurance. TRPs often have specific stipulations pertinent to the activity in question and TRPs are authorized by DEC policy.

2. Volunteer Stewardship Agreements

Many great things are accomplished on State lands through the volunteering of individuals and groups. There are instances where coordinating work through the Department proves challenging due to logistics, staffing, or funding levels. In some of these instances, great work can be accomplished through the generosity of volunteers.

The current DEC procedure that facilitates the use of volunteers to carry out work on State land is called a Volunteer Stewardship Agreement (VSA.) When a work project seems to be a good fit for volunteers and there is an individual or group willing to take on this project, the Department land manager will help the potential volunteers through the VSA process, which consists of an application and then the final Agreement. This process is necessary, as it lays out the details of the project to make sure that the final

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project is true to the intent of management of the area. The VSA also provides volunteers with liability and worker's compensation insurance coverage while they are working on State land.

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III. Management and Policy

Overview

A. Administration

The Sundown Wild Forest and the Vernooy Kill State Forest have many management challenges which call for a cohesive effort on behalf of all Department staff to effectively manage these lands. Management of the area is dependent on adequate staffing and funding to be effective. Adequate staff is necessary not only for the Division of Lands and Forests, which is directly responsible for the management of the resource, but also Forest Ranger staff for enforcement, Operations staff for completing the work projects and the Division of Fish, Wildlife and Marine Resources to assist with wildlife related issues, such as endangered species and game animal management.

Implementation of this plan will likely require an increase in present staffing. Because of the heavy use in popular areas, additional patrols by Forest Rangers are required. Current staffing is inadequate to handle the areas that are heavily trafficked without adversely affecting patrols in other areas. Because of the various improvements proposed in this plan, public use of many areas is likely to increase. Controls such as barriers and signs help but are not a substitute for additional enforcement, maintenance and management.

The administration of Forest Preserve land and State Forest land is the responsibility of the Division of Lands and Forests within the Department. The responsibility for the enforcement of Department rules and regulations lies with the Office of Public Protection. The Division of Operations conducts interior construction, maintenance and rehabilitation projects. The Bureau of Recreation within the Division of Operations operates and manages the public campgrounds adjacent to the unit. The Division of Fish, Wildlife and Marine Resources manages the State's fish and wildlife resources.

Administration of Sundown Wild Forest and Vernooy Kill State Forest is shared by several programs within the Department. Within the context of these lands, Department programs fill the following functions:

The **Division of Lands and Forests** acquires and maintains land for public use, manages the Forest Preserve lands, promotes responsible use of public lands and provides educational information regarding the use of the Forest Preserve.

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The **Division of Fish and Wildlife** protects and manages fish and wildlife species, provides for public use and enjoyment of natural resources, stocks freshwater fish, licenses fishing, hunting and trapping, protects and restores habitat, and provides public fishing, hunting and trapping access.

The **Natural Heritage Program** enables and enhances conservation of New York's rare animals, rare plants, and significant ecosystems. Field inventories, scientific analyses and expert interpretation result in the most comprehensive database on New York's distinctive biodiversity, which provides quality information for natural resources planning, protection and management.

The **Division of Water** protects water quality in lakes and rivers by monitoring waterbodies and controlling surface runoff.

The **Division of Air Resources** regulates, permits, and monitors sources of air pollution, forecasts ozone and stagnation events, educates the public about reducing air pollution and researches atmospheric dynamics, pollution and emission sources.

The **Division of Operations** designs, builds and maintains Department facilities and infrastructure, operates Department Campgrounds and day-use facilities.

The **Office of Communication Services** is the public communication wing of the Department. The Division communicates with the public, promotes citizen participation in the UMP process, produces, edits and designs Department publications.

The **Division of Law Enforcement** is responsible for enforcing of New York's Environmental Conservation Law throughout the State. A focus has been laws relating to hunting, fishing, trapping, license requirements, endangered species, possession, transportation and sale of fish and wildlife, trespass, and damage to property by hunters and fishermen.

The **Forest Ranger Division** is responsible for the preservation, protection, and enhancement of the State's forest resources, and the safety and well-being of the public using those resources. Forest Rangers are the stewards of the Forest Preserve and State Forest lands and are the primary public contact for the Sundown Wild Forest and Vernooy Kill State Forest unit. They are responsible for fire control and search and rescue functions. Forest Rangers are police officers and are the primary law enforcement service for State Lands.

B. Past Management

1. Land Management

a. Forest Preserve

Forest Preserve management began with the Forestry Act of May 15, 1885, which authorized appointment of a Forest Commission. This law established the first comprehensive forest administration in the United States. The Forest Commission, with a staff of twenty salaried employees in 1885, had responsibility for the care and custody of the Forest Preserve. At that time, the Forest Preserve was approximately 800,000 acres in size. Since January 1, 1895, management of Forest Preserve land has been guided by a provision of the New York State Constitution, now found at Article XIV, section 1, which mandates that the Forest Preserve be kept as wild forest land, prohibits the sale, removal or destruction of timber situated thereon, and prohibits the land from being leased, sold or exchanged. Therefore, habitat management using timber harvesting, prescribed burning, or other means of modifying the vegetation to alter wildlife habitat is not permissible in the Forest Preserve portion of the unit. Additionally, NYCRR §194.2 (b) prohibits prescribed fires to be set on Forest Preserve lands. Options for management in the Forest Preserve include the setting of hunting and trapping seasons, setting harvest limits, defining manner of taking, restoring or augmenting populations of native species, preventing the introduction of non-native species and removing non-native species.

New York State's initial management activities were focused on protecting the Forest Preserve from wild fire or trespass. In most areas, State boundary lines were nonexistent or poorly marked. Illegal occupancy of the Forest Preserve, as well as timber theft, were both chronic problems. Forest fires, in some cases intentionally set, were also a constant threat to Forest Preserve. Consequently, the Forest Commission focused most of its attention and meager resources on these two issues for the first three decades of its existence.

In 1975, the Temporary Commission to Study the Catskills recommended the Forest Preserve lands in the Catskills be classified into management units. In 1985, DEC completed the Catskill Park State Land Master Plan (CPSLMP), which implemented the recommendations of the Temporary Study Commission. The CPSLMP further directed DEC to complete individual management plans which include specific management objectives for each unit. The current version of the CPSLMP was adopted in August of 2008 and consists of a revision to the original plan of 1985. The revision was necessary to incorporate Forest Preserve lands purchased since 1985, as well as provide an

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update in land classifications and Department policies that evolved during this time. Management activities implemented on the Forest Preserve portion of this unit since the 1996 Sundown Wild Forest UMP and the 1990 Peekamoose Valley Wild Forest UMP have generally been related to recreation, fire prevention and fish and wildlife management. The guidelines for Wild Forest areas can be found in Appendix E of this plan.

Recreational use of the Forest Preserve was relatively limited at first. The few public roads that could provide access to State land were unpaved. Initially, recreational use was mostly for hunting and fishing. With the development of better and more numerous roads and the mass production of automobiles in the early 20th century, recreational use of the Forest Preserve increased dramatically. Consequently, the Division of Lands and Forests (a direct descendant of the Forest Commission) initiated a more comprehensive recreation program that started around 1915. This included the installation of trail signs, trail maintenance work, permits to allow construction of lean-tos on State land, and a camping permit system for those at one location for more than 3 nights. Over the years, the Department has constructed parking areas, trails, roadside campsites, boat launches and lean-tos in an effort to facilitate public recreation. Most management activities involve maintenance of Sundown Wild Forest trails and includes annual blowdown removal and periodic drainage work. Other land management activities include maintenance of existing bridges and removal of non-conforming uses.

a. State Forests

A State Forest is the collective term applied to lands administered by the Division of Lands and Forests which are located outside the Forest Preserves. State Forests include acreage acquired and classified as Reforestation Areas, Multiple Use Areas, Unique Areas, and State Nature & Historic Preserves.

From the time of European settlement in North America until the middle of the 19th century, forests had been viewed primarily by the settlers as an obstacle to civilization; they were something to be cleared out of the way for agriculture or to be unsustainably cut and exploited for profit. Forests in all the northeastern states were disappearing fast, but New York was the first to reverse this seemingly inexorable process by beginning to plant seedlings to replace the trees that were cut. The New York Forest, Fish and Game Conservation Commission founded New York's Tree Nursery System in 1902, the first tree nursery in the nation. In the early years, the nurseries supplied seedlings for planting on State land in the Catskills and the Adirondacks. Hundreds of millions of seedlings of Norway Spruce, white pine, red pine and Scotch pine were planted on State Forests as windbreaks and forest plantations.

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The State Reforestation Law of 1929 and the Hewitt Amendment of 1931 set forth the legislation which authorized the Conservation Department to acquire land by gift or purchase for reforestation areas. These State Forests, consisting of not less than 500 acres of contiguous land, were to be forever devoted to “reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber, and for recreation and kindred purposes.” This broad program is presently authorized under Article 9, Title 5 of the Environmental Conservation Law.

In 1930, Forest Districts were established, and the tasks of land acquisition and reforestation were started. In 1933, the Civilian Conservation Corps (CCC) was begun. Thousands of young men were assigned to plant millions of trees on the newly acquired State Forests. In addition to tree planting, these men were engaged in road and trail building, erosion control, watershed restoration, forest protection and other projects.

During the war years of 1941-1945, very little was accomplished on the reforestation areas. Plans for further planning, construction, facility maintenance, and similar tasks had to be curtailed. However, through postwar funding, conservation projects once again received needed attention. The Park and Recreation Land Acquisition Act of 1960, and the Environmental Quality Bond Acts of 1972 and 1986 contained provisions for the acquisition of State Forest lands. These lands would serve multiple purposes involving the conservation and development of natural resources, including the preservation of scenic areas, watershed protection, forestry and recreation.

Wildlife Management Areas in New York, like State Forests, have a varied history of acquisition. Many were gifted to New York State by the Federal Government or other cooperating public or private organizations. Some parcels were purchased with Bond Act funds or Federal Aid in Wildlife Restoration Program funds. The latter, which is commonly called the Pittman-Robertson Act, is a federal fund supported by hunters from the purchase of hunting licenses, firearms and ammunition.

Today there are over 790,000 acres of State Forest land throughout the State and over 200,000 acres of Wildlife Management Areas throughout the State. The use of these lands for a wide variety of purposes such as timber production, hiking, skiing, fishing, trapping and hunting is of tremendous importance economically and to the health and well-being of the people of the State.

The remaining lands in this unit which were not acquired as Forest Preserve lands, but rather as State Reforestation lands, consist of about 3,661 acres of land found outside the Catskill Park “Blue Line” boundary along the Vernooey Kill, which was once owned by Frederick William Irving Lundy and is commonly known as the former “Lundy Estate”. These lands, when privately held, were actively managed for farming, timbering and

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recreation. They also contain a private grass air strip which was maintained and utilized frequently by the prior owner.

Specific management activities related to the above lands, now classified as the Vernooy Kill State Forest, will be guided by the policies and directives found in the SPSFM and will include active management of the timber, fish and wildlife resources as well as managing public recreational use.

Additional information regarding the Vernooy Kill State Forest and the former Lundy Estate can be found in Section VI of this plan. Maintenance of facilities within the Vernooy Kill State Forest have included road, parking lot and bridge maintenance and periodic timber harvests.

2. Wildlife Management

Several changes have occurred over the history of the Sundown Wild Forest and Vernooy Kill State forest that have impacted a variety of wildlife species within the unit. Habitat changes have resulted from logging conducted prior to State acquisition, wild fires, acid precipitation, recreational uses, natural plant succession and other natural and human caused disturbances. Other influences on wildlife populations have included legislation involving timber harvesting and harvesting of wildlife species as well as natural population recovery of some species to the area. Recent wildlife management activities have been focused on managing and monitoring wildlife harvests and improving knowledge of vertebrate species distributions across large scales (e.g, BBA projects, Amphibian and Reptile Project Atlas). Lastly, New York Natural Heritage Program surveys have focused on endangered, threatened, and special concern species and significant and high-quality ecological communities.

Wildlife management on Forest Preserve lands is generally passive in nature with the exception of hunting and trapping. Article XIV, Section 1 of the New York State Constitution precludes wildlife habitat management or manipulation of vegetation, specifically the cutting of trees on the Forest Preserve.

3. Fisheries Management

Past fisheries management activities within the unit have been primarily limited to the stocking of the various species of trout and salmon that currently inhabit these waters. All the waters within the area are currently under statewide general fishing regulations with no special harvest restrictions imposed. The fishing pressure for this area is generally believed to be low (50-150 hours per acre).

Given the current regulations, and the low level of fishing pressure, it is unlikely that the fish populations within the unit will be significantly impacted by anglers.

C. Management Guidelines

1. Plans & Policies

a. Catskill Park State Land Master Plan

The Catskill Park State Land Master Plan (CPSLMP) was initially adopted by the Department in 1985 and revised in 2008. This plan provides the overall general framework for the development and management of State lands within the Catskill Park, including the Sundown Wild Forest lands which are found within this UMP.

The lands of the Sundown Wild Forest portion of this unit are Forest Preserve lands protected by Article XIV, Section 1 of the New York State Constitution. This Constitutional provision, which became effective on January 1, 1895, provides in relevant part:]

“The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed.”

ECL §3-0301 (1)(d) and 9-0105(1) provides the Department with the jurisdiction over Forest Preserve lands.

The CPSLMP places State land within the Catskill Park into the following 5 classifications: Wilderness, Wild Forest, Intensive Use, State Administrative and Primitive Bicycle Corridor and sets forth management guidelines for the lands falling within each major classification. Guidelines are provided for matters as structures and improvements, the use of motor vehicles, motorized equipment and aircraft, roads, jeep trails and State truck trails, flora and fauna, recreational use and overuse and boundary markings. Actions by the State on lands covered by the CPSLMP must be consistent with the provisions of the plan.

The CPSLMP requires DEC to develop individual UMPs for each unit of land under the agency’s jurisdiction. The Department must classify each unit of land under one of the established land categories, in conformance with the guidelines and criteria set forth in the CPSLMP. The role of the UMP is to implement and apply the CPSLMP’s general

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guidelines as well as provide more specific management goals and objectives for units of land within the Catskill Park.

b. Strategic Plan for State Forest Management

The 3,660 acres of Vernooy Kill State Forest lands in this UMP are contiguous with the lands in the Sundown Wild Forest, but they are located outside of the Catskill Park “Blue Line” boundary and therefore, these lands are managed differently from Forest Preserve and in accordance with the Strategic Plan for State Forest Management (SPSFM). Article 9, Titles 5 and 7, of the Environmental Conservation Law (ECL) authorize DEC to manage lands acquired outside of the Adirondack and Catskill Blue lines for watershed protection, production of timber and other forest products, recreation, and kindred purposes.

The SPSFM is the Statewide master document and Generic Environmental Impact Statement (GEIS) that guides careful management of natural and recreational resources on State Forest lands. The plan aligns future management with principles of landscape ecology, ecosystem management, multiple use management and the latest research and science available at this time. While the CPSLMP provides a foundation for the development of UMPs for Forest Preserve lands, the SPSFM provides a foundation for the development of UMPs for State Forests. For more information on management planning, see SPSFM page 21 at <http://www.dec.ny.gov/lands/64567.html>. State forests include acreage acquired and classified as Reforestation Areas, Multiple Use Areas, Unique Areas, and State Nature & Historic Preserves. Of the 4 classifications of State Forests, the Vernooy Kill State Forest is a Reforestation Area. For additional information on DEC’s legal rights and responsibilities, please review the Statewide SPSFM at <http://www.dec.ny.gov/lands/64567.html>. Refer specifically to pages 33 and 317.

The SPSFM was developed in 2010 to lead future management of DEC administered State Forests. The plan establishes Statewide guidelines for DEC staff through a process of public involvement and review. This plan provides a foundation for the development of UMPs, which sets forth specific actions to be undertaken by DEC on individual State Forests. The management objectives and proposals for the Vernooy Kill State Forest have been developed in accordance with the principles and guidelines outlined in the SPSFM.

Because the Vernooy Kill State Forest portion of this unit is outside the Catskill Park boundary and as such, is not subject to Article XIV, Section 1 of the New York State Constitution, nor the Catskill CPSLMP. The Vernooy Kill State Forest is managed in accordance to the following laws, rules, regulations and policies that apply to the

management of State lands. The Vernooy Kill State Forest lands within this UMP are protected by Article XIV, Section 3, paragraph 1 of the New York State Constitution. This Constitutional provision that became effective in 1938 recognizes the importance of State land acquisition to protect and enhance the State's forests and wildlife:

"...Forest and wildlife conservation are hereby declared to be policies of the state. For the purpose of carrying out such policies the legislature may appropriate moneys for the acquisition by the state land, outside of the Adirondack and Catskill Parks..... for the practice of forest or wildlife conservation...."

Numerous pieces of legislation have implemented this Constitutional provision. Legislation has been enacted which has resulted in the creation of Reforestation Areas, Multiple Use Areas, Unique Areas, and other land classifications. Like Forest Preserve lands, State Forest land has several classifications that place different priorities on land use that include Unique Areas, Multiple Use Areas, Reforestation Areas and State Nature and Historical Preserves. The Vernooy Kill State Forest lands contained in this UMP are classified as a Reforestation Area and may be actively managed, including the use of prescribed burns to perpetuate fire dependent natural communities and tree harvests.

The authorizing legislation for the acquisition of Reforestation Areas (ECL 9-0501 (1)) provides that: "In order to provide for the acquisition of lands outside of the Adirondack park and the Catskill park,... which are adapted for reforestation and the establishment and maintenance thereon of forests for watershed protection, the production of timber and other forest products, and for recreational or kindred purposes, the Department may acquire in the name of the state, by gift, purchase or appropriation, reforestation areas which shall consist respectively of not less than five hundred acres of contiguous lands, which shall be forever devoted to the planting, growth and harvesting of such trees as shall be reforested."

c. Policies

The following statutes, regulations, policies and guidance documents are currently in effect and relevant to the management of Sundown Wild Forest and Vernooy Kill State forest. The Department will comply with all relevant legal and policy guidelines when making any decisions regarding the use and management of these lands. Additional discussion regarding the management proposals that conform to CPSLMP guidelines for Sundown Wild Forest is provided in Section V. Additional discussion regarding the management proposals that conform to SPSFM guidelines for Vernooy Kill State Forest are found in Section VI.

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Environmental Conservation Law

Article 9: Lands and Forests

Article 11: Fish and Wildlife

Article 15: Water Resources

Article 23: Mineral Resources

Article 24 Wetlands

Article 33: Pesticides

Article 71: Enforcement

New York Code of Rules and Regulations (NYCRR) - Title 6:

Chapter I: Fish and Wildlife

Chapter II: Lands and Forests

Chapter III: Air Resources

Chapter IV: Quality Services

Chapter V: Resource Management Services

Chapter X: Division of Water Resources

Department Policies

- Motor Vehicle Access to State Lands Under the Jurisdiction of DEC for people with Disabilities (CP-3);
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1);
- Division Regulatory Policy (LF-90-2);
- Land Acquisition, Timber Cutting Reservations (NR-86-1);
- Adopt-A-Natural-Resources (ONR-1)
- Policies and Procedures Manual Title 8400-Public Land Management;
- State Land Facility Naming (NR-90-2)
- Trail Construction and Maintenance Manual
- Administrative Use of Motor Vehicles and Aircraft on Forest Preserve (CP-17)
- The Administration of Conservation Easements (NR-90-1);

- Acquisition of Conservation Easements (NR-86-3);
- Fish Species Management
- Temporary Revocable Permits
- Public Use

Division of Lands and Forest Policies

- Fireplaces and Fire Rings
- Foot Bridges
- Foot Trails
- Primitive Camping Sites
- Road Barriers
- Sanitary Facilities
- Trailheads

2. Application of Guidelines and Standards

All trail construction and relocation projects will be developed in accordance with the CPSLMP and the SPSFM and will incorporate the use of Best Management Practices, including but not limited to such consideration as:

- Locating trails to minimize necessary cut and fill;
- Wherever possible, lay out trails on existing old roads or partially cleared areas;
- Locating trails away from wetlands, streams, and unstable slopes wherever possible;
- Use of proper drainage devices such as water bars and broad-based dips;
- Locating trails to minimize grade;
- Using stream bank stabilization structures made of natural materials such as rock or wooden timbers;
- Avoiding areas where habitats of threatened and endangered species are known to exist;
- Using natural materials to blend the structure into the natural surroundings.

All bridge construction and relocation projects will incorporate the use of Best Management Practices including but not limited to such considerations as:

- Minimizing channel changes and the amount of cut or fill needed;
- Limiting construction activities in the water to periods of low or normal flow;
- Minimizing the use of equipment in the stream;
- Installing bridges at right angles to the stream channel;

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- Constructing bridges to blend into the natural surroundings;
- Using stream bank stabilizing structures made of natural materials such as rock or wooden timbers;
- Stabilizing bridge approaches with aggregate or other suitable material;
- Using soil stabilization practices on exposed soil around bridges immediately after construction;
- Designing, constructing and maintaining bridges to avoid disrupting the migration or movement of fish and other aquatic life;

All lean-to construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating lean-tos to minimize necessary cut and fill;
- Locating lean-tos to minimize tree cutting;
- Locating lean-tos away from streams, wetlands, and unstable slopes;
- Using drainage structures on trails leading to lean-to sites to prevent water from flowing into the
- sites;
- Locating lean-tos on flat, stable, well-drained sites;
- Limiting construction to periods of low or normal rainfall.

All parking lot construction and relocation projects will incorporate the use of Best Management Practices, including but not limited to such considerations as:

- Locating parking lots to minimize necessary cut and fill;
- Locating parking lots away from streams, wetlands, and unstable slopes wherever possible;
- Locating parking lots on flat, stable, well-drained sites using gravel for surfacing or other
- appropriate material to avoid stormwater runoff and erosion;
- Locating parking lots in areas that require a minimum amount of tree cutting;
- Limiting construction to periods of low or normal rainfall;
- Wherever possible, using wooded buffers to screen parking lots from roads;
- Limiting the size of the parking lot to the minimum necessary to address the intended use.

3. Application of the Americans with Disabilities Act

The Americans with Disabilities Act (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973; Title V, Section 504, have had a profound effect on how people with disabilities are afforded equality and access in their recreational pursuits. The ADA is a comprehensive law prohibiting discrimination against people with disabilities in employment practices, use of public transportation, use of telecommunication facilities and use of public accommodations. Title II of the ADA requires, in part, that reasonable modifications must be made to the services and programs of public entities, so that when those services and programs are viewed in their entirety, they are readily accessible to and usable by people with disabilities. This must be done unless such modification would result in a fundamental alteration in the nature of the service, program or activity or an undue financial or administrative burden.

Title II also requires that new facilities, and parts of facilities that are newly constructed for public use, are to be accessible to people with disabilities. In rare circumstances where accessibility is determined to be structurally impracticable due to terrain, the facility, or part of the facility is to be accessible to the greatest extent possible and to people with various types of disabilities.

Consistent with ADA requirements, the DEC incorporates accessibility for people with disabilities into the planning, construction and alteration of recreational facilities and assets supporting them. This UMP incorporates an inventory of all the recreational facilities and assets supporting the programs and services available on the unit, and an assessment of the programs, services and facilities on the unit to determine the level of accessibility provided. In conducting this assessment, DEC employs guidelines which ensure that programs are accessible, including buildings, facilities, and vehicles, in terms of architecture and design, transportation and communication to individuals with disabilities.

Any new facilities, assets and accessibility improvements to existing facilities or assets proposed in this UMP are identified in sections containing proposed action steps.

The DEC is not required to make each of its existing facilities and assets accessible as long as the DEC programs, taken as a whole, are accessible.

For copies of any of the above-mentioned laws or guidelines relating to accessibility, contact the DEC Universal Access Program Coordinator at 518-402-9428 or UniversalAccessProgram@dec.ny.gov

4. Application of Limits of Acceptable Change Process

The impacts of public use in certain areas of this unit are relatively low, so the areas that sustain the most severe impacts will take priority in the application of the LAC process. Work during the next ten years will concentrate on the development of a list of indicators and an inventory of trail and campsite conditions, to establish a baseline for monitoring, and the selection of standards to quantify management goals and objectives. The inventory will involve an initial measurement of indicators such as:

1. Trail Condition Indicators

- Depth of trail tread compared to surrounding grade at fixed locations every 500 feet along trail.
- Width of trail tread at fixed locations every 500 feet along trail.
- Number of locations, and at each location, distance along trail and width of disturbance where standing water/wetlands requires hikers to walk around.
- Number and development of user-created trails.
- Number of locations, and at each location, distance of trail where drainage is not controlled and erosion is active.

2. Campsite Condition Indicators

- General inventory indicating the number of campsites too close to water, trails, roads and each other.
- Area of barren core.
- Distance of down firewood from fire ring.

3. Social Condition Indicators

- Average number of trail register entries per day by season.
- Average size of party signing into trail registers.
- Numbers of parties per week larger than ten signing into trail registers by season.
- Number of other groups camping within site and sound.
- Number of pieces of litter at the campsites.

LAC standards for the indicators, once selected will be the targets against which the results of periodic monitoring will be compared. Future effort will focus on the development of management prescriptions to prevent standards from being exceeded.

IV. Management Recommendations, Goals, & Objectives

Overarching management objectives that apply to and are permissible in both the Sundown Wild Forest and Vernooy Kill State Forest are outlined in Section IV. Section V provides detailed management proposals for Sundown Wild Forest that comply with the management guidelines specific to the CPSLMP and Section VI provides detailed management proposals for Vernooy Kill State Forest that comply with the management guidelines specific to SPSFM.

A. Goals

The primary goal of Forest Preserve management is to preserve and protect the wild forest character and integrity of the unit and allow natural processes to proceed essentially unhindered. A secondary goal of Forest Preserve management is to provide for a variety of outdoor recreation opportunities without degrading the natural resources or impairing the setting and experiences unique to the region's wild forest lands.

The primary goal of the State Forest portion of this plan is to provide for biodiversity through ecologically sound management of the forest and adhering to sustainability guidelines to enhance the health of the forest and its inhabitants. In addition, public recreation will be allowed and encouraged so long as the primary goal is not compromised. This ability to actively manage the State Forest part of this unit to obtain specific management objectives is what sets this area apart from the Forest Preserve areas, where generally, management is passive and left to natural forces.

B. Issues

Issues directly related to management objectives are discussed in Sections V and VI, respectively.

C. Bio-Physical Resources

1. Water

Present Conditions:

The DEC Division of Water conducts the Statewide Lake Classification and Inventory (LCI), which is a comprehensive lake monitoring program that measures both water chemistry and biological parameters to evaluate lake water quality and trophic condition. No degradation of water quality is presently known in the unit. No studies have specifically focused on the effects of recreation use on water quality. There are four developed springs and many undeveloped, naturally occurring springs that are found throughout the unit. A spring box built by the Civilian Conservation Corps (CCC) is located along the Ashokan High Point-Kanape Trail. Additional developed springs are located downhill and west of the Red Hill Fire Tower and within the Peekamoose Valley Trailer Field.

Objectives:

- To maintain and/ or enhance the water quality of the streams and wetlands within the unit through careful planning of proposed facilities and the repair and maintenance of existing facilities under the guidance of recognized water quality Best Management practices.
- To maintain, protect and/or improve the quality of the area's water resources and developed springs.
- To gain detailed knowledge on the public's use of the area's waters, and how that use may be negatively impacting water resources

Management Actions:

- Support and encourage research to determine the effects of recreational use on water quality.
- Periodically inspect and maintain developed springs within this unit
- Maintain free flowing water courses in their natural condition and free of human-induced contaminants such that water quality is not impaired.

2. Soils

Present Conditions:

Determinations of various soil types within the unit are general. Little information has been compiled on soil loss and/or degradation within the unit, except that there are a few sites where some minor soil disturbances on trails that may require rehabilitative actions in the future. However, guidelines that limit the development and type of recreation that can occur within the unit have generally served well in overall protection of the unit's soil resources.

Objectives:

- To keep soil erosion and compaction caused by recreational use within acceptable limits that closely approximate the natural erosion process.
- To minimize the amount of soil compaction from human activity on undeveloped areas where natural plant communities exist.

Management Actions:

- Through field observation, inventory and monitor soil conditions within the unit affected by recreational use.
- The Regional Forester, in accordance with existing guidelines, will close, rehabilitate, or restrict use of unit facilities, as appropriate, to reduce negative impacts to soil resources caused by recreational use.
- Concentrate trail maintenance efforts on areas prone to erosion and overuse.
- Design, locate, and construct all new structures and improvements in ways that will minimize the potential for soil erosion.

3. Wetlands

Present Conditions:

The wetlands found within the unit provide great ecological, aesthetic, and educational value in their capacity to receive, store and slowly release rainwater and snow melt. Wetlands protect water resources by stabilizing water flow and minimizing erosion and sedimentation. In general, they are one of the most productive habitats for fish and wildlife, and afford opportunities for fishing, hunting, wildlife observation, and photography. Through natural processes, there are changes in the location and composition of wetlands over time, thus resulting in changes to mapping information. There are a few vernal pools scattered throughout the unit. Vernal pools are small wetlands that occupy shallow depressions flooded in the spring or after a heavy rainfall

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but are usually dry by mid-summer. Many vernal pools refill in the fall. These tiny wetlands support a diverse group of amphibians that include species of frogs, salamanders, newts and toads.

Objectives:

- To minimize the impacts of construction and maintenance activities on wetlands.
- To preserve and protect wetland community vegetation and associated plant species.
- To minimize the amount of wetland disturbances and impacts caused by the construction, maintenance and use of structures and improvements and human recreational use.

To allow natural processes to operate freely to ensure that the succession of native plant communities is not altered by human use.

Management Actions:

- Install bridges and other erosion control devices as appropriate to protect wetland areas.
- Correct any undesirable wet conditions and relocate any trails or facilities when necessary to reduce the impacts on wetlands or associated vegetation.
- Promote the development of GIS information to assist managers in accessing inventoried wetland data.
- Install and maintain erosion control devices on trails to minimize soil movement.

4. Vegetation

Present Conditions:

This unit hosts a variety of plant species and cover types. These vegetative communities have been influenced by many natural and human disturbances. Some of the disturbances include wind, fire, ice, insects, disease, logging and recreational use. These disturbances create opportunities for different species to grow and help increase the diversity of the vegetation.

Impacts to the vegetation of natural communities come from a variety of sources, but most are related to visitor activities in the unit. Impacts directly attributed to recreational use do exist in areas where high use is concentrated. Concentrated human activity in areas such as trail corridors, riparian areas and mountain summits are likely to be the primary source of impacts to vegetation, both presently and in the future.

Objectives:

- To continue to allow natural processes to function in the succession of plant communities.
- To protect species and ecological communities identified as rare, threatened or endangered.
- To support research efforts that monitor and map forest health and changing forest conditions.
- To continue and expand programs that identify and map ecological communities and sensitive, rare, threatened, and endangered plant species or communities.
- To allow natural processes to freely operate to ensure that the succession of native plant communities is not altered by human use.

Management Actions:

- Enforce existing policies and regulations that protect the unit's vegetation.
- Use minimum impact techniques to restore sites where natural vegetation has been destroyed by human causes. Native seedlings, trees, shrubs, or grasses will be planted to accelerate return of natural conditions where necessary.
- Relocate existing facilities, or locate and construct new facilities, where they will not impact rare, threatened or endangered plant species or communities.
- Monitor vegetation in high-use areas to determine overuse and the need for restricting use in such areas.
- Assist the New York Natural Heritage Program in monitoring the presence of rare, threatened and endangered plants and significant plant communities where they occur within the unit.
- Eliminate any identified populations of invasive plant species that are discovered in the unit. These actions may be carried out by DEC personnel or by other volunteers under supervision of DEC through an approved Volunteer Stewardship Agreement
- Enforce the Department's rules and regulations regarding tree cutting on Forest Preserve land in Sundown Wild Forest.

5. Invasive Terrestrial and Aquatic Species

Present Conditions:

Non-native, invasive species directly threaten biological diversity and high-quality natural areas. The unit's key conservation targets and supporting ecological processes are at risk from invasive species, as the number of communities threatened and the number of invasive species that threaten them is expected to increase over time.

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Invasive plant species can alter native plant assemblages, often forming monospecific stands of very low-quality forage for native wildlife, and drastically impact the ecological functions and services of natural systems. Invasive plants are likely to spread, undermining the ecological, recreational, and economic value of the unit's natural resources.

There are very few measures currently in place in the Sundown Wild Forest and Veerney Kill State Forest to control the spread of exotic and invasive species. Many, if not all, invasive plant infestations within a respective unit will have multiple transport and distribution vectors and will threaten sensitive communities. All "easy to contain – low abundance" terrestrial and aquatic invasive plant infestations within the unit are immediate targets for containment and/or eradication controls. Minimizing the spread of newly documented and immature infestations before they have the chance to become established is a priority management action.

Facilities and activities within the unit may influence invasive plant species introduction, establishment, and distribution throughout and beyond the unit boundaries. These facilities and activities are likely to serve as "hosts" for invasive plant establishment. Perpetual Early Detection/Rapid Response protocols will be implemented within the unit at probable locations of invasive plant introductions, such as parking/trailhead areas.

Educating natural resource managers, elected officials, and the public is essential to increase awareness about the threat of invasive species and ways to prevent their introduction and transport into or out of the unit. Invasive species education will be incorporated in staff training and citizen licensing programs for hunting, fishing, and boating; through signage, brochures, and identification materials; and included in information centers, campgrounds, community workshops, and press releases.

The CPSLMP allows for the use of motor vehicles, motorized equipment, and aircraft "to preserve and enhance the fish and wildlife or other natural resources of the area". This equipment could be used for purposes of control or eradication of exotic or invasive species in the Sundown Wild Forest. Motorized control measures of exotic and invasive species which threaten other resources are also authorized under CPSLMP guidelines if the threat constitutes an emergency involving the protection or preservation of intrinsic resource value. Invasive Species management in the Veerney Kill State Forest will follow the management threshold for invasive species established in the SPSFM.

Objectives:

- To reduce or eliminate terrestrial invasive plant species found within the unit and protect the area from the introduction, establishment and spread of invasive species.
- To prevent the establishment of non-native invasive vegetation.
- To protect locations of sensitive, rare threatened, and endangered plant species.

Management Actions:

- Continually update the inventory of Sundown Wild Forest and Vernooy Kill State Forest to determine the presence and extent of invasive species. All management recommendations are based on the knowledge of non-native invasive species present in the unit and their location, species, abundance and density. Inventory should be based on existing inventories formal or informal inventories during routine operations by DEC personnel and by assistance from volunteers under DEC supervision through a Volunteer Stewardship Agreement to report on invasive species presence, location and condition.
- Educate natural resource managers, elected officials and the public about the threat of invasive species and ways to prevent their introduction and transport into and out of the unit.

6. Wildlife

Present Conditions:

While all of the objectives and management actions outlined below are important, a management priority should be placed on increasing our understanding of the occurrence and distribution of many wildlife species and their habitats within the unit. This priority is reflected under the list of potential management action projects outlined below. Active management of wildlife populations will be accomplished primarily through hunting and trapping regulations developed by the DEC's Bureau of Wildlife for individual or aggregate Wildlife Management Units. Where appropriate, continued input from Citizen Advisory Committees will be considered in determining desirable levels of wildlife within this unit.

Objectives:

- To maintain all native wildlife species at levels within the carrying capacity of this unit through current hunting/trapping regulations and where permitted, through

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habitat management and frequent consultation with the Division of Fish and Wildlife.

- To perpetuate, support, and expand a variety of wildlife recreational opportunities including sustainable hunting, trapping, wildlife observation and photography as desirable uses of wildlife resources.
- To assure that wildlife populations are of appropriate size to meet the demands placed on them, including consumptive and non-consumptive uses.
- To meet the public's desire for information about wildlife and its conservation, use, and enjoyment.
- To minimize wildlife damage and nuisance problems.
- To increase our understanding of the occurrence, distribution, and ecology of game and nongame wildlife species and their habitats.

Management Actions:

- Support traditional use of the unit's wildlife resources, particularly activities designed to perpetuate hunting and trapping programs and education efforts.
- Manage and protect wildlife through enforcement of the Environmental Conservation Law and applicable Rules and Regulations.
- Continue to monitor and inventory wildlife populations and their habitats, particularly game species and species classified as rare, threatened, endangered or special concern.
- Continue to support Statewide survey efforts that increase our understanding of the occurrence and distribution of flora, fauna, and significant ecological communities (e.g., New York Natural Heritage Program surveys).
- Re-establish, to the extent possible, self-sustaining wildlife populations of species that are extirpated, endangered, threatened or of special concern in habitats where their existence will be compatible with other elements of the ecosystem and human use of the area.
- Provide information, advice and assistance to individuals, groups, organizations and agencies interested in wildlife whose activities and actions may affect, or are affected by, the wildlife resources or the users of wildlife.
- Provide information to user groups on avoiding problems associated with black bears.
- Encourage the use of bear-resistant food canisters.
- Work cooperatively within the Department to assess problems associated with beaver-flooded trails. Work with area trappers and encourage trapping at nuisance sites during the open beaver trapping season.

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- The Department will protect critical plant and animal habitats such as rare or protected plants, rattlesnake areas, and sensitive areas such as steep slopes and stream banks within the unit. Any new recreational facilities such as trails, camping and parking areas will be located to avoid these sensitive areas to the extent possible
- The Department will monitor existing facilities to ensure that there is no significant impact on the area. The Division of Lands and Forests will work with the New York Natural Heritage Program to help monitor and identify possible locations of rare species.

7. Fisheries

Present Conditions:

The fisheries resources within the management unit are mostly remote small stream wild trout fisheries with low fishing pressure. The DEC Bureau of Fisheries conducts biological and water chemistry surveys to periodically assess the sportfish within the management area. The Rondout Creek and Vernooey Kill stay cold all year and are the largest fishable streams within the UMP. Both have stocked and wild brook trout, as well as some wild brown trout. The lower portion of the Vernooey Kill as well as Rondout Reservoir are also both stocked with brown trout. A series of small parking lots along the north side of Peekamoose Road provides access to 4.5 miles of the Rondout Creek. The second largest trout stream in the area is the Vernooey Kill, in the towns of Rochester and Wawarsing (partially within the Vernooey Kill State Forest). Similar to the Rondout Creek, pull-offs and small parking areas provide access to the Vernooey Kill. The Kanape and South Hollow Brooks are small, but both have wild trout populations. Mettakahonts Creek and its feeder streams contain trout, even though the upper tributaries may dry out in summer.

Fishing in the unit, as in the rest of the State, is regulated by open seasons, size and catch limits, and manner of take, as specified in 6 NYCRR Part 10, authorized by Sections 11-1303 and 11-1305 of the Environmental Conservation Law. The Department's fisheries management goal within the area is to preserve, enhance, and where needed, restore, fisheries habitats and populations to achieve and perpetuate the historic quality of the fisheries resource. Aquatic resource management will emphasize the quality of the angling experience over quantity of use. Current fisheries quality can be maintained even if accessible fishing acreage is expanded in the upper Neversink watershed. This type of fishing experience is becoming rare within the region and adds to the diverse fishing opportunities available to New York anglers. Crowds of people and stocked fish would not be consistent with DEC objectives now.

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Objectives:

- To preserve, enhance, and restore where needed, fisheries habitats to achieve and perpetuate the historic quality of the fish communities found in all streams occurring within the unit.
- To enhance the angling experience for both the young and persons with disabilities through more intensive management of the ponded waters within the unit.
- To identify future management objectives resulting from information gained from ongoing fisheries studies surrounding the unit.
- To maintain and improve access to the fisheries resources of the unit and maintain fishing quality in consideration to the sensitive nature and carrying capacity of riparian lands.

Management Actions:

- Brook trout are generally considered to be easily caught, and increased pressure and take could result in a decrease in the size and number of fish caught. If this kind of pressure is experienced, then special harvest restrictions could be the management action of choice as opposed to increased stocking. The second consideration is that the experience of a fishing trip to this area would be compromised if the level of use on the area increases significantly. In most cases the Department's goal will be to manage the fisheries of the area for a quality fishing experience. The present level of use is consistent with the current goals for this area and a significant increase in fishing use is not likely to occur soon.
- Fishing access is very limited in some areas of the unit. Land acquisition priorities should continue to be identified and if acquired by the Department, have the potential to enhance fishing access.
- In some instances when indigenous fish communities cannot in any way be protected, maintained or restored due to human caused disturbances, a waterbody specific stocking plan may be implemented. Species historically associated with the Catskill Region such as brook trout, brown trout, rainbow trout, landlocked Atlantic salmon, and some warm water species could be incorporated into stocking plans.

8. Fire

Present Conditions:

DEC is charged with protecting the Sundown Wild Forest and the Vernooy Kill State Forest from fire under the provisions of Article 9 of the Environmental Conservation Law. The towns of Neversink, Denning, Rochester, Warwarsing and Olive are “Fire Towns”. Permits from the Department must be obtained when an individual seeks to burn brush in a town which is totally or partially located within the boundaries of the Catskill Park. For more information, please see regulations at <http://www.dec.ny.gov/chemical/58519.html>. Fire prevention, detection and suppression is the responsibility of the Forest Rangers assigned to these towns.

The validity of controlling fires started by natural causes in a wild forest is questionable. Natural fires, though rare, are a part of the natural ecosystem. The difficulty arises in identifying naturally caused fires from set fires. Any changes to current fire management techniques will depend upon the adoption and implementation of a fire management policy.

Objectives:

- To adequately protect the unit from fire, as required by Constitutional and State law (ECL Article 9).

Management Actions:

- Where endangered or threatened plant species or communities are identified and would be destroyed by inaction the Department may consider the use of fire or measures imitating fires in special circumstances. A candidate for special consideration is the fire dependent High Point Mountain region of the Town of Olive. The elimination of all fire in this area could cause significant changes in the native woodland composition.
- Use restrictions may be imposed on lands within the unit during periods of high fire danger.

9. Vistas

Present Conditions:

Several locations within the unit provide naturally occurring and filtered scenic views, particularly during leaf-off. A vista that is periodically maintained is located near the summit of Ashokan-High Point. A 1935 opinion of the Attorney General provided that, “Article VII, section 7 (now Article XIV) of the New York State Constitution does not

IV. Management Recommendations, Goals, and Objectives

prevent the removal of an immaterial amount of tree growth for the purpose of opening vistas or view about the building of trails in the Forest Preserve. Care should be taken such that such removal does not pass the point of immateriality as defined by the courts". The written opinion includes the advice that tree removal be done "where as little cutting as possible is required".

Objective:

- To Provide the public with a viewshed of the lands surrounding Ashokan-High Point

Management Action:

- Maintain the existing vistas along the trail near the summit of Ashokan-High Point mainly through brushing and the pruning of tree branches whose removal will not significantly reduce the wild character of the area. Tally and remove trees larger than three inches rarely, and only when necessary, to maintain the dimensions of the existing vista. During annual maintenance, stagger the cutting of brush and, if necessary, the limited cutting of trees within the area so that all trees and shrubs in the area will exhibit a natural variation of sizes.

D. Man-Made Facilities

1. Trails

Present Conditions:

Trail management involves not just the trail itself, but also the corridor it occupies. Trails are not self-sustaining. Once developed, all trails must receive a degree of maintenance, otherwise, unmaintained trails will deteriorate and cause resource problems.

Recreational trail opportunities will be provided by the Department to the extent that they do not infringe upon the character of the unit. The level and intensity of public use will be monitored and steps to prevent degradation and overuse of the area will be taken when necessary. Existing trails will be monitored and maintained where appropriate. When necessary, trails will be rebuilt or rerouted to more appropriate locations to protect the environment. An inventory and description of the trails within the unit is provided below.

IV. Management Recommendations, Goals, and Objectives

a. Hiking Trails (about 20.9 miles)

1. Long Path, Upper Cherrytown Road DEC parking lot to Peekamoose Road (Bangle Hill) about 9.2 miles (blue markers). Cherrytown to Vernoooy Falls section is about 1.75 miles. About 6.5 miles of this 9.2-mile section of the Long Path is shared with a horse/snowmobile trail. (See description below).
2. An additional 2 miles from Vernoooy Kill Falls to Greenville Road, not part of the Long Path, is shared with a snowmobile/horse trail.
3. Peekamoose-Table Trail (Long Path): blue markers - 0.6 miles.
4. Long Path: Bull Run to Riggsville, blue markers - 0.5 miles.
5. Long Path: Bull Run to Peekamoose Mountain Trailhead - follows Peekamoose Road, blue markers - 0.3 miles.
6. Red Hill Fire Tower Trail - 2.0 miles
7. Ashokan High Point - 6.3 miles

b. Horse/Snowmobile Trail (about 18.2 miles)

1. Upper Cherrytown Road DEC parking lot to Greenville, return via Trails End Road - 11.2 miles. About 4.65 miles is also a hiking trail. Remainder is along town roads.
2. Denman Mountain - 7 miles

c. Cross Country Ski Trails

Cross country skiing is allowed on all trails. The Ashokan High Point Trail is marked as a recommended cross-country ski trail.

d. Unmarked Trails

1. Old woods roads (see easements and ROWs for more information). Each of these locations have several old woods roads: Denman Mountain, Wildcat Mountain South, Sugarloaf Ridge, Lackawack Hill-East Mountain, Vernoooy Kill Falls area from Yagerville and south of Spencers Road, where it passes through State land in Denning, Bangle Hill, Mombaccus, and Kanape. Those on Denman Mountain and at the Kanape are the most heavily used.
2. Unmarked foot trails which have evolved by sporadic public use were observed on Denman Mountain (south and east slopes), the Vernoooy Kill Falls area, Mombaccus-Little Rocky (from Haver Road old woods road up to the Little Rocky Ridge), and the Kanape (from a point on the old woods road to the summit of Ashokan High Point Mountain).

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e. Long Path

The Long Path is a continuous hiking trail marked, managed and maintained by the New York/New Jersey Trail Conference. It originates in Fort Lee, New Jersey and extends northward through the Catskills to John Boyd Thacher State Park in Albany County, New York. Volunteers have constructed, and now maintain, most of the present 328-mile long path. Although most of the trail is marked and maintained by the New York/New Jersey Trail Conference, the Long Path uses hiking trails marked and maintained by the DEC as it travels through the Catskill Park (approximately 90 miles). While some of the maintenance of the Long Path as it passes through the Catskills is being adopted by the New York/New Jersey Trail Conference, the ultimate responsibility for these trails will continue to rest with the Department.

Objectives:

- To provide visitors with a trail system that offers a range of recreational opportunities in a manner that keeps the natural resource impacts and maintenance needs to a minimum.
- To identify suitable locations and create improved access to the unit and access to the unit for people with disabilities.
- To eliminate incompatible uses which detract from the character of the unit.
- To educate and work with local user groups to self-police and educate their members and visitors to discourage the use of unauthorized trails.

Management Actions:

- Construct and maintain all trails in the units in accordance with their classifications under the official trail classification and standards system. Trail maintenance will include removal of trees, tree pruning, clearing of brush, ditching, water bar construction and cleaning, the construction of bridges where needed, bridge repairs and reconstruction. All maintenance and construction will conform to the best management practices and will be conducted in conjunction with a project work schedule, subject to the availability of funds and labor.
- On existing marked trails or existing unmarked trails that need be marked, address major wetland, spring, or stream crossings, beaver flooding or soil erosion on slopes through trail relocation where feasible.
- Address major wet areas and erosion problems that cannot be avoided through trail relocation, as well as minor wet areas and erosion problems, through the installation of bridges or appropriate water management structures but only where necessary to protect natural resources.

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- Identify trail sections that are vulnerable to excessive damage because of steep slopes, erodible soil types or high water tables and close them during wet seasons. Announce trail closures through posting of signs at trailheads and through media. Seek voluntary compliance first, utilize regulation and enforcement only when and where lack of voluntary compliance poses a serious threat to natural resources.
- Prohibit by regulation the marking or maintenance of trails, including trails that serve as exclusive access from adjacent private lands, without Department approval.
- Develop LAC indicators and standards for marked and unmarked trails in the unit.
- Conduct a detailed inventory of chosen LAC indicators for all of the marked trails in the unit. Begin an inventory of major unmarked trails after the inventory of marked trails has been completed.
- Take appropriate action when and where necessary to keep LAC standards from being exceeded.
- New facilities such as trails (snowmobile, equestrian, bicycle and hiking), bridges, parking areas, information kiosks, etc. will be constructed to enhance public recreational opportunities. The Department will insure that all facilities are in conformance with DEC specifications and policies.
- Update the current Sundown Wild Forest brochure to include the Vernooy Kill State Forest. The brochure will contain access points, trails, key points of interest such as springs, camp sites and vistas, describe appropriate use of the area (camping regulations, etc.) and provide a brief historical background.
- Provide additional foot, mountain bike, snowmobile and horse trails in areas which can sustain such uses over the long term (i.e., Vernooy Kill State Forest to Vernooy Falls area in Forest Preserve). Monitor all trail areas and reassess impacts when this plan is updated. Control use or eliminate trails if erosion, vandalism, water quality, rare species or the natural character of the forest lands is imperiled by continued use.
- Design and locate trail markers and trail signs in accordance with the unified system developed for all State lands.

2. Trail Heads/ Entry Points

Present Conditions:

A trailhead is defined as the starting or termination point of one or more designated trails at a point of entrance to State land, which may contain some or all of the

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following: vehicle parking, trail signs, and peripheral registration structures. Information kiosks with maps, signs and other pertinent interpretive information at key locations such as trailheads and parking areas will be provided where appropriate. Trailheads are located in the following areas within the unit:

- Kanape (physically on Slide Mountain Wilderness lands)
- Vernooy Kill Falls at Trails End Road
- Vernooy Kill Falls at Upper Cherrytown Road
- Red Hill Fire Tower at Dinch Road
- Peekamoose/Table Trail on County Route 42
- Bull Run (Long Path to Riggsville) on County Route 42
- Vernooy Kill Falls at Greenville Road/Yagerville Road
- Denman Mountain at Glade Hill Road
- Trail registers are located on 5 of the 8 existing trailheads listed below. Trail registers are used by the Department to gather public use information for the unit.
- Vernooy Kill Falls
- Red Hill
- Peekamoose/Table
- Ashokan High Point
- Bangle Hill

DEC informational kiosks are used to provide a wide variety of educational information at one location. Standard kiosks include a plexi-glass covered display board. Educational information addresses water supply, human waste, fire, litter, tree and vegetation cutting and camping restrictions. The kiosks in the unit presently contain DEC general rules and regulations, maps, and educational information and emergency contact information. There are 8 informational kiosks currently in place within the unit, in the following locations:

- Four in Peekamoose Camping Area: Lower Field, Middle Field, Upper Field and Trailer Field.
- Peekamoose/Table Trailhead Parking
- Entrance to the Blue Hole access trail
- Upper Cherrytown Road, located beyond the gate on the trail to Vernooy Kill Falls.
- A kiosk is located at the Ashokan High Point-Kanape Parking Area which supports the unit but is located within the bounds of the Slide Mountain Wilderness Area.

Objectives:

- To provide adequate access to the unit.
- To provide and manage adequate trailhead facilities (including trail registers and informational kiosks) that accommodates visitor needs and protects resource values.
- To provide adequate parking and mitigate any parking related problems.
- Provide educational information, DEC rules and regulations and emergency contact information to users.
- To reduce the amount of litter and vandalism occurring at trailheads.
- To provide wooden ID signs and kiosks where necessary and appropriate

Management Actions:

- Encourage partnerships with local governments and outside volunteers to maintain and snowplow trailhead parking facilities.
- Monitor trailhead condition and schedule regular maintenance of parking area surfacing, barriers, signs and trail registers.
- For each trailhead, monitor interior use and parking levels throughout the year and periodically reassess parking needs in relation to interior capacity.
- Maintain all information kiosks and register boxes on the unit.

3. Signs

Present Conditions:

Signs are provided to mark trails, minimize impacts and provide safety information. Signage is kept to a minimum to avoid interfering with Wild Forest and State Forest values and guidelines. Currently, the Divisions of Lands and Forests, Operations and Fish and Wildlife all use signs in the unit. Trailhead signing is limited to small signs on sign standards. Interior signing is limited to trail junctions and special information and regulatory signs. Sign theft and vandalism is an occasional problem.

Objectives:

- To more adequately identify access points to the unit.
- To provide for the minimal use of signage necessary to manage and protect the resource and user safety.
- To create signs that carry positive messages. Rather than simply citing a regulation, a sign should explain the reason behind the message.

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Management Actions:

- Update and maintain sign inventory.
- Coordinate and review all signage needs through a single area manager.
- Signs will be provided for visitor safety and resource protection, not for the convenience of the user.
- Minimize regulatory signs at interior locations in favor of signs posted at trailheads or access points and published, where feasible, in brochures and maps otherwise made available to users prior to entry into the unit.
- Install new and/or maintain existing ID signs and kiosks with register books
- Replace all signs removed through vandalism or other causes

4. Roads

Present Conditions:

The following road information was collected from regional DEC staff and various other sources. These roads are currently being used by motor vehicles and many are being used illegally by ATVs. The Department uses administrative roads for various administrative purposes such as for fisheries management, maintenance of facilities, law enforcement and access for firefighting. Several of the Department's roads are open for public use of vehicles to access recreational facilities in the unit. However, the use of motor vehicles, except for snowmobiles and to provide access for persons with disabilities to certain areas administered by the Department, is generally not a program that is offered by the Department.

Administrative use of motor vehicles on Sundown Wild Forest must comply with Commissioner's Policy #17 (CP-17). This policy requires reporting of administrative use of motor vehicles, motorized equipment, and aircraft. One of the intentions of this policy is to "minimize the administrative use of motor vehicles on roads closed to public motor vehicle use and aircraft on Forest Preserve lands."

Existing Public Roads on the Unit (23.55 miles)

1. Ulster County Route 42 along the Kanape (Town of Olive) for 1.4 miles and the Peekamoose Valley area (Town of Denning) for 3.8 miles.
2. Browns Road (adjoining Krumville Plantation), Town of Olive - 0.56 miles.
3. Upper Cherrytown Road (Town of Rochester) for 0.86 miles.
4. Mill Road (Town of Rochester). Three (3) locations for a total 1.16 - mile stretch.
5. Holly Road (Yagerville, Town of Rochester) - 0.38 miles.
6. Dymond Road (Greenville, Town of Denning) - 0.50 miles.

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7. Spencer Road (connecting Dymond and Sundown - Greenville Roads) - 0.40 miles.
8. The Sundown - Greenville Road (Ulster County Route 101) passes though the unit at 2 locations (Town of Denning) - 1.06 miles.
9. Sugarloaf Road, Town of Denning, 2 segments - 0.93 miles.
10. Red Hill Knolls Road, Town of Denning, 0.49 miles.
11. Denning Road, Town of Denning, through Neversink River parcel - 0.21 miles.
12. Furmans and Glade Hill Road, Town of Neversink - 0.31 miles.
13. Moore Hill Road, Town of Neversink, year-round - 0.60 miles; seasonal - 1.78 miles.
14. Denman Mountain Road, Town of Neversink, seasonal, 2 sections - 0.46 miles
15. Glade Hill Road, Town of Denning (continuation of seasonal Moore Hill Rd.) – 0.30 miles.
16. Frank Donovan Road (Neversink) – through private and State land to private inholding from road- 0.42 miles.
17. Ridge Road, Yagerville, Town of Rochester, to inholding 0.18 miles.
18. Lundy Road, Town of Wawarsing, 7 miles.
19. Rouge Harbor Road, Town of Wawarsing, 2 sections- 0.75 miles

b. Existing Unmaintained/Seasonally Maintained Town Roads (approximately 9.44 miles)

1. Spencer Road in Town of Denning is called Trails End Road and Mountain Road in Town of Rochester, through State land - 4.3 miles.
2. Van Aken Road, Town of Denning - 1.61 miles through State land.
3. Balace Road, Town of Denning (public access to State land preserved).
4. Bear Spring Road, Town of Rochester, through State land to inholding - 0.9 miles.
5. Van Aiken Knolls Road (a/k/a Mike Combs Road), Town of Denning (through State land only) - 0.25 miles.
6. William O'Coon Road, a/k/a Stone Cabin Brook Road (south, off Porcupine) through State land to inholding - 0.93 miles.
7. Dinch Road (north, abutting Red Hill), Town of Denning - 0.85 miles.
8. Wildcat Road R.O.W. through State land, Town of Denning - 0.50 miles (formerly a town road).
9. Van Etten Road, Town of Denning - 0.1 miles. Road is gated at the Peekamoose area Lower Field parking lot to restrict motor vehicle use to authorized vehicles only.

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c. Forest Preserve Access/Other Roads (approximately 2.4 miles)

1. Mancuso Road, Town of Wawarsing - 1.39 miles to State land (about .49 miles on State land still visible).
2. South Hollow Road, Town of Olive - to State land.
3. Bungalow Brook Road, Town of Neversink, to State land - 0.33 miles on State land accessing 0.18 miles stretch of private land, then crossing State land to Denman Mountain Hunting Club and other inholdings.
4. Lackawack Hill Road, Town of Wawarsing - 0.04 miles on State land.
5. Krumville Plantation access, Town of Olive, off Browns Road through State land - 0.16 miles.
6. Haver Road, Town of Olive, access to and into State land.
7. Claryville Rd, Town of Neversink, access to the Neversink River
8. Peekamoose Middle Field Access - 0.1 miles. Administrative use only.
9. Peekamoose Upper Field Access - 0.1 miles. Administrative use only.
10. Peekamoose Trailer Field Access Road - 0.1 miles. For public access for camping purposes for trailer camping and/or persons with disabilities with a camping permit.

Objectives:

- To utilize the road system to provide public access to recreational opportunities and administrative access.
- To continue to provide public motorized use of designated roads in the unit to accommodate access for recreational opportunities consistent with CPSLMP and SPSFM requirements.
- To provide for adequate maintenance of former all-season roads that are designated for non-motorized recreational trail use in compliance with the CPSLMP and the SPSFM requirements.
- To continue to develop partnerships with local municipalities to help maintain public roads and administrative areas.
- To prevent illegal motor vehicle use.

Management Actions:

- Periodically maintain roads using proper materials, tools and techniques in a manner consistent with the CPSLMP and the SPSFM.
- All roads will be mapped and inventoried during management actions as to their suitability to accommodate vehicular traffic for management and special use.
- Roads will be re-routed and repaired when a management activity requires such action.

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- Whenever possible, costs associated with the maintenance and/or the construction of roads will be borne by the purchaser of the forest products. Pursuant to DEC policy, this tradeoff shall not exceed 20 percent of the cost of the timber.
- All actions pertaining to the re-route of existing roads or the building of new ones will be done so under the guidance and supervision of the forester in charge of the unit.

5. Barriers: Gates and Rocks

Present Conditions:

Several former roads entering the unit from various points around its periphery have been blocked to prevent the passage of motor vehicles. Other roads have not been blocked. Though illegal motor vehicle use is not a major issue in this unit, instances occasionally have been observed by staff and reported by members of the public. On non-conforming roads or trails not presently blocked, barriers will be placed when required. A barrier on a trail may consist of a line of boulders or locked gate to deter illegal motor vehicle use or piles of brush, tree plantings or appropriate structures to prevent passage of trail users. Locations of existing gates and rock barriers within the unit is included below.

Gates exist at the following locations to prohibit unauthorized motor vehicle access to Forest Preserve lands by the public while allowing for the occasional need of DEC to access these areas for administrative purposes:

Peekamoose Valley Sundown Wild Forest Gates (8):

- Van Etten Road
- Middle Field
- Upper Field
- Trailer Field
- Vernooy Falls
- Trails End
- Upper Cherrytown Road
- Kanape - before bridge on Ashokan High Point Trail

Vernooy Kill State Forest Gates (5):

- Power line, Lundy Road
- Dunlop Farm access road (from Lundy Road)

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- Terwilliger Farm access road
- Phillips Road entrance (from Cutler Road)
- Gravel Pit entrance (from Cutler Road)

** An additional gate was installed at the entrance to the Potterville Bridge, but was destroyed by vandals and subsequent flooding. The gate no longer serves a purpose and will not be replaced.*

Rock Barriers

Rock barriers have been placed at several locations throughout the unit to prevent motor vehicle access to unit lands at the following locations:

- Middle Field Parking Lot
- Middle Field, northside of Peekamoose Road
- Western Upper Field Parking Lot
- Upper Field, northside of Peekamoose Road
- Trailer Field, northside of Peekamoose Road
- Long Path Trailhead at Bull Run
- Peekamoose Mountain Trailhead
- Blue Hole Access Trail

** Many locations along Lundy and Rogue Harbor roads. Concrete barriers have been placed to restrict motor vehicle access from Cutler Road onto Philips Road. Barriers are found at the entrance of many historic logging roads to prevent motor vehicle trespass onto the unit.*

Objectives:

- Install and maintain barriers at the boundary of all non-conforming roads and trails to prevent motor vehicle use in this unit in areas where motor vehicle use is prohibited.
- Construct barriers of natural boulders large enough to prevent unauthorized removal. In each barrier associated with a marked trail, leave a space 36 inches wide in the center to allow passage of wheelchairs while preventing the passage of motor vehicles. In situating boulders, leave room for parking where appropriate.

Management Actions:

- Monitor all existing barriers and repair them as soon as damage is detected.

- Maintain gates, barriers and associated signage that prevent motor vehicle trespass onto adjacent private lands or unauthorized areas. Gates that are part of the snowmobile trail season will be opened at the onset of winter and closed for mud season.

6. Bridges

Present Conditions:

Bridges generally provide a safer means of crossing waterways, particularly during high water times or during the winter months with ice buildup. Bridges also help lessen trampling of soil and vegetation along the banks. Bridges will be constructed to the minimum size needs to serve trail users and designed to be as unobtrusive as possible.

Existing Bridges/Culverts (7)

- Ashokan High Point Trail over the Bushkill at Kanape. 60-foot triple steel stringer with board decking and railing. Fair condition. (replaced Winter/Spring 2011-2012).
- Ashokan High Point Trail over a tributary of the Bushkill just below the Norway spruce plantation, approximately 1.3 miles up the trail. Very good condition. Bridge was built to replace large culvert which was removed due to deterioration.
- Ashokan High Point Trail over Kanape Brook, about 1.5 miles up the trail, just above the Norway spruce plantation. Fair condition. (built by SCA interns in 2013).
- Upper Cherrytown Road to Vernoooy Falls Trail. Log span with board decking and railing. Replaced in Summer of 2007. Good condition.
- Vernoooy Kill Falls (over Vernoooy Kill). 60-foot triple steel stringer bridge with wood decking and railings. Bridge installed Fall 2015 to replace failing double span log bridge with board deck constructed in summer 1993. Good condition.
- Trails End Road. 30-foot triple steel stringer bridge with wood decking and railings installed over stream just beyond the gate on Vernoooy Kill Falls trail. Bridge installed in 2012 and replaced existing double culvert. Good condition.
- Van Etten Road Bridge (Bridge No. 3346440) spanning the Rondout Creek near the Lower Field parking area. Concrete with concrete wing walls. 16 feet x 58 feet. Fair condition.

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Several culverts (minor culverts not listed) over which authorized vehicles can presently drive and which are part of formal and/or informal trails are found at:

- Ashokan High Point trail (2)
- Haver Road (Mombacus-Rose Bone area) (2)
- Lackawack Hill area (1)
- Lundy Road near Terwilliger Farm access road, replaced Summer 2007 with a concrete box culvert)
- Terwilliger Farm access road at gate location

Objectives:

- To adopt a bridge design system that meets user needs, provides resource protection and requires minimal future maintenance.
- To ensure that all bridges and culverts are properly maintained and safe for travel.
- The use of pressure treated lumber on bridges and dry tread will be preferred over untreated lumber, in recognition of treated lumber's capacity to remain sound for more than 30 years in service.

Management Actions:

- Perform annual routine maintenance to ensure that bridges, culverts, waterbars and ditches are functioning properly.
- Conduct annual inspections of all trails, using a combination of Department staff and volunteers. These reports will document current problems and enable area managers to develop a prioritized maintenance schedule. All bridges that are no longer safe will be addressed as soon as possible.
- Assess replacement needs in coordination with all DEC program units and volunteer organizations.
- Incorporate the use of Best Management Practices (BMPs) identified in the Management Guidelines section of this plan in all new bridge construction projects and maintenance work.
- Remove or replace as necessary illegal pallets and user constructed bridges that do not comply with DEC standards and specifications.

7. Camping/ Primitive Campsites

Present Conditions:

Existing camping regulations require camping to be either at designated sites or at undesignated locations that are at least 150 feet or more from a road, trail or water (6 NYCRR 190.3 (b)). A primitive tent site is one identified by a DEC sign or disk and defined as consisting of a clearing that may contain a fire place, a picnic table and an accommodation for parking of a motor vehicle. (CPSLMP, 2008, page 79).

Camping sites are closely monitored and are designated by the Department in areas which are within 150 feet of a road, trail or water. They are provided as a courtesy to the public if their use does not result in a significant negative impact on the surrounding natural resources. Camping is permitted elsewhere throughout the unit, if it occurs more than 150 feet from a road, trail or water and below 3500 feet in elevation, or at other sites designated by the Department.

Designated Camping Sites (50)

- Kanape Brook and Road, Town of Olive - 4 sites
- Bushkill (Watson Hollow Road), Town of Olive – 2 sites
- Mine Hollow (Watson Hollow Road), Town of Olive – 1 site
- South Hollow Brook Road, Town of Olive - 3 sites
- Trout Creek (near Mill Road), Town of Rochester - 3 sites
- Vernooy Kill Falls and Trail, Town of Rochester - 4 sites

Peekamoose Valley:

- Lower Field - 13
- Middle Field - 7
- Upper Field - 9
- Trailer Field - 6 (2 are ADA accessible)

Objectives:

- To provide a small number of designated favorable tent sites in a manner which minimizes impact to the site while providing an enjoyable experience for the user.
- To maintain historical camping opportunities and provide for group camping at locations which do not cause significant impact or otherwise degrade or damage the area.

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- To direct the public to designated camping locations by providing information in publications and at area trailheads.
- To allow “at-large” camping in accordance with 6 NYCRR §190.3 (b) except at areas with specific regulations.

Management Actions:

- Restore all closed campsites to a natural condition. Remove fire rings and other evidence of past use. Sign closed sites with Department “No Camping” disks.
- Designate new tent sites at suitable locations where anticipated overnight camping use is significant enough to demand it and the area can sustain public use.
- Regulate camping within this unit through 6 NYCRR Part 190, protecting the water quality of streams and rivers. A camping permit is required for any group of 10 or more individuals wishing to camp overnight. A camping permit is also required for any size group wishing to stay in the same location for more than 3 nights.

8. Sanitation

Present Conditions:

Wild Forest and State Forest areas must be managed to preserve natural conditions and minimize human influence. Improper waste disposal by visitors can pollute soils and water, interfering with natural processes and affecting visitor health and safety. The appearance of food and drink containers, broken glass, food scraps and human waste can severely degrade the quality of the recreational experience for visitors.

In regularly visited places such as trailheads, tent sites and mountain summits, proper refuse and human waste disposal is of critical importance. Popular tent sites are areas of major concern. Most overnight use is concentrated around lakes, ponds and streams. As use near water increases, so does the potential for impacts to soil and water quality. Soaps, shampoos, and other man-made substances can affect the delicate chemical and biological balance of soils and water. Visitors may contract diseases such as giardiasis by drinking water contaminated with human and animal wastes. The cleanup of broken glass and refuse is time-consuming and expensive, posing a safety risk to Department staff and volunteers.

In general, the problems of waste disposal on State lands have been substantially curtailed through public cooperation with the “carry in, carry out” campaign for litter removal. The Department should monitor areas of concentrated use and take actions

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to address problems as they arise. The Department installs pit and standard privies, port-a-johns and accessible port-a-johns at locations where use levels are observed or expected to be high enough that the practice of burying waste in dispersed, individually selected locations would not succeed in protecting the environment.

Additional privies and port-a-johns should be installed where relatively high use can be expected to result from new trail proposals or at other locations where disposal problems have been observed. Existing sanitation facilities exist in the following locations within the unit:

Peekamoose Valley:

- Lower Field (2) - port-a-john
- Middle Field (1) - port-a-john
- Upper Field (2) - port-a-john
- Trailer Field (1) - port-a-john (ADA compliant)
- Peekamoose Trailhead (2) - port-a-john (1 ADA compliant)

Objectives:

- To minimize the adverse effects of the improper disposal of refuse and human waste on the natural environment within the unit.
- To provide additional accessible port-a-johns for the public where appropriate.
- To prevent or minimize the adverse effects of improper disposal of refuse and human waste on the environment.
- To provide additional pit privies or port-a-johns at popular or sensitive sites.

Management Actions:

- Educate visitors about the principles of the Leave No Trace program, stressing the need for proper disposal of refuse and human waste and for the proper treatment of drinking water.
- Prohibit by regulation the use of glass containers, any soap or detergent, or the disposal of food scraps in any waters.
- Designate tent sites in locations conducive to proper human waste disposal, such as locations where soils are deep and well drained.
- Inspect privies on a regular basis to ensure that they are kept in a safe and sanitary condition. Move as needed.
- Install pit privies and port-a-johns at suitable locations where public use and monitoring indicates that they are needed.
- Construct a pit privy at the proposed lean-to location. (See Section V.1. Kanape)

9. Parking Areas

Present Conditions:

The Department provides two types of parking facilities: parking areas and pull-offs. Parking areas are designed and designated for parking with signs and established perimeters. The perimeter can be guard rails, boulders or natural features. Pull-offs are areas where the public can safely pull off the road to park, stand or allow other traffic to pass. These areas are wide spots on the road or just off the road shoulder. Pull-offs are not formally designated or signed and are generally only suitable for one to a few vehicles.

The current parking situation throughout this unit is adequate to accommodate current use levels. However, improvements to existing parking areas can be made which will ensure the protection of the resource and the quality of the visitor experience. The development of new facilities or improvements to existing facilities for persons with disabilities will require the need for additional parking. There are several locations at which roadside parking currently occurs and numerous campsites which are utilized for parking by day users. In locations where roadside parking occurs, parking facilities should be provided to alleviate safety concerns.

Existing Parking Areas:

- Upper Cherrytown Road - 6 cars.
- Denman Mountain/Moore Hill Road - 10 cars and 2 trailers (snowmobile/horse)
- Claryville Road- 6 cars
- Peekamoose Valley- parking map available at:
https://www.dec.ny.gov/docs/lands_forests_pdf/peekamooseparking.pdf
- Lower Field (65 feet x 150 feet) - 30 cars
- Middle Field (25 feet x 105 feet) - 15 cars
- North Middle Field (30 feet x 55 feet) - 7 cars
- Western Upper Field (34 feet x 100 feet) - 12 cars
- Eastern Upper Field (25 feet x 65 feet) - 8 cars
- Peekamoose Mountain Trailhead (30 feet x 90 feet) - 10 cars
- Forest Preserve Parking Area (25 feet x 120 feet) - 12 cars
- Buttermilk Falls Parking Area (25 feet x 60 feet) - 6
- Bear Hole Brook Parking area (20 feet x 25 feet) - 2 cars

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* There are two informal limited parking pulloffs in the Slide Mountain Wilderness to the east of the Buttermilks Falls Parking Area. Blue Hole permits are required to park in those two locations.

Parking areas in adjacent management units which serve this unit:

- Kanape (Watson Hollow, Town of Olive, Slide Mountain Wilderness) - 6 cars.
- Informal parking is found at many locations which include: near campsites by Trout Creek (Yagerville), Trails End Road (Town of Rochester), Vernooy Kill State Forest area (along Lundy and Rouge Harbor roads), Hog Rocks area, Route 55 (Town of Wawarsing), and the Krumville Plantation, just to name a few.
- Red Hill/Dinch Road - 6 cars

Objectives:

- To provide adequate parking where necessary and consistent with the area's capacity to withstand use.
- To design trailheads and parking areas to reflect allowed uses and capacity of resource to withstand use. Consider space requirements for larger vehicles with trailers where appropriate.
- To develop partnerships with local governments to maintain and snowplow roadside trailhead parking facilities.
- To ensure all new or expanded parking lots have accessible spaces pursuant to ADA and ADAAG guidelines.

Management actions:

- Monitor parking to determine if current parking facilities meet public demand or if additional parking is needed within the unit.
- Reassess parking capacity needs after all management proposals affecting the area have been implemented and new use patterns are established.
- Prohibit parking where necessary to protect public health and safety and/or natural resources.
- Mitigate parking problems in cooperation with adjacent private landowners.
- Indirectly manage interior use by balancing parking lot size to interior visitor-use capacities.

10. Aircraft Use

Present Conditions:

The use of aircraft for emergency operations including fire suppression, search and rescue and medical emergencies is considered appropriate under established policy and guidelines. Helicopters are also used for administrative support functions such as biological surveys and fish stocking, etc. DEC fixed wing and helicopter flights, except in emergencies, are restricted to periods of low visitor use to reduce sound and visual intrusions.

Noise exists over the unit due to commercial and private flights from nearby airports. All airspace is under the jurisdiction on the Federal Aviation Administration (FAA). The states do not have the authority to regulate their own airspace.

Over the years, there have been several plane wrecks on the Forest Preserve portion of this unit. The remains of a small WWII trainer are located near the loop trail on Ashokan High Point. The wreckage of a small civilian plane can be found a short distance off the Long Path trail leading up from Peekamoose Road, toward Bangle Hill. A crash site can be found on a shoulder of Van Wyck Mountain, just below 2,300 feet in elevation. This crash site consists of a USAF T-33A training jet (tail number 55-4402) that crashed on November 1, 1962, when the pilot lost control of the airplane while practicing aerobatics during testing. Both pilots perished in this crash. An additional crash site is located nearby in the Slide Mountain Wilderness. This site is also located on the same shoulder of Van Wyck. This crash site is further up the ridge, just below 2,700 feet in elevation, and nearly in the center of the ridge. This upper crash site consists of a small civilian passenger plane that crashed in 1978, killing its passengers.

Objective:

- To reduce aircraft use to the minimum necessary to protect the public and manage natural resources.

Management Actions:

- Where possible and appropriate, cooperate with area airports, pilots and scenic flight operators to reduce low level flights. Report low level violations to FAA.
- Administrative use of helicopters and fixed wing aircraft shall be reflected in all work plans and be supported by individual flight requests over Sundown Wild Forest.

11. Dams

Present Conditions:

There are six dams located within the unit. There are 4 small dams located on Sundown Wild Forest on the Lower Field. These dams were used at one time to create several shallow water ponds along the northern side of the lower field, using water diverted from Stone Cabin Brook. In addition, the remains of an old dam on the Roundout Creek can be found across the Peekamoose Road (south side) from the trailer field. There is one dam located on Vernooy Kill State Forest, near the pond at Brownville, that is constructed of stone, mortar and concrete.

Objective:

- Maintain dams on State lands, when determined to be necessary.

Management Action:

- Develop a schedule for routine inspection and maintenance.

12. Existing Structures

Present Conditions:

Numerous old foundations and stone walls are found throughout the unit. The tallest stone wall is located below the bridge at Vernooy Kill Falls. This wall is likely a remnant of the grist mill built about 1702 by Cornelis Vernooy. The Vernooy house on Lundy Road in Vernooy Kill State Forest still stands. Several structures can be found on Sundown Wild Forest. A fire tower, observer's cabin, and storage shed is located on Red Hill and is a popular destination for the public.

Objectives:

- Protect the area's natural resources while accommodating appropriate public use and Departments administrative needs.
- Protect the historic and cultural significance of area fire towers and associated facilities, and to affect their restoration, while allowing the public to access and appreciate them in a safe manner.
- Utilize volunteers to help maintain each facility through a Volunteer Stewardship Agreement.

Management Actions:

- Preserve the Red Hill observer's cabin, storage shed and fire tower.

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- Assist with volunteer efforts to maintain the fire tower and access trail.
- Surplus any non-conforming buildings or structures located on Forest Preserve.

13. Lean-Tos

Present Conditions:

Lean-tos are a traditional, quintessential feature of the Catskill Park. Prior to the advent of lightweight backpacking tents, lean-tos were constructed in many areas to provide shelter from inclement weather. These lean-tos were often built immediately adjacent to trails and close to water sources. They were sometimes clustered in scenic areas to accommodate increased visitor demand and to facilitate maintenance.

At present, there are no lean-to facilities within this unit. Construction of a lean to along the Ashokan High Point trail is proposed in Section V.

Objectives:

- Provide a new lean-to that conforms to CPSLMP guidelines.
- Construct a new lean-to to ensure a quality Catskill camping experience for all users of the Sundown Wild Forest.
- Utilize volunteers and Volunteer Stewardship Agreements for assistance in lean-to construction and subsequent maintenance.

Management Action:

- Monitor camping activity near the proposed lean-to site. To help ensure a wild forest experience, control camping and enforce regulations to ensure the maximum capacity of any lean-to shall not exceed eight persons. No additional primitive tent sites will be allowed adjacent to this lean-to.

14. Boundary Lines

Present Conditions:

There are approximately 133 miles of boundary lines encompassing Sundown Wild Forest and 20.7 miles of boundary line encompassing Vernooy Kill State Forest. This unit consists of land boundaries and associated monuments, wire fencing, stone walls, etc. that follow public roads, water courses, lakes and individual property lines.

Property lines, where surveyed, are blazed and painted yellow. State lands are also identified by the posting of "Forest Preserve" or more specific, "Wild Forest" and "State Land Boundary" signs. In cases where there is a lack of legal evidence as to the

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location of the boundary between State and private land, a common boundary line can be established under 9-0105 (13) of the ECL.

A better method of tracking the condition of areas boundary lines is being implemented. As time permits, records indicating years painted, condition, survey needs, and other important information will be developed in a GIS-compatible format to better enable the prioritization of boundary line maintenance throughout the Region 3 working circle. Increased funding and staff commitment will be required to enable the maintenance of boundary lines on a seven-year cycle.

Objectives:

- To maintain unit boundaries on a scheduled basis.
- To adequately identify State land ownership to prevent trespass.

Management Actions:

- Brush, paint and sign all boundary lines on a seven-year cycle. Provide resources to accomplish this task in accordance with DEC Boundary Line Maintenance Policy NR- 95-1.
- Monitor boundaries for unauthorized activities, such as illegal motor vehicle use, trespass and encroachments.
- Clearly mark all public rights of way and easements through private lands with signs informing the public to stay within the roads, which will reduce or eliminate public trespass on private lands.

E. Public Use and Access

Present Conditions:

Public use is permitted to the extent that it does not degrade the physical, biological, and social characteristics of an area. The “minimum tool” concept is used to manage public use and achieve management objectives, using indirect methods when possible (i.e. limited parking) and direct methods when necessary (promulgating regulations). One example of where such direct methods are considered necessary is the use of the unit by large groups.

Many visitors consider large groups inappropriate and undesirable in areas within the Forest Preserve. Aside from the behavioral factors, the potential to cause negative impacts varies with the party size and type of user. Although large party use in the unit represents a small proportion of total users, they contribute a disproportionate amount of impact when compared to smaller parties.

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Large groups commonly create congestion problems on trailhead facilities, on trails, rock climbing sites, and mountain summits. It is very difficult to control and confine large groups in vulnerable locations such as mountain summits or riparian areas. The rate of unacceptable change on a resource can be accelerated by large group occupancy of a site over a short period. Higher noise levels and sound issues are associated with large groups.

It is a major source of visitor dissatisfaction when large groups, just by their sheer size, displace other users. There is also a problem when groups from one organization split into several smaller groups and then rejoin at interior locations, often in fragile riparian or summit areas.

Many of the resource impacts that result from recreational use can be mitigated through an active visitor education and information program. Most visitors lack a basic understanding of DEC rules and regulations and are unaware of the effects that their activities have on a resource. Visitors need to be informed of the proper use of State land and all special regulations that apply before they enter the unit. A well-developed education and information program can help reduce user impacts while improving the visitor experience. Access to the unit is poorly marked and/or limited in many areas. Additional access would facilitate public use.

Objectives:

- To enforce existing laws, rules, regulations and policies and control adverse and illegal uses through enforcement of the Environmental Conservation Law and DEC Rules and Regulations.
- To permit and encourage recreational use levels consistent with the protection of the unit's natural resources and character and consistent with the guidelines provided by the CPSLMP and the SPSFM.
- To monitor changes in use over time.
- To identify and develop methods to monitor public use accurately.
- To minimize user conflicts by providing appropriate information to visitors.
- To clarify and resolve public access through easements or old town roads as necessary.
- To provide clearly marked access points and parking facilities with clearly set limits, reducing or eliminating trespass onto State and private lands and unwanted or illegal parking along roads.
- To improve public recognition and awareness of Forest Preserve and State Forest and the differences between the two.

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- To educate landowners and visitors about the benefits of forested lands in watershed management and encourage conservation and stewardship.

Management Actions:

- Monitor the intensity of public use by utilizing the principles described in the Limits of Acceptable Change process. Take appropriate steps to prevent misuse/overuse of an area that could lead to site degradation.
- Monitor public use activities which do not utilize Department facilities to ensure that damage to the natural resources is not occurring. Allow these activities to occur as long as they are not causing damage to the natural resources or user conflicts.
- Employ the “minimum tool” necessary to regulate public use, using indirect methods whenever possible (such as limiting parking) and direct methods such as regulations when necessary.
- Promote “Leave-No-Trace” ethics with all users particularly with hikers.
- Use the Temporary Revocable Permit Process for organized events where appropriate. In limited circumstances, as deemed appropriate by the Department, depending on the character of the area in question and the nature of the proposed activity, the Temporary Revocable Permit Process will be used to handle appropriate organized events in the unit.

1. Access for Persons with Disabilities

The federal American with Disabilities Act of 1990 (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973, have important implications for the management of all public lands, including the lands within this unit.

In 1997, DEC adopted Commissioner’s Policy #3 (CP-3)- Motor Vehicle Access to State Lands under Jurisdiction of the Department of Environmental Conservation for People with Disabilities, that establishes guidelines for issuing temporary revocable permits allowing qualified people with disabilities to use motor vehicles to gain access to Department programs (hunting, fishing, camping, etc) using designated routes on certain State lands.

Universal Trail Assessment Process

The Universal Trail Assessment Process (UTAP) is an objective method used by the Department to measure such site conditions as average and maximum grade, minimum trail width, cross slope, trail length and surface type. These variables can

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then be presented to the user at the trailhead and assist them in making an informed decision about whether they would like to use the facility or not.

Present Conditions:

Accessible camping opportunities are currently provided at 2 locations in the trailer field in the Peekamoose Valley Riparian Corridor. Permits are required to camp at the accessible sites. There is a proposal in this plan to convert an existing primitive campsite in the trailer field to an accessible campsite. Camping at these sites will be managed according to general State land backcountry camping regulations. These locations will have stable surfaces and include parking access, a hardened tent location, an accessible privy with a hardened access route to it. Exact locations of these sites will be provided on maps, at trailheads, on the DEC website and through other appropriate information pathways. Monitoring use and satisfaction of users will occur to assess and determine the long-term management of these sites.

Objectives:

- Increase access opportunities for people with disabilities where such development, does not alter the fundamental nature of existing programs, is compliant with Department regulation and policy, and conforming under the guidelines of the Catskill Park State Land Master Plan.
- Comply with the American Disabilities Act (ADA) of 1990 by improving access and creating recreational opportunities for people with disabilities.
- Inform users of the location and condition of the facilities in the unit, focusing on such variables as length of trails, average grade, steepest grade, minimum width, etc.

Management Actions:

- Maintain existing recreational access for people with disabilities, in compliance with the American Disabilities Act (ADA) of 1990.
- Publicize the locations and details of existing accessible facilities on DEC's public website and through other appropriate informational pathways.
- Incorporate accessible signage at trailhead access points.
- Construct new facilities to the most accessible degree possible given site constraints, with the understanding that while many may not meet Americans with Disabilities Act (ADA) standards, the intent is to maximize the degree of accessibility for the widest range of abilities. The trail and tent sites would provide opportunities for those seeking more primitive outdoor experiences than those found in traditional intensive use campground areas.

F. Special Regulations

Executive Law §816.3 directs the Department to develop rules and regulations necessary to implement the CPSLMP. Existing regulations relating to public use of State Lands under the jurisdiction of the Department are found in 6 NYCRR Part 190. The special regulations presented below constitute the minimum level of direct regulation necessary to assure CPSLMP compliance and directly influence visitor behavior to protect resources and the experiences of visitors. The Peekamoose Valley Riparian Corridor was designated in 2016. The special regulations were modified in 2018 to include a no-cost-permit system for public use of the Blue Hole on weekends and holidays from May 15th until October 15th.

The Peekamoose Valley Riparian Corridor required special management actions because resource and public use factors needed to be addressed more specifically than is provided elsewhere in this UMP. The special regulations listed below constitute the minimum level of direct regulation necessary to assure CPSLMP compliance and directly influence visitor behavior to protect resources and the experiences of visitors.

Brief History of Use

Public use in the Peekamoose Valley began with the acquisition of the "Ash Property" by New York State in 1962. For the most part, use in the 1960s was minimal, but by 1971, the unit saw a dramatic increase in visitors in the camping area.

Use figures for this section of the unit are rather incomplete since the 2 registers that exist in the area are trail registers and are not located within the heavily used camping area. These trail registers are helpful in providing information to the Department regarding numbers of visitors utilizing the nearby section of the Long Path as it descends from Bangle Hill en route to Peekamoose Mountain, but they do not provide definitive use numbers for the camping area. However, enough information does exist to make some estimates of past use and to reveal trends in use.

In 1975, with the acquisition of the Morrell property and associated facilities, DEC instituted a camping permit system for the Peekamoose Valley. There were 2,769 campers recorded for the weekends during the Summer of 1975. Based on this information, it is likely that well over 3,000 people utilized the unit in 1975.

Memorial Day weekend, time and again, has proven to be the most popular period of use by the public. Figures available from both 1975 and 1988 support this fact. An examination of Memorial Day weekend use in the past may present the most accurate picture available about public use over time in the Peekamoose Valley. While some

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records are missing, visitor use of this area continued to increase rapidly during the early 1970s and peaked in the early 1980s. In the Spring of 1983, the Department constructed and formally designated parking lots at the upper, lower, and middle fields. These parking areas were designed to limit the number of cars that could park there and provided a mechanism that regulated access to the area. Surveys were once again taken during selected weekends in the Summer and Fall of 1988. Based on these weekend tallies and other observations, it is estimated that over 4,000 people recreated in the Peekamoose Valley in 1988.

During this time, the Department documented numerous incidences of littering, illegal tree cutting, illegal drugs and shooting of firearms. Residents had also raised concerns including about noise, parking issues, litter, and theft of firewood. Below is a brief chronology of significant events which occurred in the Peekamoose Valley beginning in the 1970s up to the present:

1971-1974 - Use of the Peekamoose Valley for camping dramatically increased during this period. Fire, litter, disorderly conduct, tree cutting, and shooting of firearms were some of the many problems which arose.

1973 - Cables were erected across old roads entering the Forest Preserve to control motor vehicle use.

1974 - The Peekamoose Valley suffered continued abuse by campers. Vandalized cable barriers were replaced.

1975 - Campsites in the lower, middle and upper fields were numbered and all campers were required to obtain a camping permit. A trailer was set up by DEC in the Middle Field to issue camping permits (no fee). A total of 50 sites were designated in the three fields. Each designated site was limited to 2 tents and/or 10 people. Records indicate a total of 2,769 visitors camped in the designated campsites between Memorial Day and Labor Day. Unrestricted camping was allowed in what was called the Upper Rondout Camping Area, upstream (northeast) of the Morrell Estate. Problems that summer included improper human waste disposal, garbage, disorderly conduct and alcohol/drug abuse.

The Department acquired the Morrell Estate.

1976 - The Department established Camp Sundown, a Youth Conservation Corps program which was based at the Morrell Estate. This 8-week summer program employed high school-aged youths in conservation-oriented work.

1977 - Forest Ranger resided at the Morrell Estate.

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1978 - Final season for Camp Sundown. Continued heavy use of the Peekamoose Valley by campers and garbage issues persisted. Several outhouses were destroyed by campers.

1980 - Increased use of the Peekamoose Valley by campers. Numerous arrests for violations, including: illegal use of motor vehicles on Forest Preserve lands, littering, defacing and/or cutting trees and disorderly conduct.

1981 - Camping was prohibited in the "Upper Rondout Camping Area" - that area northeast of the former Morrell Estate.

1982 - Residents, County and State authorities worked together to control disorderly conduct, alcohol and drug abuse in the camping areas along the Rondout. Several people were cited for camping and littering violations and a few were arrested on drug charges during Memorial Day weekend.

1983 - The Department severely restricted motor vehicle use of the valley by limiting parking to the newly constructed parking lots at the upper, lower and middle fields. The size of each parking lot was determined by the ability of the immediate surrounding area to withstand use. The Peekamoose Road was posted with signs prohibiting parking along the road by the Town of Denning. Rocks were placed along the Peekamoose Road to prevent motor vehicles from entering Forest Preserve land. All buildings on the former Morrell Estate were removed. Garbage pits were established in each field, and eight culvert-type outhouses were constructed at appropriate locations near the camping areas. Use of the area declined significantly.

1984-1988 - Use of the area leveled off. Conditions in the camping areas improved, but some problems persisted. Most notable are the problems associated with camping close to the Rondout Creek, endangering the water quality of this resource. Garbage and human waste are still improperly disposed of by campers. The Peekamoose Valley continued to suffer from overuse on weekends, especially the Memorial and Labor Day weekends.

1988-2014 - Information kiosks were installed in each of the four main parking areas in the Peekamoose Valley camping area. The existing culvert pipe pit privies were replaced with 6 port-a-johns. Two were placed in the Lower Field, one in the Middle Field, two in the Upper Field and one ADA-compliant unit in the Trailer (Morrell) Field. All garbage pits were removed from within the camping area and replaced with "Carry In - Carry Out" signs. Many campsites were closed and/or rehabilitated to reduce adverse impacts on the area. There are now 35 campsites scattered throughout the 4 fields. Two of the six designated campsites in the Trailer Field have been upgraded in

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accordance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG). A trail register was installed on the Long Path at Bull Run, a short distance up the trail from the Peekamoose Road, heading toward Bangle Hill.

2014 – Use of the Blue Hole increased exponentially, due in part to the prevalence of social media outlets, resulting in a significant impact on the area which included trash, human waste, site compaction, loss of vegetation, illegal parking and a host of other social/environmental issues.

2015 – Management actions were taken to alleviate some of the environmental and social issues which resulted from overuse of the area. Actions included resurfacing of 4 closest parking areas to the Blue Hole totaling 33 parking spaces, installation of two electronic billboards displaying parking information, installation of 20 barrel barricades placed in illegal parking areas, assignment of backcountry stewards to assist with refuse removal and public education on weekends, weekly garbage sweeps by Department staff and volunteers, installation of a port-a-john and refuse container at the Peekamoose/Table Trailhead parking area and assignment of additional Law Enforcement staff to the area.

2016 – The area continued to receive an inordinate amount of public use which resulted in additional management actions, including: the creation/designation of the Peekamoose Valley Riparian Corridor(PVRC) enacting Emergency Regulations for the PVRC, installation of an information kiosk at the Peekamoose/Table Trailhead parking area and another at the beginning of the Blue Hole access trail to educate the users on proper behavior and rules/regulations when recreating on public lands, installation of additional “No Parking” signs in areas commonly used illegally for parking, installation of two port-a-johns and a bear proof refuse container on a pad across from the Peekamoose/Table Trailhead parking area and an additional refuse container in the Lower Field parking area. In addition to the above, weekly garbage sweeps by Department staff and volunteer organizations are ongoing as well as an increased presence of Department Law Enforcement staff.

2018- Overuse of the Blue Hole area of the Peekamoose Riparian Corridor of the Catskill Park accelerated in recent years, resulting in natural resource impacts and threats to public safety. Education and enforcement alone have not proven effective. Implementation of a Day use permit requirement was put in place in place during the peak use period on weekends and holidays from May 15th until October 15th for visitors to the Peekamoose Valley Riparian Corridor.

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OFFICIAL COMPILATION OF CODES, RULES AND REGULATIONS OF THE STATE OF NEW YORK
TITLE 6. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAPTER II. LANDS AND FORESTS
PART 190. USE OF STATE LANDS
SPECIFIC AREAS

Express Terms for NYCRR Part 190.35, Peekamoose Valley Riparian Corridor

In addition to other applicable general provisions of this Part, the following requirements apply to the Peekamoose Valley Riparian Corridor. In the event of a conflict between this section and another section of this part, the more restrictive provision will control.

(a) Description. For the purposes of this section, Peekamoose Valley Riparian Corridor means all those State forest preserve lands lying and situated in the Town of Denning in Ulster County located within 300 feet on either side of the centerline of the Rondout Creek, beginning at the NY State land boundary where it crosses Ulster County Route 42 southwest of the Lower Field Parking Area, thence heading northeast for approximately 3.75 miles, and ending with the NY State land boundary approximately 1 mile east of the Buttermilk Falls parking area, encompassing lands designated by the department as the Sundown Wild Forest and Slide Mountain Wilderness Area of the Catskill Park.

(b) No person shall kindle, build, maintain or use a fire within the Peekamoose Valley Riparian Corridor, including, but not limited to, charcoal fires, wood fires, gas grills, propane stoves or other portable stoves, except at designated campsites.

(c) No person shall possess a glass container within the Peekamoose Valley Riparian Corridor, except when necessary for the storage of prescribed medicines.

(d) No person shall possess a portable generator within the Peekamoose Valley Riparian Corridor except at designated campsites.

(e) No person shall play a musical instrument or audio device, including, but not limited to, radios, tape players, compact disc or digital players, except at designated campsites unless the noise is rendered inaudible to the public by personal noise-damping devices such as headphones or earbuds. At designated camp sites, no person shall use any audio device which is audible outside the immediate area of the campsite.

IV. Management Recommendations, Goals, and Objectives

(f) No person shall deposit or cause to be deposited, any solid waste, garbage, food waste, human wastes or other sanitary waste products within the bounds of the Peekamoose Valley Riparian Corridor provided and designated by the Department.

(g) No person shall park any motor vehicle within the Peekamoose Valley Riparian Corridor except at areas designated and marked by the Department as parking areas.

(h) No person shall enter the Peekamoose Valley Riparian Corridor area between one-half hour after sunset and one-half hour before sunrise except for: (1) persons camping at designated campsites; (2) licensed hunters and trappers for the purpose of hunting or trapping; (3) pedestrians using the marked hiking trails crossing the corridor; or (4) persons otherwise authorized by permit issued by the department.

i) (i) From May 15th thru October 15th of each year on Saturdays, Sundays and state and federal holidays no person shall enter the Peekamoose Valley Riparian Corridor east of the County Route 42 bridge crossing the Rondout Creek, an area that includes that portion of the Rondout Creek known as the Blue Hole, except under permit from the Department. Permits can be acquired from Reserve America at:

<https://newyorkstateparks.reserveamerica.com/>

V. Sundown Wild Forest Projected Use and Management

*Descriptions of the seven geographic areas of Forest Preserve lands are included in this section. Information provided includes geographic descriptions, maps, management issues, completed and proposed projects and public use management and controls.

1. Kanape

a. Description

The Kanape and South Hollow brooks flow northwesterly toward the Bushkill through this area (see map on page 85). The High Point and Mombaccus - Little Rocky Mountain ridges - form a backdrop for the two stream valleys. Both streams contain native trout populations. An old woods road, rebuilt in the 1930s as a fire truck trail by the Civilian Conservation Corps, parallels and eventually crosses the Kanape Brook on its way to what is today called Freeman Avery Road. The woods road is no longer a thoroughfare for motor vehicles and is not open to the public beyond State land. This road is now a portion of the Ashokan High Point Trail, a popular hiking trail which begins at the Kanape Trailhead. This trail was established because of the 1996 Sundown Wild Forest UMP and uses the woods road nearly to the col between Mombaccus and High Point before turning northeast and climbing up to a clearing on Ashokan High Point Mountain. The trail then heads northwest to Hoopole Mountain before turning south along an old woods road, rejoining itself just above the Kanape woods road portion of the trail.

In 1963, all truck trails were closed to public motorized traffic by the State Attorney General's office based on an interpretation of the "forever wild" clause of the New York State Constitution. In 1976, the stone bridges of the Kanape Woods Road were replaced with culverts by the Forest Rangers.

In South Hollow, the remains of a road which once connected farmsteads in the South Hollow Brook Valley to Watson Hollow Road is still visible along this brook. Access to State land is sometimes difficult over this old woods road, which crosses the brook at one point. Further up the valley the old road splinters into numerous roads once used for logging and mining, crisscrossing onto the steep flanks of High Point. For more

V. Sundown Wild Forest Projected Use and Management

information on this area, please refer to the History of Land Unit section in Section I, and man-made Facilities in Section II.

b. Visual

Repeated fires have scarified the soil on Ashokan High Point, creating small and large ridgetop heath meadows with impressive westerly views of the Rocky - Balsam Cap - Friday Mountain Ridge and the Peekamoose - South Hollow Valley, particularly from adjacent Hoopole Mountain. Michael Kudish, in his book “The Catskill Forest - A History”, lists the following fires in this vicinity:

April 29, 1891	One square mile burned starting in South Hollow and moved southeastward to Hoopole Mountain, through the Kanape Hollow to Goodwins Road and onto Ashokan High Point
July 4, 1891	85-100-acre fire swept the southeast slope of Ashokan High Point to its summit and on to Lewis Mountain
October 1946	125 acres burned on Hoopole Mountain and Ashokan High Point
October 1961	400 acres in Watson Hollow
May 1969*	1000 acres
Spring 1980*	500 acres
Summer 1993	2-acre fire on Ashokan High Point

**Both above fires were in the west-facing bowl cradled by Ashokan High Point and Hoopole Mountain, between 2,550 and 2,700 feet in elevation. Kudish states that this area “...is the largest stand of native American chestnut in the Catskills.”*

Many of these fires lead to the creation of openings, providing vistas in several areas. Vista locations are shown on the Kanape, Mombacus, and Krumville Sections Map (page 79). Several of these views were incorporated into the loop trail as described above. There are limited views on the summit from the existing Ashokan High Point trail toward the north and east in the summer. A fantastic view of the Ashokan Reservoir and the Rondout Valley framed by the Shawangunks is available from a large blueberry patch via a short bushwack (no existing trail to this vista) to the east. Vistas can also be found along a herd path running northerly in the direction of the col between Ashokan High Point and South Mountain. These vistas will not be maintained.

c. Wildlife

The combination of streams, heath meadows, steep rocky slopes and hardwood forests containing chestnut and red oak provide ideal habitat for black bears. Many sightings are reported annually in the Ashokan High Point trail register book. This area receives a significant amount of hunting pressure during the fall big game season.

d. List of projects completed projects from the 1996 Sundown Wild Forest Unit Management Plan

1. Bureau of Real Property staff researched the South Hollow Brook area to clarify access issues. DEC believes the public has access via the woods road which extends beyond South Hollow Road.
2. The former unmarked Kanape Brook hiking trail has been marked and maintained as the Ashokan High Point Trail. The upper trail and loop connecting the summit of High Point Mountain to Hoopole Mountain has been created and marked as a footpath to protect the steep slopes and the unique ecology. This new loop trail returns via an old fire road to the Ashokan High Point Trail near where the trail leaves the old Kanape woods road and heads up to the High Point summit. This trail has received extensive tread work and will require additional stabilizing and improving in several locations, particularly the steep foot trail segment leading to the High Point summit.
3. An information kiosk has been installed at the Kanape Parking Area. A map of the unit and additional information has been displayed for public use. A pit privy was installed near the parking area and a trail register installed along the Ashokan High Point Trail beyond the Bush Kill Stream crossing. The parking area continues to be plowed during winter months.
4. The 6 designated camping sites near the Ashokan High Point Trail adjacent to the Kanape and Bush Kill Streams and the 3 sites along South Hollow Brook continue to be used and maintained.
5. The spring box along the Ashokan High Point Trail has periodically been cleaned and stabilized.
6. A new 60-foot long steel stringer foot bridge was built over the Bush Kill Stream near the Kanape Trailhead in the fall of 2011 to replace the original 35-foot long log stringer bridge destroyed during Hurricane Irene in August 2011.
7. An approximate 15-foot log cradle foot bridge was installed in 2013 over a new channel cut through the Ashokan High Point Trail because of Hurricane Irene in 2011.

e. Management Issues and Considerations

1. The main access to the Kanape Area of this unit is limited to the Kanape Parking Area (6 cars) and the Ashokan High Point Trail.

Additional public access is via both the maintained and unmaintained portions of South Hollow Road onto State land. The unmaintained segment was never formally abandoned and deeds from the 1800s indicate the presence of a public right-of-way through the area.

There is also access from the informal parking area at the old sawmill site located at the top of the hill on the north side of County Route 42 (Watson Hollow/Peekamoose Road) beyond the Kanape Trailhead. Although this informal parking area is in the Slide Mountain Wilderness, access to the Sundown Wild Forest requires a simple crossing of the road.

2. Any new facilities constructed in the Kanape and Ashokan High Point area will consider the presence of rare, threatened or endangered species as well as the "pitch pine-oak-heath rocky summit" community. In addition, established "Best Management Practices" (BMP's) will be utilized when citing new facilities and the "Limits of Acceptable Change" (LAC) protocols will be utilized for monitoring and managing all proposed and existing trails and facilities in the area.
3. This is one of the few areas in the Catskills where a significant loop trail may be constructed using existing old logging roads most of the way. A large loop could allow hikers to start in the Kanape Valley on the Ashokan High Point Trail, travel up the High Point ridge and descend into the South Hollow Brook Valley, using an old logging road for a significant portion of the trail. A portion of this old road leaves State lands and if used for trail purposes, would depend on an easement or in-fee acquisition from a willing seller of a pedestrian right-of-way through a privately-owned parcel. An alternate route solely utilizing Forest Preserve lands may be sought.
4. Central Hudson Gas and Electric Company has utility poles along Watson Hollow Road bordering the unit for about 1.4 miles. This easement/use must conform to the requirements of the State Constitution and laws, rules, regulations as well as DEC policies pertaining to the Forest Preserve.

f. Proposed Projects

1. **Construct Adirondack Style Log Lean-To:**

Construct an “Adirondack” style log lean-to along the Ashokan High Point Trail near the upper Norway spruce plantations in the Kanape Brook Valley. This proposed lean-to will provide a backcountry camping experience for those visitors seeking the security of a shelter. A pit privy will be installed for sanitation purposes along with a fire ring for containment of camp fires.

2. **Re-route Ashokan High Point Loop Trail:**

Re-route the current loop trail starting near the summit of Ashokan High Point from the existing Ashokan High Point Trail, then turning westerly back to a point along the lower portion of the Ashokan High Point Trail. The re-route proposal would extend the trail from the northwest side of the current loop and wrap the trail around southwest to the Norway spruce plantation where the lean-to would potentially be located. This re-route would be about 2 – 2.5 miles. The current loop trail is an example of a poorly laid-out and poorly constructed trail and as a result gets little use and has problems with erosion. This new loop can be constructed without the need for extensive cutting of trees but will require tread work.

3. **Expand Kanape Trailhead Parking Area:**

The Kanape trailhead parking area will be expanded to accommodate 15-20 cars.

4. **Facility Maintenance and Monitoring:**

Continue to maintain the existing trails, gates, parking area, kiosk, pit privy, spring box, designated campsites, culverts and foot bridges. Monitor public use of all facilities and insure LAC thresholds are not exceeded without taking appropriate management actions.

5. **Vista Maintenance:**

The Ashokan High Point vistas will be measured and maintained periodically by Department staff.

V. Sundown Wild Forest Projected Use and Management

Sundown Wild Forest Unit Management Plan

Kanape - Ashokan High Point

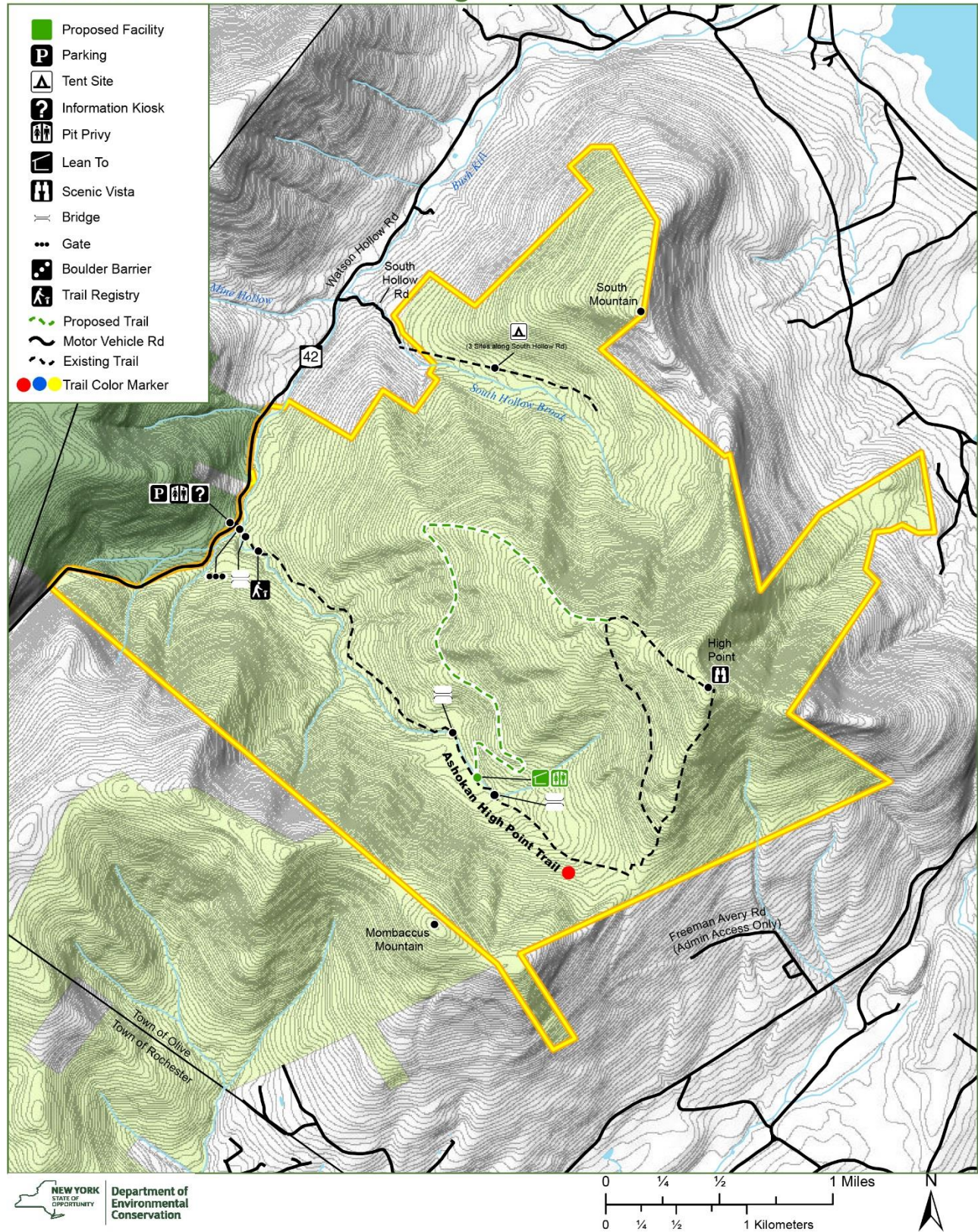


Figure 3. Kanape - Ashokan High Point Map

2. Mombaccus Mountain, Big Rosy Bone Knob, and Krumville Plantation

a. Description

Mombaccus Mountain/Big Rosy Bone Knob

The area of Mombaccus - Rosy Bone Knob is accessed by a woods road off Haver Road in the Town of Olive (see map on page 89). The road is currently blocked off on State land after it crosses a tributary of Mettakahonts Creek. From this road, old logging roads rise up the short, steeply sloping valleys between the mountains and disappear about mid-slope. One overgrown woods road, currently no wider than a footpath, shows signs of being kept clear by someone. This woods path reaches the ridge between Little Rocky and Rosy Bone. A path, which appears to receive some maintenance, follows this ridge to the private land nearby. This route is the best way to reach the ridgetops in this area, however; no substantial views were found from these densely-wooded hillsides.

Mettakahonts Creek and its tributaries contain trout, although the upper tributaries may be dry in summer. Walking north from the old woods road on Mettakahonts Creek, you arrive at a place where numerous springs and wet seeps quickly swell the water flow within a quarter mile. Walking south along the creek, the banks steepen and are covered with hemlock (*Tsuga canadensis*). The heavy shade is only occasionally broken by a clearing from wind thrown or storm damaged trees where saplings are beginning to take hold. Additional access to this area of the Forest Preserve is through Bear Spring Road (see Chapter II, Major Easements and Access Points). This woods road is a public right-of-way on what has been referred to in the past as a public road. This road is in the Town of Rochester and begins at the intersection of Trails End Road and ends on a piece of private land surrounded by State land.

Krumville Plantation

The Krumville Plantation is an 80-acre piece of Forest Preserve located one mile east of Samsonville, along Browns Road. This parcel at times has been referred to as the Brown's Road Parcel or the John Vandemark Lot. A portion of this parcel contains a 90+/- year old Norway spruce tree plantation.

V. Sundown Wild Forest Projected Use and Management

b. Wetlands

There are 55 acres within this geographic region that is protected as a State designated wetland (WS-3, Class II), some of which is on adjacent private lands.

c. List of completed projects in the 1996 Sundown Wild Forest Unit Management Plan

6. Limited signage had been placed along the woods road leading to State land off Haver Road.
7. A portion of the boundary line around the Krumville Plantation has been re-posted.
8. A portion of the southern State boundary between Ashokan High Point, Mombaccus and Big Rosy Bone Knob was recently painted and posted.

d. Management Issues and Considerations

1. The woods road off Haver Road is a clearly defined and established public access to the Forest Preserve. To reduce the potential for public trespass on the adjacent private lands, this access needs to be properly marked and maintained.
2. Browns Road forms the easterly and part of the southerly boundary of the Krumville Plantation (about 0.47 miles). The owners of 3 house/cabins currently use a woods road which passes through the northeasterly corner of the lot. Only a portion of this woods road is part of the original access to the farmhouse which once stood on the property. The remainder of the road currently used by the adjacent land owners was built and utilized as a log road for purposes of timber harvesting, not as a right-of-way for the adjacent lots. The original road is further to the northeast of the currently used access and is lined with stone walls and large trees, limiting the width of the original access to less than 10 feet. The right of adjacent private owners to use the woods road currently found on State land needs to be clarified.
3. A large private inholding within existing Forest Preserve lands can be found near Big Rosy Bone Knob. The potential for acquisition of this parcel would be considered a high priority if offered in either fee or easement from a willing seller.

e. Proposed Projects

1. The Haver Road access will be formalized by placing a "Forest Preserve Access" sign along Haver Road at its junction with the public access road leading to the Forest Preserve. The access road will be posted with "Public access through private land" signs. In addition, a small 2-3 car informal parking area currently used by hunters shall be formalized on State land along the north side of this woods road, just prior to the bridged stream crossing. A "Forest Preserve Parking" sign and "rules and regulations" sign will be posted here. The bridge will be maintained for fire and emergency access. A "No Motorized Vehicles Beyond This Point" sign will be posted just beyond the parking area and before the bridge. A gate will be installed between the parking area and the bridge if enforcement or other circumstances warrant.
2. Once the use of the road through the Krumville Plantation is clarified, proper signage shall be placed at the entranceway and along its length. The exact location of permissible access, if any, will be established, and other roads will be closed as necessary to prohibit unauthorized access by motor vehicles. Boundary line maintenance and signage will be required in this area to insure potential encroachments onto State land do not occur.
3. This area will be maintained as trail-less to prevent conflicts between various user-groups.

V. Sundown Wild Forest Projected Use and Management

Mombaccus Mountain & Big Rosy Bone Knob

Sundown Wild Forest Unit Management Plan

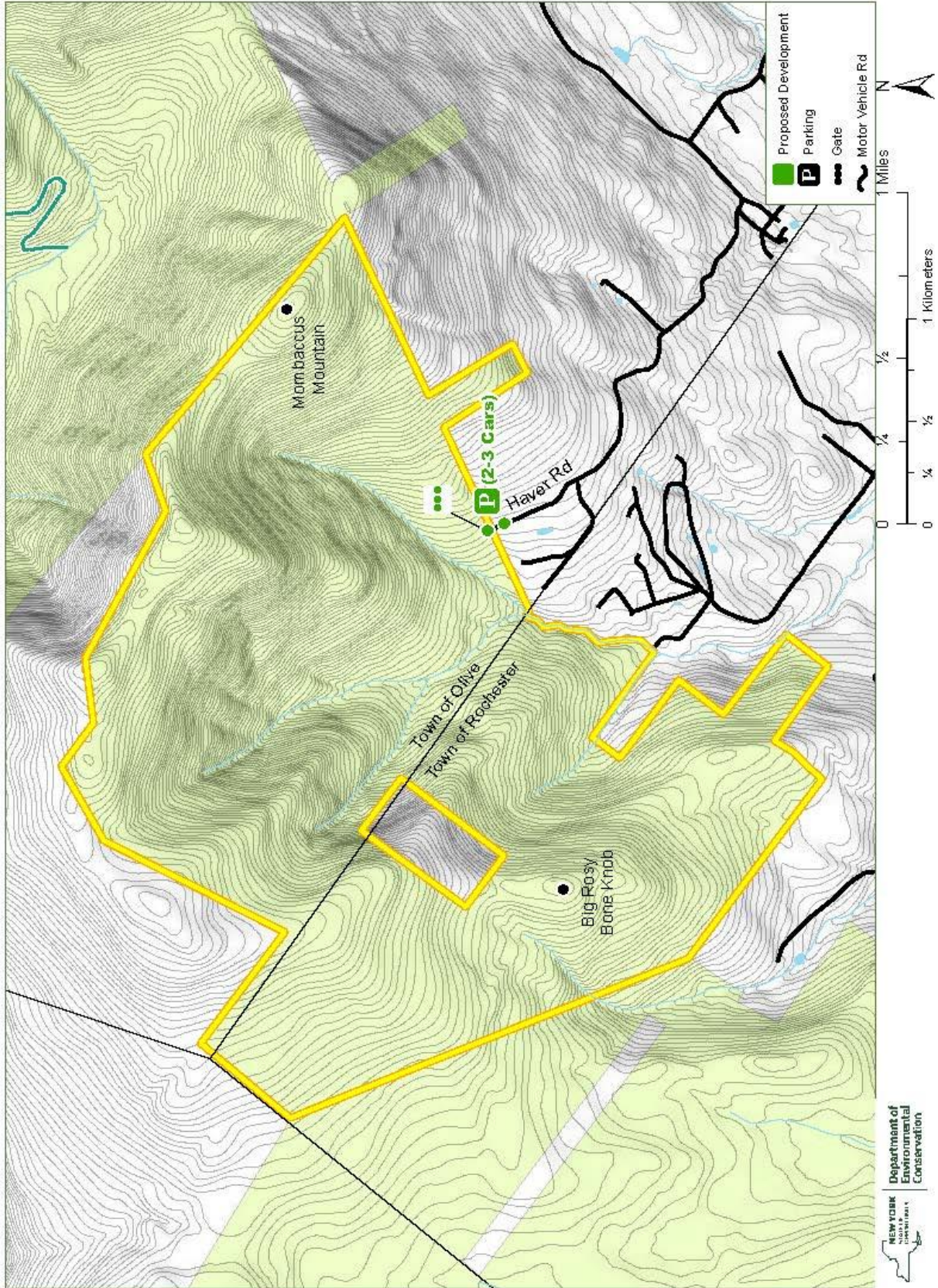


Figure 4. Mombaccus Mountain & Big Rosy Knob Map

3. Vernooy Kill Falls

a. Description

The Vernooy Kill Falls section is one of the largest areas in the Sundown Wild Forest unit (see map on page 166). Most this area is located within the Town of Rochester. The southernmost tip lies in the Town of Wawarsing and westernmost edge in the Town of Denning. This area is predominantly a high plateau with several high points and ridges which include Popple Hill and Cherrytown Mountain. The main watershed consists of the Vernooy Kill Stream which drains the moist eastern hemlock woodlands and wetlands in the area (see map). All the streams and tributaries found in this section of the unit are tributaries of the Rondout Creek.

A snowmobile/equestrian shared use trail consisting of about 11.2 miles passes near an area called the Balsam Swamp (about 195 acres). This loop trail begins at the Upper Cherrytown Road Parking Area and travels to Vernooy Kill Falls where it then heads west to Greenville. The trail then travels in a northeasterly direction on Dymond Road and turns right onto the seasonally maintained Spencer Road in the Town of Denning. The trail then turns southeast at the Town of Rochester line where the road name changes to Trails End Road. This trail then passes the turn off for the Long Path (which crosses over Pople Hill and travels down to Vernooy Kill Falls) until it turns right onto the old road to Vernooy Kill Falls for the return trip to the Upper Cherrytown Road Parking Area.

The Long Path begins at the Upper Cherrytown Road Parking Area and shares the snowmobile/equestrian trail to Vernooy Kill Falls, then heads northeast along the old road leading to Trails End Road where it turns north, leaving the shared use trail. After traversing Pople Hill, the Long Path turns west, joining Trails End Road and continuing into the Town of Denning on Spencer Road. The Long Path then turns northwest and enters the Bangle Hill section of this unit and continues to Peekamoose Road. This section of the Long Path from the Upper Cherrytown Road Parking Area to Peekamoose Road consists of about 9.2 miles.

The ridges in the Vernooy Kill Falls section of this unit contain a high component of chestnut oak, rhododendron and mountain laurel. This can be directly attributed to the many fires this area has received in the past. The following is a listing of recent fires in the area:

V. Sundown Wild Forest Projected Use and Management

1980	580 acres	Cherrytown Mountain
1991	400 acres	Cherrytown Mountain
1993	22 acres	
1995	8 acres	Cherrytown Mountain
1998	35 acres	
2001	866 acres	Cherrytown Mountain
2002	130 acres	Baker Road
2006	998 acres	Cherrytown Mountain

Several of the fires on Cherrytown Mountain burned deeply into the mineral soils on portions of the summit. These scars remain visible today.

A formal parking area is located on Upper Cherrytown Road. An additional informal parking area is located at the top of the hill along the seasonally maintained portion of Trails End Road, at the intersection with the old road/multi-use trail leading to Vernoooy Falls. A trail register box and bridge are located at the falls. An additional bridge is located near the Upper Cherrytown Road Parking Area.

b. Visual

Panoramic views from most ridges in this area are limited to the winter months. Because of the many fires, the Cherrytown Mountain summit provides a view of the surrounding area which includes High Point, Mombaccus, Big Rosy Bone Knob and limited views of the Rondout Valley and the Shawangunk Ridge.

The most popular destination in the region is the Upper Falls of the Vernoooy Kill, accessed by the multiple use trails either from Trails End or Upper Cherrytown roads. Here, the clear water of the Vernoooy Kill drops about 60 feet in a series of small falls. Below the falls, a 15-20-foot tall stone wall stands adjacent to the stream, likely part of the old Vernoooy Mill. The Lower Vernoooy Kill Falls are about one-half mile downstream. A faint herd path follows the stream down from the bridge at the upper falls.

A large meadow, most of which was once a beaver pond, lies at the headwaters of the Vernoooy Kill. The stone remains of a farm can still be found nearby. Most of the area is wet and is a designated freshwater wetland.

In August 1972, a tornado progressing northeast on its way from Sullivan County blew down a swath of trees several hundred feet wide and about one-mile long, west of Ridge Road in Yagerville (C. P. Fish, pers. comm.). Because of Super Storm Sandy in

the fall of 2012, there was an extensive blow down of trees along the Greenville to Vernooy Kill Falls snowmobile trail.

c. Wildlife and Wetlands

There are several State designated wetlands in the area, totaling about 480 acres. Although no rare or endangered species have been identified there, additional screening of these sites is recommended.

The Balsam Swamp area, including a few satellite swamps along the trail to Greenville, contains several boreal relict species such as creeping snowberry (*Gaultheria hispidula*), sheep laurel (*Kalmia angustifolia*), mountain holly (*Nemopanthus* spp.) and wild raisin (*Viburnum cassinoides*), in addition to balsam fir and red spruce. Yet, nearby along the trail from Upper Cherrytown Road to Vernooy Kill Falls are southern species, suggesting a history of repeated burns. These species include chestnut oak (*Quercus prinus*), white and red oaks, flowering dogwood (*Cornus florida*), mountain laurel (*Kalmia latifolia*), great rose-bay rhododendron (*Rhododendron maximum*), black birch (*Betula nigra*) and highbush blueberry (*Vaccinium corymbosum*).

Eastern timber rattlesnakes are found throughout the Sundown Wild Forest/Vernooy Kill State Forest, especially from Vernooy Kill Falls south.

Black bears can be found throughout the Vernooy Kill Falls section of this unit and can be seasonally abundant when blueberry and mast crops are present.

d. List of completed projects in the Sundown Wild Forest Unit Management Plan in 1996

1. A gate was installed at the intersection of Trails End Road and the Upper Vernooy Kill Falls Trail to prohibit unauthorized motor vehicle access to the falls.
2. A new parking area/trailhead sign and sign standard was installed at the Upper Cherrytown Road Parking Area.
3. An information kiosk was installed beyond the gate on the trail to Vernooy Kill Falls opposite the Upper Cherrytown Road Parking Area as part of a Boy Scout project to attain the rank of Eagle.
4. A new multi-use bridge and abutments has been installed over the stream just a short distance up the Vernooy Kill Falls Trail from the Upper Cherrytown Road Parking Area. This bridge was installed in the summer of 2007 and replaced the original snowmobile bridge.

V. Sundown Wild Forest Projected Use and Management

5. A trail register has been installed above the Peekamoose Camping Area on the Bangle Hill section of the Long Path in the spring of 2008.
6. A “Forest Preserve Parking” sign has been placed in the grass parking area at the Dymond Road entrance to the Vernooy Kill Falls snowmobile trail in Greenville.
7. The number of campsites was reduced to 3 along the Trout Creek area in Yagerville in the Town of Rochester, located along Mill Road. The remaining campsites were designated and marked. Access with motor vehicles has been limited to pull off areas near the road.
8. The former Lundy Estate was acquired by the State in 2001 and all acquired lands located within the blue line of the Catskill Park became part of the Forest Preserve. About 1,102 acres were added to the Vernooy Kill section of the Sundown Wild Forest. The remaining 3,660 acres of the former Lundy Estate outside the Catskill Park boundaries became the Vernooy Kill State Forest.
9. A gate was installed near the culvert bridge in Potterville in 2001 to prohibit unauthorized motor vehicle access to the Forest Preserve. This gate was destroyed by vandals a short time later. Since that time, the culvert bridge in Potterville was destroyed by flood. The 2 remaining 8-foot culverts that washed downstream were removed and recycled during the winter of 2013.
10. A new steel stringer wood decked bridge was installed to replace the old double culvert stream crossing near the gate at the junction of the access road to Vernooy Kill Falls and the town-maintained Trails End Road. This bridge was designed to carry all snowmobile, horse, bicycle and pedestrian use of this trail.
11. A 60-foot steel stringer bridge was installed across the Vernooy Kill in 2015 to replace the existing bridge installed in 1993. This bridge was designed to carry all snowmobile, horse, bicycle and pedestrian use of this trail.

e. Management Issues and Considerations

1. Signs on roads accessing the Forest Preserve and existing trails needs to be improved. Access in some areas is unclear to the average person. This can lead to increased use of the better known and marked trails, causing additional overcrowding in some parts of the Catskills. Damage to trees, campfire scars and garbage cans all pose a problem in high use areas.
2. The designated campsites along Trout Creek (Yagerville) and the Vernooy Kill could impact water quality and aesthetics if abused or overused. Monitoring of these sites for significant adverse impacts is necessary.
3. Several threatened, endangered, or protected species sites can be found within/nearby the Vernooy Kill Falls section of this unit. There are several

V. Sundown Wild Forest Projected Use and Management

rattlesnake dens in the area which should be studied to assess what management considerations or habitat requirements are needed for long term survival of the species. These sites must be taken into consideration when proposing facilities such as trails and parking areas. Timber rattlesnakes (*Crotalus horridus*) are listed as a Threatened Species in New York State but are not federally protected.

4. Resolving the access relationship between the Department and the owner of the inholding along Trails End Road in Rochester (see Bear Spring Road under Major Easements and Access Points, Section I).
5. A 40-year occupancy agreement (see 5b, Section I.) existed on Lot 12 until October 20, 2015. All improvements on this parcel were to be removed by this date or become the property of the State with no further compensation. All remaining structures on this parcel will be surplus by the Department and removed.
6. Off road vehicles have used and occasionally continue to use the Vernooy Kill Falls area trails. Abuse and damage to some parts of the trail have occurred because of this illegal use. At times, injuries to the operators have been reported, including one known fatality in recent history.
7. Large fires have occurred periodically in this area, especially on Cherrytown Mountain. Department policies should be reviewed and updated to provide clear guidance on fire-fighting protocols to ensure minimal impact to the Forest Preserve resulting from approved fire-fighting techniques. The chestnut oak/mountain laurel/blueberry heath regime is fire dependent. Where there is no threat to life or private property, allowing fires to burn would ensure the perpetuation of this cover type.
8. The State owns a detached triangular shaped parcel in the Yagerville area which provides about 0.25 mile of stream access to Trout Creek. Public access to this parcel needs to be clarified. If a determination is made that the public has access, the access needs to be clearly marked to prevent trespass onto private lands.
9. The parking area at Upper Cherrytown Road has experienced increased usage in recent years. The lot fills on a regular basis and vehicles have been reported to be blocking the road leading to the parcel located at 576 Upper Cherrytown Road.

f. Proposed Projects

** Project # 1 is predominantly located within the Vernooy Kill State Forest section (Section V) of this plan. Due to the proposed relocation of the Long Path and for clarity, project # 1 is described in both the Vernooy Kill Falls and the Vernooy Kill State Forest sections of this plan.*

1. Re-route the Long Path by removing it from the public highways. The Long Path currently follows State Route 209 to Lundy Road to Rogue Harbor Road to Upper Cherrytown Road to the DEC parking area at Upper Cherrytown Road. This project is described in conjunction with projects proposed and described in Section V. Vernooy Kill State Forest.

The Long Path will now be routed up Lundy Road in the Town of Wawarsing, and will cross over to the west side of the Vernooy Kill Stream on the Cutler Road Bridge. The trail will then turn north and enter the proposed Cutler Road Parking Area and will head northwest across the gravel pit where it will join with Phillips Road. Phillips Road is a dirt road which services the Vernooy Kill State Forest as an access road and is gated at its junction with Cutler Road to prevent unauthorized motor vehicle access. The Long Path will follow Phillips Road north for about one mile to the north end of the old field area where the access road to the former Dunlop Farm crosses the Vernooy Kill. The Long Path will then continue on Phillips Road past the old Dunlop Farm site. Here the road gains elevation on its route north towards Brownville. At Brownville, the trail needs to gain the height of land on the west side of the airstrip for the trip north to Vernooy Kill Falls. This may require either a route across the airstrip and potential switch backs from the airstrip to the height of land or routing the trail on the old jeep trail which leads from Brownville to Sholam (Mechler Road) to a point where the trail can then turn north for a gradual ascent up the ridge leading towards Vernooy Kill Falls. The trail will continue north beyond the Catskill Park Blue Line boundary. This boundary defines the end of the Vernooy Kill State Forest and the beginning of the Vernooy Kill Falls section of the Sundown Wild Forest. The trail will travel north, west of the ridge, where it will join the Greenville section of the existing snowmobile trail on the west side of the upper Vernooy Kill Falls. This section of the proposed relocation of the Long Path from State Route 209 north to Vernooy Kill Falls will be about 10 miles. This proposed trail will enhance the existing Vernooy Kill Falls snowmobile trail and will provide a viable trail system of about 20 miles for all users of this trail.

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The Long Path at this location will be a DEC marked and maintained multi-use trail and will include the use of snowmobiles. The trail leading from the Upper Cherrytown Road Parking Area up to Vernooy Kill Falls will no longer be marked as part of the Long Path but will remain a DEC marked and maintained multi-use trail. The Long Path will cross the West Branch of the Vernooy Kill, as well as other tributaries to the Vernooy Kill Stream, and may require bridges at several locations.

2. To prevent motor vehicle trespass where the Long Path joins Trails End/Spencer Road near Gray's Camp, large boulders will be installed. These boulders will be placed such that there will still be room for parking or turning around for at least one vehicle at this junction.
3. Improved signage is needed in several locations along the Long Path, especially where the Long Path leaves Spencer Road in the Town of Denning and heads toward Riggsville and Bangle Hill, as well as the intersection near "Gray's Camp" on Trails End Road. These signs will include destinations and mileages for each direction.
4. At the Upper Vernooy Falls Trail, near its junction with Trails End Road, large rocks are needed next to the gate to prohibit motor vehicle trespass.
5. A large rock is needed adjacent to the gate across from the Upper Cherrytown Road Parking Area to prohibit unauthorized motor vehicle access.
6. Maintain and mark Bear Spring Road as public access. Clarify access rights of owner of private land inholding near Bear Spring and Trails End Roads. Establish a clear and consistent policy to deal with driveway access to this parcel through Forest Preserve lands. Consider for acquisition if offered by willing seller.
7. Delineate a parking area at the start of the Upper Vernooy Kill Falls Trail, at its junction with Trails End Road and install a "Forest Preserve Parking Area" sign. Install an informational kiosk with Forest Preserve regulations, a map of the area and general information. Rehabilitate the large campsites and monitor for adverse impacts.
8. Maintain/stabilize all existing designated trails and bridges. Maintain trail registers and improve signage throughout the area.
9. Maintain woods road which starts near the end of Holly Road for continued administrative access. As discussed in Section I, this was once a major public road which continued to the mill at Vernooy Kill Falls. Close with a gate if unauthorized use becomes a problem.
10. Work in close cooperation with the Division of Fish and Wildlife and Natural Heritage to study rare and endangered species sites, particularly rattlesnake

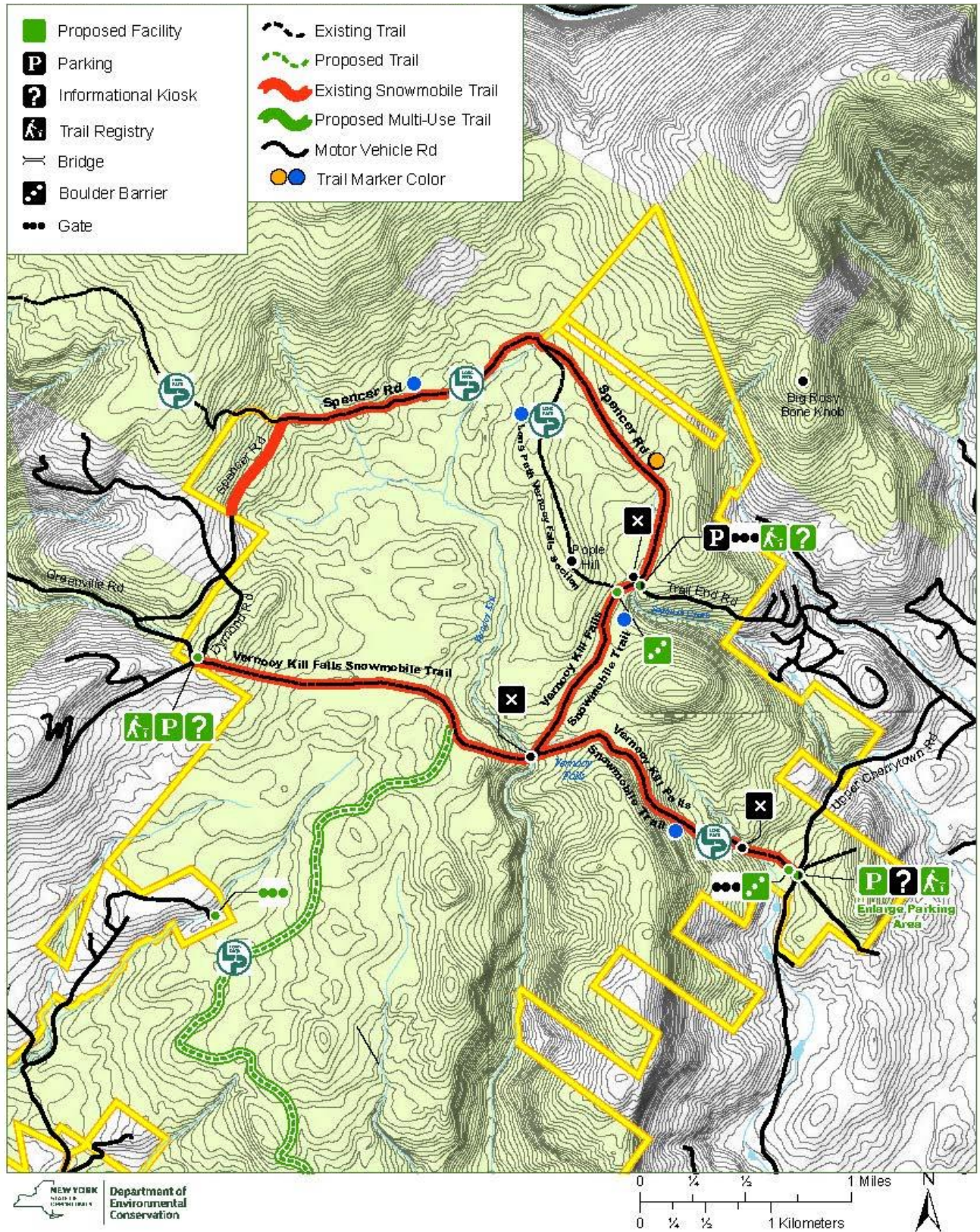
V. Sundown Wild Forest Projected Use and Management

dens, and determine what management steps may be necessary to protect them.

11. Acquire key parcels of private land from willing sellers to enhance the viability of this wild forest. Inholdings, lands surrounded on several sides by State lands and lands necessary for protection of critical habitat will be sought.
12. Remove the existing trail registration box, which is located at the Vernooy Kill Falls, and install registration boxes at the trailheads at Upper Cherrytown Road, Greenville and Trails End.
13. Expand parking area at Upper Cherrytown road to accommodate current usage and alleviate blocking of the road leading to privately owned parcel.
14. Remove the hunting camp and associated structures on Lot 12 (formerly Hoar/Murray). The 40-year occupancy agreement expired as of October 20th 2015. These structures are considered non-conforming structures on forest preserve lands and shall be removed.
15. Improve the informal parking area in Greenville located at the intersection of Greenville Road (Ulster County 46) and Dymond Road. The existing dirt pull-off will be surfaced with gravel to improve access and to define the parking area. The parking area will include the installation of a sign and sign standard, an information kiosk and trail information/directional signage. In addition, a trail register will be located a short distance down the Vernooy Kill Falls Trail.

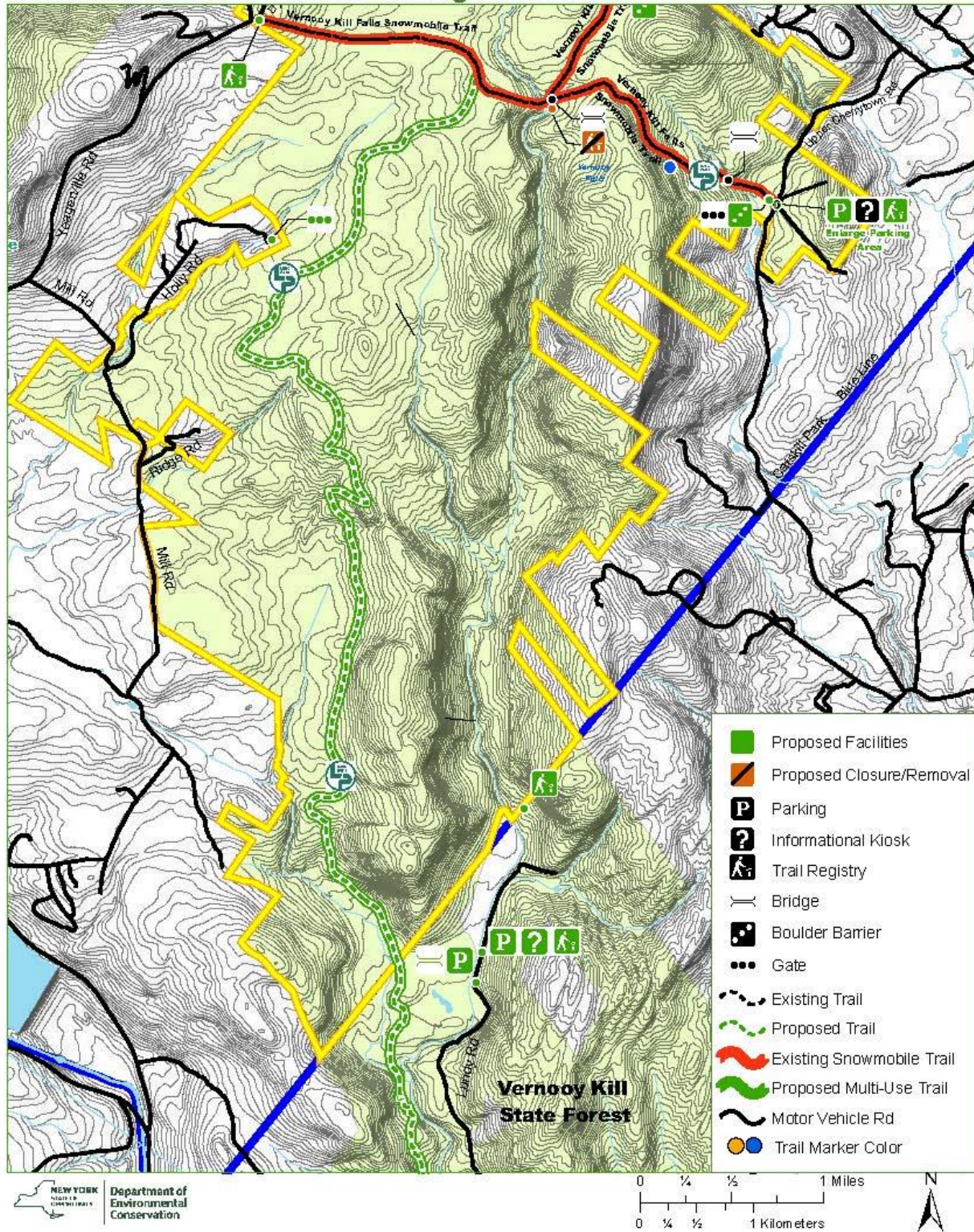
V. Sundown Wild Forest Projected Use and Management

Figure 5. Vernooey Falls North Map



V. Sundown Wild Forest Projected Use and Management

Sundown Wild Forest Unit Management Plan Vernooey Falls (South)



4. Bangle Hill to Spencer's Ledge

a. Description

As described in the Vernooy Kill Falls section, the Long Path turns north from Spencer Road in the Town of Denning and continues northwest toward Bangle Hill, along the lower slopes of Sampson Mountain. Here, noticeable stream beds begin to form as water flows southward to Sundown Creek, also known as the East Branch of Rondout Creek. After crossing Bangle Hill, the Long Path descends sharply down into the Peekamoose Valley. Short streams quickly gather the runoff from this hillside and drop into the Rondout Creek through a series of spectacular waterfalls visible along Peekamoose Road (Ulster County Route 42).

Sampson Mountain is heavily wooded with steep slopes. According to Kudish, in his book "The Catskill Forest: A History", the northwest slope of the mountain contains about 0.3 square miles of "first growth" forest starting at an average elevation of 2,175 feet. There is no evidence of human activity and the trees are large, with 3-foot diameter beeches, yellow birches and sugar maples found in the area. It is accessible only from the westerly side (Bangle Hill) across a rocky and boulder strewn ridge. A designated snowmobile trail continues west from Upper Cherrytown Road through Balsam Swamp to Greenville (within the Vernooy Kill Falls section) where it picks up Dymond Road to Spencer Road and returns via Trails End Road in a loop (see map on page 99). A cleared, grassy area provides parking for several cars on State land on the corner of Dymond Road and Yagerville Road and across the road from where the snowmobile trail from Vernooy Kill Falls exits.

A small cabin is located within Forest Preserve on a 2-acre parcel along Spencers Road in the Town of Denning. A 40-year occupancy agreement exists on the property expired on October 20, 2015. Any property/improvements as of that date have become property of the Department and non-conforming structures will be scheduled for removal.

b. Visual

As mentioned under the Vernooy Kill Falls segment, Spencer's Ledge is the only summit in this area which provides a filtered view of the ridge to the east. Although many old woods roads can be found in the area, there is no direct road or marked trail which leads directly to the Ledge.

c. List of completed projects in the 1996 Sundown Wild Forest Unit Management Plan

1. A new trail register has been installed above the Peekamoose Camping Area on the Bangle Hill section of the Long Path in the spring of 2008.
2. A “Forest Preserve Parking” sign has been installed in the informal parking area at the intersection of Dymond and Yagerville/Greenville roads

d. Issues

1. Private inholdings, access and occupancies continue to cause concern and must be monitored.
2. The traditional access to the privately owned “Gray’s Camp” inholding is severely rutted and braided into 2 roads. One of these roads will be blocked to prevent illegal motor vehicle trespass; the other will be hardened to prevent further degradation. In addition, there is a campsite located just beyond the private camp that contains a drive through road due to illegal motorized access. This road will be blocked, prohibiting motorized access. Parking for this campsite will be delineated along the intersection of Trails End/Spencer Road and the access road to the private inholding.
3. Green Farm access road will be blocked just down from its intersection with Spencer Road in the Town of Denning. Off road vehicles and 4-wheel drive trucks have been rutting this road and traveling into the nearby wetlands and campsites. This road will be blocked, allowing room for 2-3 vehicles to park off of Spencer Road. Three campsites will be designated for public use and will be monitored for significant adverse impacts utilizing the principles of LAC.
4. Portions of the Long Path where it descends from Bangle Hill to Peekamoose Road are steep and have potential for significant erosion.

e. Proposed Projects

1. Currently, portions of the Long Path traverse steep sections that run nearly straight up and down the contours of the slope as the trail descends from Bangle Hill to Peekamoose Road. Trails containing straight, steep segments have a higher potential for soil erosion and runoff, resulting in site degradation. These sections of trail are often the result of poor trail location and generally lead to maintenance issues. In many instances, these sections lead to a decrease in user satisfaction, taking away from the overall hiking experience.

V. Sundown Wild Forest Projected Use and Management

Minor trail relocations may be necessary to decrease trail slope through better use of the available contours. In addition, tread work such as stone stairs and trenching along with installation of water control structures such as waterbars and ditching may be necessary.

2. Improved signage is needed in several locations along the Long Path, especially where the Long Path leaves Spencer Road in the Town of Denning and heads toward Riggsville and Bangle Hill. These signs will include destinations and mileages for each direction.
3. Remove hazardous bridge structure on illegal access road to private inholding (formerly Tarantino's) off Spencer Road. Block illegal access to old field/pond site to prevent further site degradation by 4-wheel drive vehicles (near bridge site listed above).
4. Maintain Spencer's Ledge as trail-less to ensure hunters can continue to use the area without conflicts from other users.

V. Sundown Wild Forest Projected Use and Management

Bangle Hill to Spencers Ledge

Sundown Wild Forest Unit Management Plan

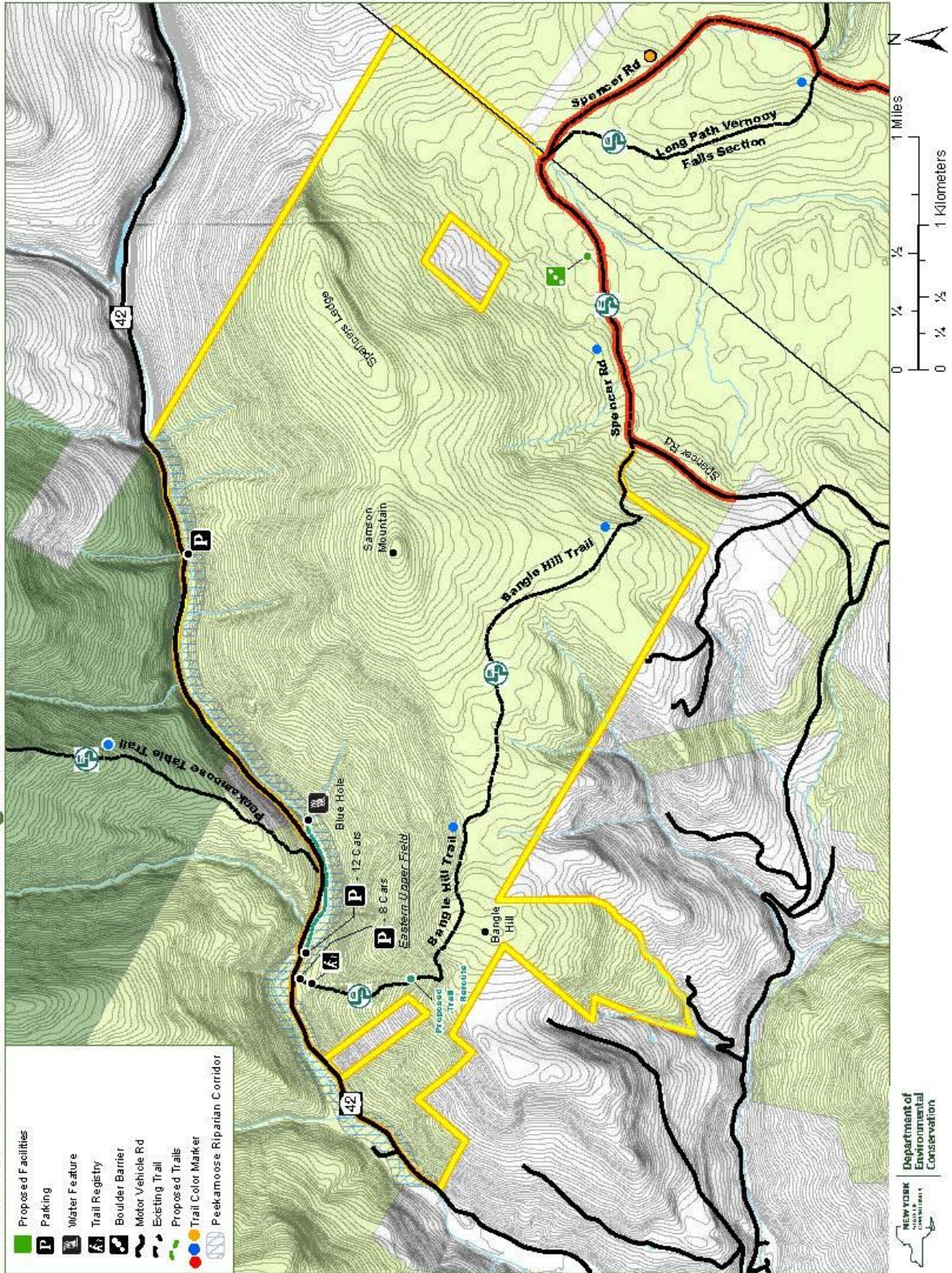


Figure 6. Bangle Hill to Spener Ledge Map

5. Sugarloaf Mountain/Sugarloaf Ridge/Lackawack Hill

a. Description

This area includes 3 separate parcels and is roughly bounded by County Route 46 (Yagerville Road) to the east, Sugar Loaf Road to the west and the Slide Mountain Wilderness to the north. The 3 parcels are described as:

1. Sugarloaf Mountain Section

This detached parcel is located just south of the Sugarloaf Mountain peak in the Town of Neversink. The parcel contains some mature woodlands with large specimens of oaks (*Quercus*, spp.), maples (*Acer*, spp.), and other trees found on the ridge top. It appears to have avoided the lumberman's ax for an extended period.

No formal access has been developed for this 254-acre parcel. However, past deeds indicate an access easement exists to this property.

2. Sugarloaf Ridge Section

This large parcel spans the ridge between Sugarloaf Road/Red Hills Knolls Road east toward the Rondout Creek (Peekamoose Valley) and from north of the Sugarloaf Mountain peak in the south, heading north toward Woodhull Mountain and Porcupine Road. Access is through several dirt woods roads which include Van Aken, Balace, Van Aiken Knolls, Mike Combs and Stone Cabin Brook roads in the Town of Denning. These roads consist of both present and former town roads. In addition to road access, several roadside pull offs exist along Sugarloaf and Red Hill Knolls Road.

The Sugarloaf Ridge north, like most of the area, had a sprinkling of hilltop farms, logging roads and connecting town and private roads. Remnants of the farms and roads survive today. In several locations, areas were reforested with conifer plantations. One plantation is found near Porcupine Road and another, partly visible along Sugarloaf Road. These plantations consist of stands of Norway spruce (*Picea abies*), White pine (*Pinus strobus*) and Red pine (*Pinus resinosa*), planted in 1929.

3. Lackawack Hill Section

This section begins with a ridge starting with Lackawack Hill in the south, extending north to the Sundown Creek/Greenville Road area in the towns of Wawarsing and Denning. Lackawack Hill is northwest of East Mountain. Access to this parcel is

V. Sundown Wild Forest Projected Use and Management

through Lackawack Hill Road and Mancuso roads. Both roads begin as paved town roads which end as dirt roads. Mancuso Road turns into a steep 2 track road which can only be negotiated by 4-wheel drive vehicles. A trailer adjacent to State property along Lackawack Hill Road has access through the southwest corner of the Forest Preserve. A spring line in the area runs several hundred feet on State land to a small holding reservoir in a stream. Nearby, a 16-foot wide right-of-way splits off to lands owned by the Whitestone Hunting Club (see Section II. Major Easements and Access Points). On the southeasterly side of this area, Mancuso Road turns into a steep 2 track road beyond the town-maintained portion, until the height of elevation is reached. Once on top, this road becomes more gradual as it works its way north. Here, stone remains of several abandoned farms can be found on the center of the ridge. Plantations containing white spruce (*Picea glauca*), Norway spruce (*Picea abies*), balsam fir (*Abies balsamea*), red pine (*Pinus resinosa*) and white cedar (*Thuja occidentalis*) are also found here. Eventually, the road reaches a campsite used by hunters. Beyond this campsite, trees have blown down and the road becomes overgrown, disappearing and reappearing at intervals. The remnants of this road continue to the north and eventually loop toward the southwest, where it joins the upper reaches of Lackawack Hill Road. Although in disrepair, the lower portion of Mancuso Road can still be used by 4-wheel drive vehicles to access the State property.

Although a comprehensive search of all adjacent landowner deeds has not been undertaken, no other access to this parcel was identified except along its northerly edge from Greenville Road. Other fingers of State land are located along Spencer, Dymond, Cross and Yagerville Roads in the northeasterly corner.

b. Visual

There are known vistas of exceptional quality known to exist in this geographic area. Filtered vistas may exist during winter months.

c. Wetlands

A State designated wetland (P-3, Class II) of 20 acres is located on Sugarloaf Ridge. Another 17-acre wetland (P-5, Class IV) is located west of Red Hills Knolls Road.

d. List of completed projects from the 1996 Sundown Wild Forest Unit Management Plan

1. At the cul-de-sac at the end of Lackawack Hill Road, Forest Preserve access, rules and regulations and boundary signs have been installed.
2. Signs have been placed along Mancuso Road beyond the informal parking area at the height of land, prohibiting motor vehicles beyond that point.
3. Boundary signs have been maintained along Sundown Creek by the pull off on Greenville Road so that visitors are aware of this non-trailed access.
4. Signs have been placed along Stone Cabin Brook Road south of Porcupine Road, prohibiting ATV and unauthorized motor vehicle access.

e. Issues

1. Public and administrative access to State lands is blocked by private landowners in several locations, creating conflicts between users and adjacent landowners. Public and administrative access rights to State lands must be clarified and clearly marked where appropriate to reduce the potential for future conflicts. The Forest Preserve Program will work closely with the Real Property Program and the Office of General Council to take an affirmative position on these access issues.
2. The use of road shoulders by the public for parking to access State lands is common in many areas. Parking along roads can be difficult and hazardous to motorists traveling public highways. In some instances, town ordinances prohibit road side parking unless all 4 wheels are off the pavement or maintained portions of the road. These ordinances can lead to visitor confusion and in some cases, parking violations. The establishment of official pull-offs along public highways, additional parking areas, directional signs and more frequent boundary markers where State lands abut major roadways will increase the visibility and public understanding of access to this section of the Forest Preserve. Improved access in this area may draw visitors away from some of the more popular areas where use concentration is high. This potential redistribution of public use away from more heavily used areas may offer some relief to areas affected by overuse.
3. An easement is held by the owners of a three-acre lot which straddles the old Stone Cabin Brook Road just south of Porcupine Road. ATV and motor vehicle trespass in this area, especially during the big game hunting season, has been a

V. Sundown Wild Forest Projected Use and Management

recurring problem. Full protection of this area would be greatly enhanced by purchasing the lot from a willing seller(s) when it becomes available.

4. Providing a parking area and formalized access from Porcupine Road (formerly Woodhall Road) via old Stone Cabin Brook Road could eliminate the need for formal access from the more southerly Van Aiken Knolls Road (aka. Mike Combs Road). This southerly access could then be gated just within the State land boundary, reducing disturbance and illegal use.
5. At one time 2 roads in the Sugarloaf area, Balace Road (High Falls Brook) and Stone Cabin Brook, connected with the Peekamoose Valley. Good views of the Peekamoose Valley and surrounding countryside are available from the ridge top open fields on the westerly side of Stone Cabin Brook. These views coupled with an old conifer plantation, vegetating old farm fields, stone walls, and the relatively gentle topography along the ridge make it an excellent choice for a trail location. A hiking trail on the Stone Cabin Brook Road could connect this area to the Peekamoose Valley Camping Area. This area has been popular with hunters and to date no requests for such a trail have been made. No trail is proposed at this time.
6. Utility lines and poles are located on Forest Preserve lands. Deeds on record need to be reviewed regarding the status and legality of these existing lines to establish protocols for the eventual repair/replacement of the lines.

f. Proposed Projects

1. Construct a small 2-3 car parking area in the southwest corner of the Lackawack Hill parcel just beyond the cul-de-sac on Lackawack Hill Road. Parking has been ongoing at this location. A formal gravel parking area with appropriate signage will allow the public to park off the currently maintained town road and further away from the nearby private residence.
2. Maintain State land signs at the parking pull off on Greenville Road (Rte 101) along Sundown Creek, to provide non-trailed access to the Lackawack Hill parcel.
3. Mancuso Road will be maintained to minimum standards to remain passable for administrative/emergency use by DEC vehicles as well as public access by 4-wheel drive vehicles to the informal parking area located at the height of land just beyond the State land boundary. The remaining portion of this road through State land will be closed to unauthorized motor vehicles. Signs indicating "No motorized vehicles beyond this point," and "No ATVs Allowed" will be placed on the road just beyond the State land boundary and parking area. The area will be

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monitored and if necessary, a gate will be installed beyond the parking area to prohibit motor vehicle trespass.

4. Re-establish the existence of the public and administrative easement access to the detached parcel south of Sugarloaf Mountain. This road access (see #12, page 39) shall be posted with public access signage. A pull-off is desired at this location but may not be feasible due to steep terrain.
5. Sign and improve the parking area along Sugarloaf Road near the Ulster/Sullivan County lines. A small informational kiosk with a map of the area, rules and regulations and general Forest Preserve information will be installed.
6. Construct a 4-car parking area along Stone Cabin Brook Road off Porcupine (formerly Woodhull) Road. This parking area will be located a short distance beyond the State land boundary. A "Forest Preserve Parking" sign will be installed along with a "Rules and Regulations" sign. "No Unauthorized Motor Vehicle" and "No ATVs Allowed" signs will be installed just beyond the parking area.
7. Establish a 2 car pull-off near the old apple orchard a short distance beyond the State land boundary on the Van Aiken Knolls (Mike Combs) Road. This area is already being used as an informal parking area and currently is rutted. Hardening of the area is required to protect the resource.
8. Close off Van Aiken Knolls (Mike Combs) Road (see #15, page 41) with a gate above the proposed 2-car pull-off on State land to prevent unauthorized motor vehicle access. The road beyond this point is grown in and rutted. The owners of Lot 31 are using the upper access via Porcupine Road to Stone Cabin Brook Road. Additional access for this private parcel is not needed at this location.
9. Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve. Place directional signs on roads which have not been abandoned by the Towns and clearly provide public access to Forest Preserve lands. Where these roads cross private lands, "Public Easement Through Private Lands, Stay on Road" signs will be posted to prevent trespass on private lands.
10. Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and be required to move them.
11. Acquisition of key inholdings will be sought from willing sellers.

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Sundown Wild Forest Unit Management Plan

Sugarloaf Mountain

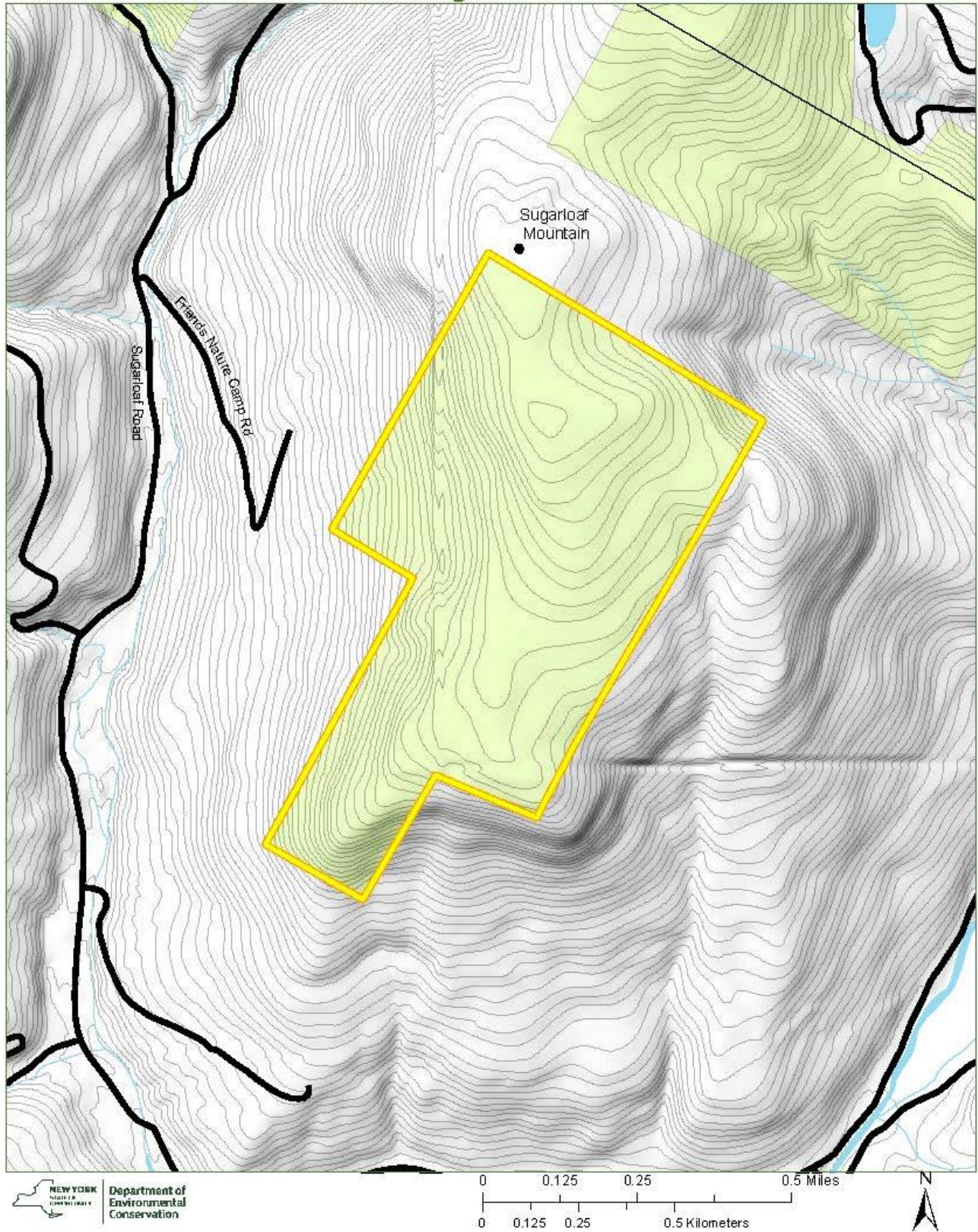


Figure 7. Sugarloaf Mountain Map

V. Sundown Wild Forest Projected Use and Management

Sundown Wild Forest Unit Management Plan

Sugarloaf Ridge

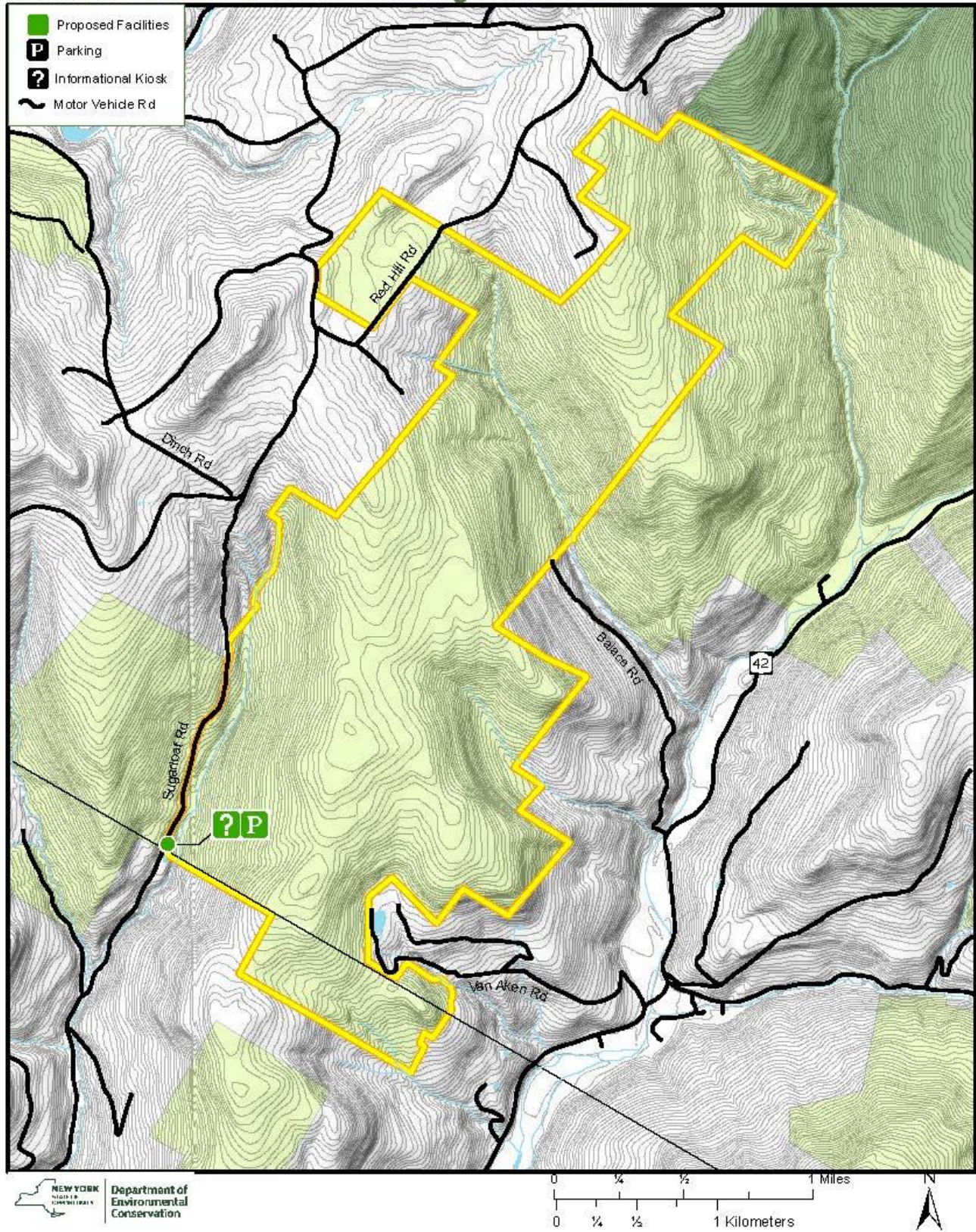


Figure 8. Sugarloaf Ridge Map

V. Sundown Wild Forest Projected Use and Management

Sundown Wild Forest Unit Management Plan

Lackawack Hill

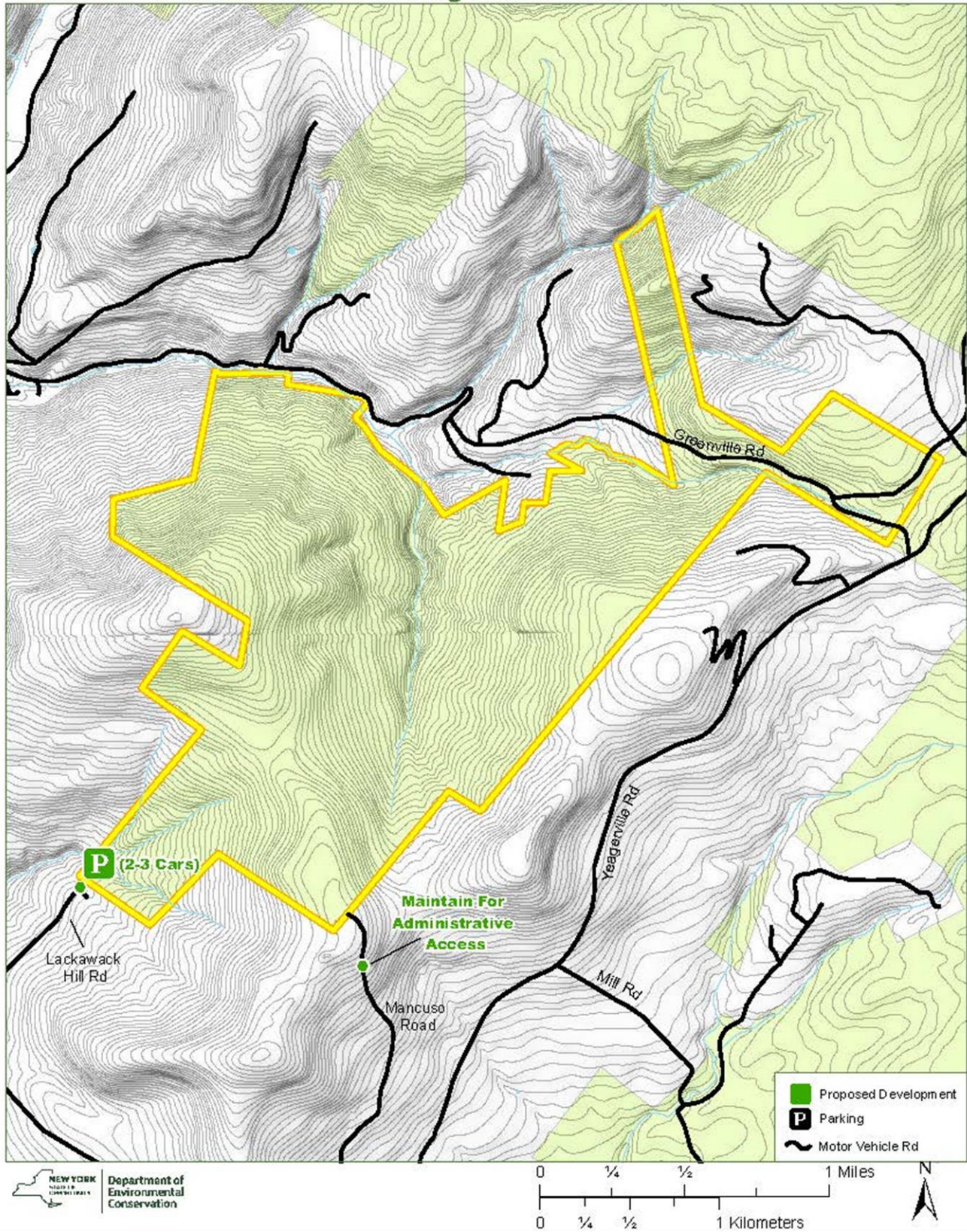


Figure 9. Lackawack Hill Map

6. Denman Mountain/Red Hill/Wildcat Mountain/South Neversink/Camp Pine

a. Description

This section of the Sundown Wild Forest/Vernooy Kill Falls State Forest unit consists of 4 separate parcels of land. Most this section and largest parcel is the Denman Mountain parcel, which lies within the Town of Neversink, Sullivan County. The remaining area consists of the Red Hill, Wildcat, and Neversink River parcels which all lie within the Town of Denning, Ulster County. The 4 parcels are described below:

1. Most of the **Denman Mountain parcel** is within the Town of Neversink with a small portion along the northeast boundary overlapping into the Town of Denning, Ulster County. Because of its size and proximity to villages, along with access from several good town roads and an existing network of old woods roads within the parcel, the area provides a good base for the expanded recreational uses completed since the 1996 Sundown Wild Forest UMP. Denman Mountain, at 3053 feet, is one of the highest peaks in Sullivan County.

The woods road traversing the mountain from east to west beginning as Bungalow Brook Road near the village of Claryville, was once a main thoroughfare in the 1700s, connecting many farms to Claryville and nearby Grahamsville. This road continues to serve as access to State land as well as the Denman Mountain Sporting Club private inholding. It also serves several other bordering landowners on the west side of this parcel. Early landowners, such as Denman, Van Aken, Moore, and Furman have leant their names to many now familiar places. Stone remains of farm buildings, fields, and logging roads can still be found here. Most of these remnants of history are fading into the landscape, hidden by natural forces such as forest succession.

In the Town of Neversink, Moore Hill Road is seasonally maintained and serves as part of the State marked Denman Mountain snowmobile trail during the winter months. This section of road was greatly improved in 1993 by the Town of Neversink. Moore Hill Road becomes Barnes Road as it passes through the Town of Denning. This section of road was greatly improved by the Town of Denning between 2006 and 2007.

V. Sundown Wild Forest Projected Use and Management

Hog Rocks, reached by Moore Hill Road, continues to be a popular local destination to the east of Denman Mountain. At the "Hog Rocks," a cliff of about 60 feet stretches about a quarter mile along Moore Hill Road. The geological term "hogback" is sometimes given to a steep ridge with abruptly sloping sides. Such a description is fitting of the Hog Rocks area and the term "hogback" may serve as the origin of the name. A huge boulder dominates a turn in the road near Hog Rocks. This area, including a nearby field, are often used for camping. Rutting caused by illegal off-road vehicle use, litter, and damage to trees have been observed on occasion.

2. The **Red Hill parcel** in the Town of Denning is best known for the fire tower built on its summit in 1920. Nine (9) flights of stairs lead to the cab of this 60-foot tower which sits atop the 2,980-foot-high Red Hill. A 1994 Letter of Resolution between the Office of Parks, Recreation and Historic Preservation and the Department stipulated that the Red Hill tower be retained. The tower is on the National Historic Lookout Register (National Woodlands Magazine, 1995) and affords a good view of the Catskill peaks to the west and north. Southeast from the tower, a glimpse of the Rondout Reservoir is visible from behind Denman Mountain. Before the use of radio repeater towers, this strategically placed tower enabled radio communications by the Department to occur throughout the southern half of the Region. It continues to provide a panoramic view of a large area of productive forest land just outside the Catskill Forest Preserve. Red Hill and Hunter Mountain fire towers were the last towers staffed in the Catskills, both of which closed during 1990.

Administrative access to the tower was provided by a well-maintained road on adjacent private property through a verbal agreement. Permission to access the Red Hill Fire Tower via this private road has been granted and cancelled several times. Currently, the parcel containing the access road is owned by the New York City Department of Environmental Protection (DEP). It was purchased under the guidance of the 1997 Watershed Agreement, which allows DEP to purchase lands for protection within their watershed. The access road is gated at the junction with the town maintained Red Hill Road. Verbal permission has once again been granted for administrative access to the tower and DEC maintains a lock at this location.

A right-of-way for a trail and telephone line "for tower access" connects to the southwesterly corner of the property (see 17a, page 41 for easement details). A developed spring at the base of a cliff is found to the west and downhill of the

fire tower and was once the water supply for the tower observer. This spring now services the foot trail from the Dinch Road Parking Area (described below) to the summit of Red Hill.

Public access to the property is along its northerly border with Dinch (formerly Coons) Road. This town road can only be reached from the east. There is no bridge from Ladleton over the East Branch of the Neversink to provide access from the west. A new parking area was constructed near the bottom of the hill to the west side of Dinch Road. In addition, an information kiosk and a trail register were constructed and installed in the rear of the parking area. An approximate 1.4-mile foot trail was constructed from the parking area to the fire tower to provide the public with a marked, improved access to the tower.

Portions of Dinch Road are seasonally maintained, making this parking area difficult to access during the winter months. Several hillside fields associated with long abandoned farms are returning to woodlands near the parking area. Some of these nearby areas have been planted to conifers such as Norway spruce (*Picea abies*).

3. The **Wildcat Mountain South parcel** straddles a ridge overlooking the West Branch of the Neversink River in Denning. This same ridge continues north to Wildcat Mountain in the Slide Mountain Wilderness Area. This parcel touches the wilderness area in one corner but due to the presence of nearby hunting cabins, residences, and Wild Cat Road, the department found it more appropriate for this area to be designated as Wild Forest. The Wildcat Mountain Hunting Club has access through this Forest Preserve parcel to its camp and property.
4. **The South Neversink parcel** is a 16-acre parcel fronting on the East Branch of the Neversink River and was acquired through a tax sale in 1898. Camping is not permitted on this parcel because of its proximity to Denning Road and the Neversink River. Public use is limited to day use for picnicking, fishing access and similar pursuits. This property is essentially a flood plain containing numerous streams and overflow channels carved during past flood events. This parcel is dominated by an eastern hemlock overstory, accompanied by northern hardwood species such as American beech, black and yellow birch and maple. Due to dense shading, little vegetation grows on the forest floor, resulting in what may be considered a “park like” appearance.

V. Sundown Wild Forest Projected Use and Management

Several fires have been noted for this section of the unit. Records show that 55 acres burned on Red Hill in November 1987. Another fire was recorded for May of 1992 where 163 acres of woodlands burned on the southern flank of Denman Mountain, east of the private in-holding and near the summit. This fire appears to have spread upslope from the woods road.

5. The 231-acre **Camp Pine parcel** was originally acquired in December 1949 by what is now known as Cornell Cooperative Extension Association of Sullivan County and, until 1980 was used as a rustic outdoor educational facility formerly known as Camp Pine. The property was managed as a working forest for two decades until it was conveyed to the Department in 2009 at which time public access was permitted. The parcel has more than 4, 400 feet of frontage along both shores of the Neversink River and can be accessed from Claryville Rd. in the Town of Neversink. The parking lot can accommodate 6 vehicles.

b. Visual

The Red Hill Fire Tower provides the only unobstructed vista in this section.

c. List of completed projects in the 1996 Sundown Wild Forest Unit Management Plan

1. A 10-car parking area was built at the corner of Glade Hill (Furman) and Moore Hill roads. This parking area is large enough to turn horse/snowmobile trailers around and includes an informational kiosk in the north corner of the lot. The parking area is protected with large boulders on the south side, adjacent to Glade Hill Road. In addition, several trees have been planted among the boulders with the intent of producing a protective hedge row in the future.
2. A multi-use trail (Denman Mountain trail) has been constructed around the north side of the Denman Mountain parcel linking Moore Hill/Barnes (Hog Rocks) Road with the Bungalow Brook Road. This section of trail is about 2.2 miles in length, and when used in conjunction with the 2 seasonally maintained roads listed above creates an approximate 7-mile loop beginning and ending with the Glade Hill Road Parking Area. This trail has been marked for snowmobile use when snow or ice covered. Equestrian use is allowed when not snow covered. In addition to the uses listed above, cross country skiing, snowshoeing, hunting, hiking and mountain biking are all allowed on this trail.

V. Sundown Wild Forest Projected Use and Management

A significant section of the Denman Mountain Trail located on the north side of Denman Mountain was obliterated by blowdowns because of a severe windstorm in 2005. Many trees with diameters exceeding 3 feet were blown across the trail and stacked like match sticks. Significant effort by the Department was required to re-open this section of trail.

3. An approximate 0.6-mile section of multi-use trail has been constructed from the southern end of Bungalow Brook Road heading east toward the Glade Hill Road Parking Area. This section of trail was constructed to allow users to return to the parking area without traveling down the town-maintained portion of Moore Hill Road.
4. A 4-car parking area has been constructed near the bottom of the hill along Dinch Road in the Town of Denning for access to the Red Hill parcel. This parking area is located on the west side of the road and includes an information kiosk and trail register on the north end of the lot.
5. A foot trail has been constructed from the Dinch Road Parking Area to the Red Hill Fire Tower. This trail leaves the parking area and heads north for a short distance before turning west and eventually south as it climbs to join the fire tower at 2,980 feet in elevation. This trail is about 1.4 miles long and passes near the spring which once served as a water supply for the fire tower observers. This spring continues to serve both visitors and volunteer stewards of the fire tower.
6. The Red Hill Fire Tower has been adopted by the Red Hill Fire Tower Committee through the Volunteer Stewardship Program with DEC. With the help of this committee, the Red Hill Fire Tower, caretaker cabin, work shed and pit privy have been rehabilitated and opened to the public. Materials, including wood, shingles and steel braces were flown to the clearing near the fire tower by helicopter through a coordinated effort of volunteer, DEC and State Police staff. This fire tower is staffed by volunteer interpreters on weekends during the summer months. The fire tower cab is accessible to the public during this time.
7. A verbal agreement with the New York City DEP allows DEC to maintain a lock on the gate on the fire tower access road located on DEP lands for administrative access.

d. Proposed Projects

1. Install a rock barrier to prevent motor vehicle access to State land in the open field near the Hog Rocks to eliminate rutting and off-road vehicle damage.
2. Post unauthorized trails that enter the unit from private lands with signs prohibiting all-terrain vehicles at illegal access points.

V. Sundown Wild Forest Projected Use and Management

3. Clearly mark and post all Forest Preserve boundaries, especially along woods where motor vehicle trespass occurs and along private lands where encroachments have occurred. Block off all woods roads not open for motorized access and post signs prohibiting motorized access. Additional patrols by law enforcement may be required.
4. Develop a spring along the multi-use trail that loops around Denman mountain. There are several potential areas where a spring could be developed to provide water for visitors, especially during the dry summer months.
5. Review and address the occupancy of Forest Preserve lands by utility company poles along Denman Mountain Road for consistency with State laws. Central Hudson Gas and Electric was given permission in 1947 to place utility poles within the right-of-way of the town road. The poles were placed off the right-of-way and on Forest Preserve land when they were installed.
6. Monitor the 16-acre Neversink parcel to ensure that public use will not adversely affect water quality. This site will be monitored in accordance with the Limits of Acceptable Change (LAC) principles.
7. Annually maintain the Red Hill Fire Tower to keep this fire tower safe for public use in perpetuity.
8. Purchase, in fee from willing sellers, key parcels abutting Forest Preserve lands. Emphasis will be placed on inholdings and connecting parcels to establish a viable Forest Preserve.
9. Install a trail register either in the Glade Hill Road Parking Area or a short distance up the trail on the north side of Denman Mountain, where the trail heads west from Barnes Road.
10. Provide a small rustic 3-car pull-off along Wild Cat Road, primarily for hunters and bushwhacking hikers. There are several small clearings which could be slightly enlarged and posted without significant tree cutting or grading.
11. Designate a parking area near Hog Rocks. Using large boulders, block off all other access to the cliffs and open fields in the area. Increase the frequency of Forest Preserve signs along the road. "Rules and Regulations" and "carry in - carry out" signs will be posted in the area.
12. Maintain all trails including the Red Hill Fire Tower Trail and the Denman Mountain multi-use loop trail.
13. Maintain the Red Hill Fire Tower and associated buildings for public access.
14. Purchase in fee land from willing sellers, key parcels abutting Forest Preserve lands. Emphasis will be placed on in holdings and connecting parcels to establish a viable Forest Preserve.
15. Maintain the Camp Pine and associated parking facilities for public access.

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16. The Department will pursue partnerships with landowners adjacent to the Red Hill area to improve access opportunities, including parking, where appropriate. This may include an expanded trail network on the Red Hill parcel.

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Sundown Wild Forest Unit Management Plan

Denman Mountain

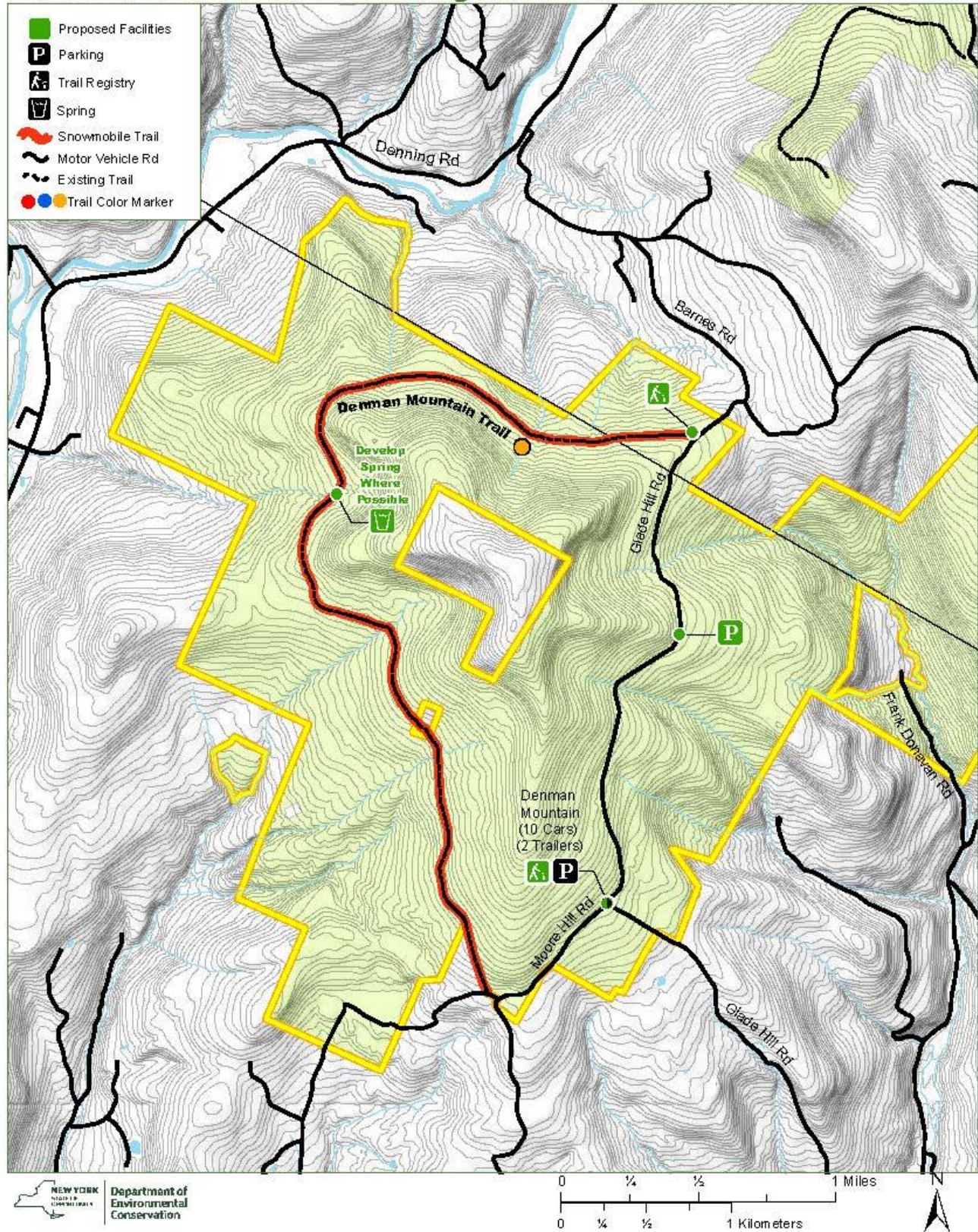


Figure 10. Denman Mountain Map

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Sundown Wild Forest Unit Management Plan

Red Hill

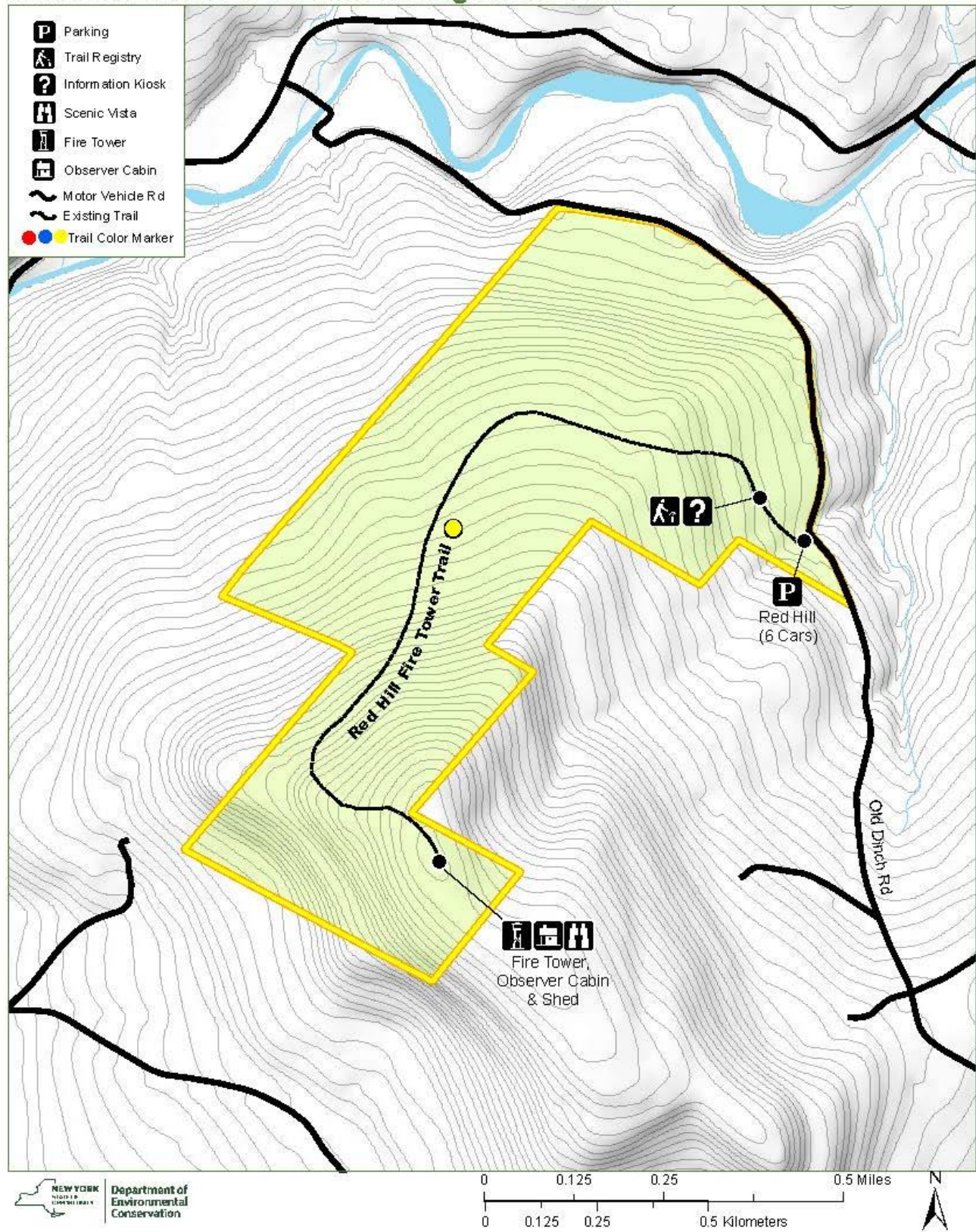


Figure 11. Red Hill Map

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Sundown Wild Forest Unit Management Plan

Wildcat Mountain

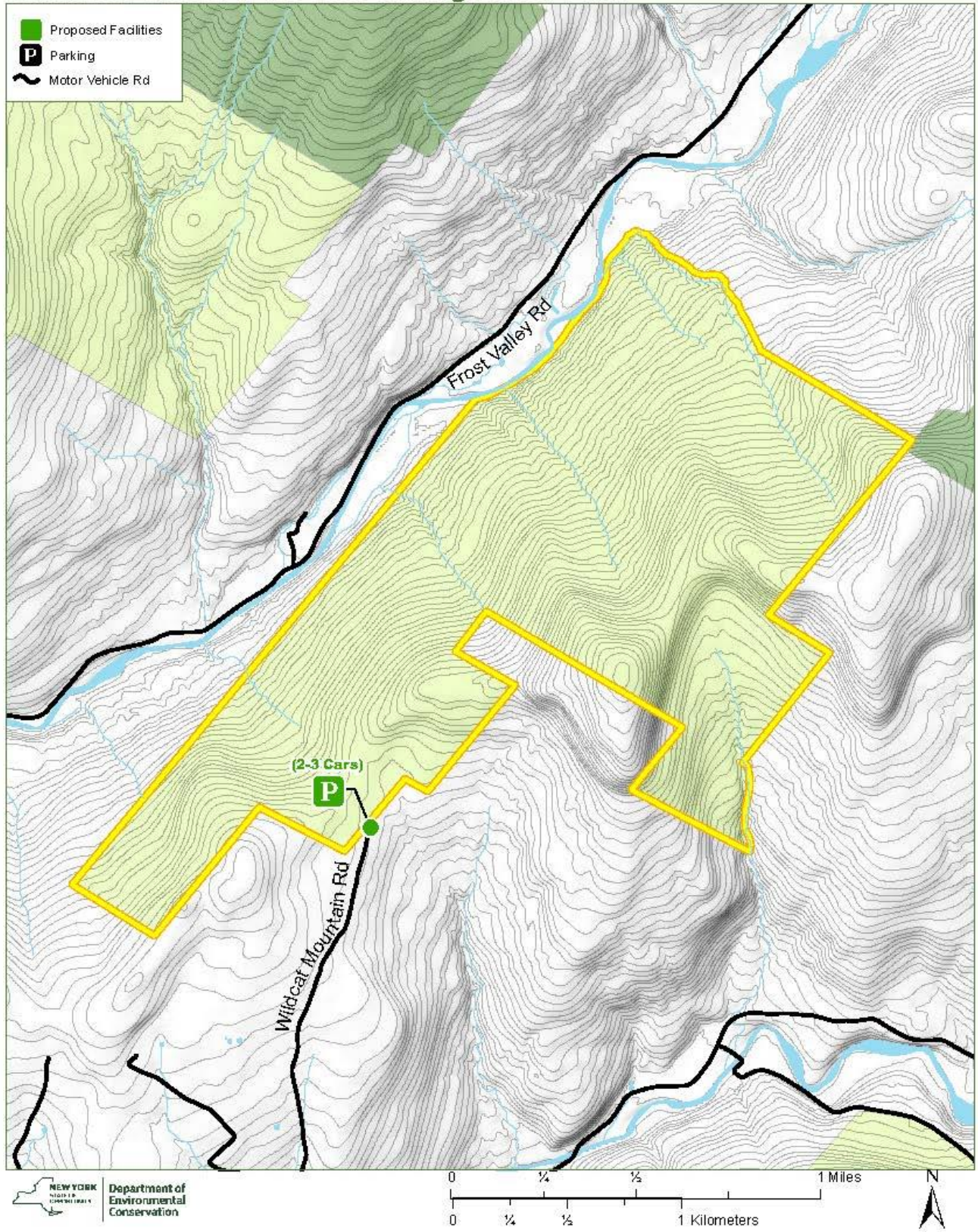


Figure 12. Wildcat Mountain Map

Sundown Wild Forest Unit Management Plan

Camp Pine

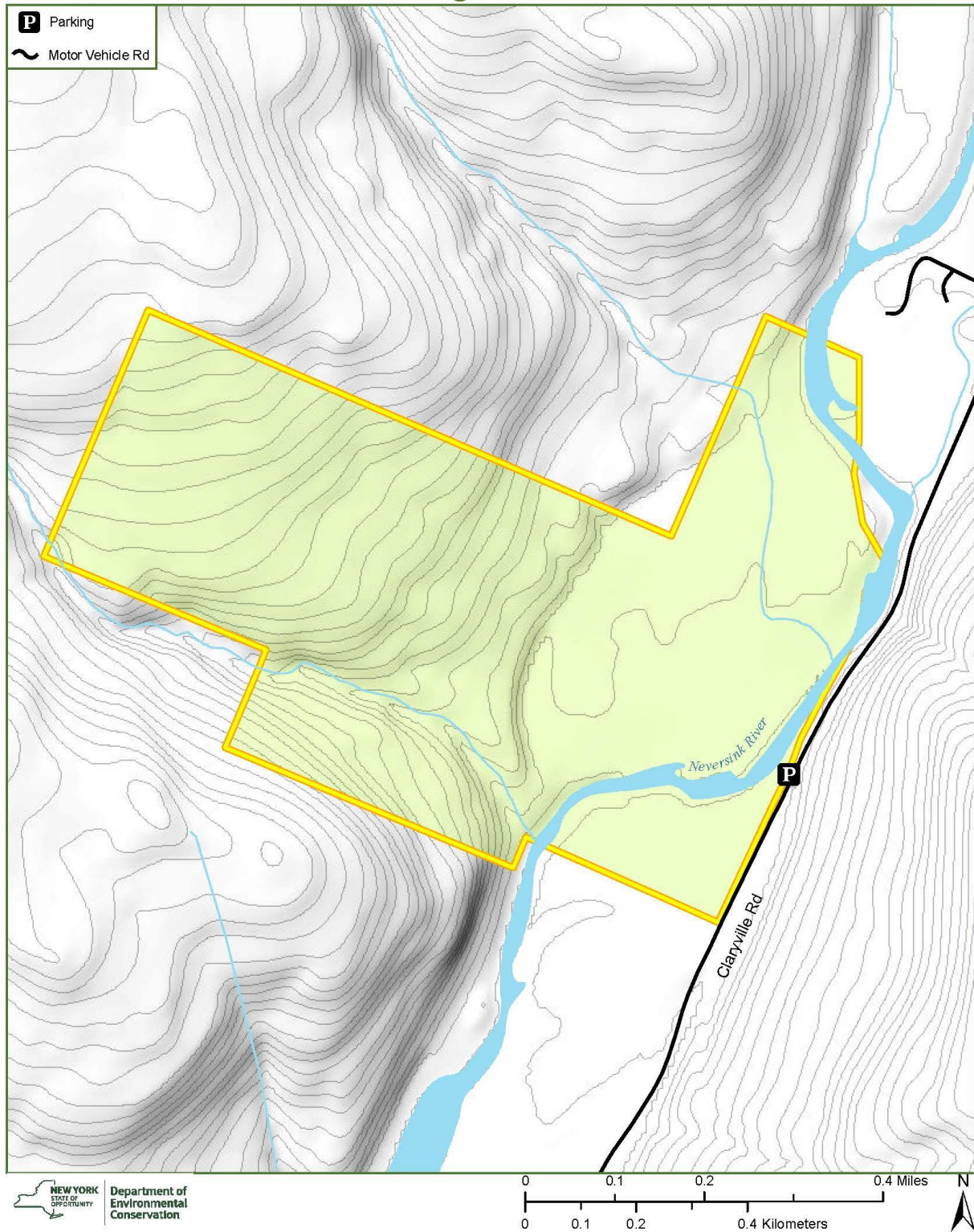


Figure 13. Camp Pine Map

7. Peekamoose Valley

a. Description

“A narrow valley dissected by the swift and clear rushing waters of the once mighty Rondout Creek and several of its tributaries. A dramatic valley extending between high and steep hills, hills so steep at times as to be inaccessible. A recreational valley, where waterfalls, swimming holes and sunbathed rock terraces are common, and camping is extremely popular. A remote valley where visitors must traverse a road "not built for the pleasure or use of nervous people, the grade being very steep, and the road bed formed of the loose slabs and pieces of rock that have fallen from the overhanging cliffs above, extremely narrow and winding with no protection on the other side (DeLisser 1896)." A heavily used, and occasionally abused valley in need of management” (DEC 1990). This was the wording used to describe the Peekamoose Valley in the preface of the Peekamoose Valley Wild Forest Unit Management Plan released by the Department in October 1990. This description still fits today, more than 2 decades later.

The Peekamoose Valley section can be further described as encompassing about 2,200 acres of land straddling the Rondout Creek. This section of the Sundown Wild Forest is predominantly used by campers, anglers and hunters. Several swimming holes are found along the Rondout Creek, including a large pothole referred to as the “Blue Hole”. The waters of this pool are indeed blue, as is the color of a swimmer’s skin after submersion in the cold water. In addition to the swimming holes, several steep waterfalls cascade into the Rondout from surrounding tributaries. Several of these waterfalls are named, including Peekamoose Falls and the nearby Buttermilk Falls located in the adjacent Slide Mountain Wilderness.

b. Visual

No ridge top vistas exist within the Peekamoose Valley section of this unit. The only views that exist within this section involve the many waterfalls found along Peekamoose Road as well as the scenic Blue Hole. Views of Peekamoose Mountain can be found in the nearby Slide Mountain Wilderness

c. List of completed projects

1. A no-cost day-use permitting system requiring visitors to obtain a permit to access the Blue Hole has been implemented. This type of permitting system

V. Sundown Wild Forest Projected Use and Management

allows the Department to limit the number of visitors in the area and strikes a balance between allowing the public to enjoy the natural resource and reducing environmental damage. Permits will be available through an on-line reservation system, and permits will be issued to a maximum group size of 6 individuals. DEC will issue up to 40 permits per day allowing for a maximum of 240 people to be at the Blue Hole on weekends and holidays from May 15th through October 15th. Each permit is limited to 6 individuals. Visitors are required to list the names of all members of their party when making the reservation, but will be able to change the names up to one day in advance. Visitors must have a permit with them at all times. Photo ID is required for each visitor over the age of 18. Permits are available on Reserve America.

2. All garbage pits have been removed from the camping area. "Carry In-Carry Out" signs were placed throughout the camping area to encourage users to be responsible for their own refuse.
3. All culvert type pit privies have been removed and replaced with port-a-johns to promote better sanitation. The culvert pit privies were used extensively by the public for disposal of their refuse and quickly filled. Six (6) port-a-johns are provided before Memorial Day each year and remain through Columbus Day. They receive a weekly cleaning and twice weekly cleaning on holiday weekends.
4. The number of designated campsites was reduced to 35. Campsites which were poorly located or severely abused were closed and the sites rehabilitated and planted with a conservation mix and, in some cases, planted with trees.
5. The section of the Long Path found within the Peekamoose Valley portion of this unit has been maintained. Blowdown removal is ongoing, and many water control devices have been installed to prevent erosion.
6. Four (4) informational kiosks have been installed; one in each of the camping area fields. The kiosks contain area maps, rules and regulations, emergency numbers and general information on camping and hiking in the Forest Preserve.
7. The herd path established foot trail leading from Peekamoose Road to the Blue Hole has been rehabilitated to accommodate the high use the area receives during the summer months.
8. Trail registers have been installed at both the Peekamoose Mountain Trailhead and at Bull Run. The Peekamoose Mountain register is located at the top of the first incline beyond the parking area. The register at Bull Run is located a short distance up the trail from Peekamoose Road. This register was installed in the spring of 2008.
9. 2 campsites in the Trailer Field have been modified to comply with the Americans with Disabilities Act (ADA) and the Americans with Disabilities Act

V. Sundown Wild Forest Projected Use and Management

Accessibility Guidelines (ADAAG). The 2 sites include a hardened campsite containing accessible fire rings and picnic tables, an accessible port-a-john, an information kiosk and an accessible trail that leads users along the bank of the Rondout Creek to another picnic table and a fishing pier. There is a total of 6 designated sites, including the 2 ADA compliant sites, located in the Trailer Field. All sites in this area require a permit from the local Forest Ranger. All sites are on a first come - first served basis and are open to visitors of all abilities. Sites are numbered 1 through 6 for convenience.

10. The 7 original parking areas servicing the area have been maintained to provide safe, off road parking for visitors to the Peekamoose Valley.

The 7 parking areas include: a large parking area located adjacent to the gated access road leading to the Lower Field (this parking area has been used periodically by Ulster County DPW and the Town of Denning Highway Department for temporary storage of stone during resurfacing of the public highway. This parking area has received stone surfacing several times because of this temporary use); 2 parking areas in the Middle Field; 2 in the Upper Field; accessible parking in the Trailer Field; and 12 car parking area at the Peekamoose Mountain Trailhead.

11. All gates and boulders installed to prohibit illegal motor vehicle use have been maintained. In several instances, boulders were slid aside by visitors so that access was attained by motor vehicles. Boulders are re installed and locks replaced on the gates quickly to discourage would-be violators from continuing this practice.
12. A rope swing has been removed many times from a large hemlock overhanging the Blue Hole. In the past, a tree climber was hired to remove several branches from this hemlock to discourage any further replacement of the rope. The hemlock has since succumbed to insect damage and was removed in July 2016 to eliminate a potential hazard to the recreating public.
13. Due to severe erosion, the area experienced from flooding during Hurricane Irene and Tropical Storm Lee in August 2011, the Department was approached by the Town of Denning requesting assistance in repairing the public highway through Peekamoose. Specifically, DEC was asked to return the Rondout Creek channel to its former location prior to the storms, located on State lands. A new channel had been cut because of the flooding, which negatively impacted the re-establishment of Peekamoose Road.

Department staff spent a significant amount of time and effort re-establishing the creek channel, diverting the Rondout from eroding the Peekamoose Road. In

addition, a significant amount of repair was necessary in the Peekamoose Camping Area to re-establish camping areas and the accessible fishing platform located a short distance down the trail from the Trailer Field.

14. The Department designated the “Peekamoose Valley Riparian Corridor” area in 2016. This designated area includes the Blue Hole and Peekamoose Camping Area and is further defined as the portion of State owned lands located within 300 feet on either side of the centerline of the Rondout Creek, beginning at the State land boundary where it crosses Ulster County Route 42 southwest of the Lower Field Parking Area, thence heading northeast for approximately 3.75 miles, ending with the State land boundary at UC 42, approximately 1 mile east of the Buttermilk Falls parking area. See Section IV.G for Special Regulations that apply to this area.
15. A kiosk was constructed and installed to educate the public on the Peekamoose Valley Riparian Corridor Special Regulations along the path leading into the Blue Hole along Peekamoose Road (Ulster County Route 42). The kiosk contains a map of the area, emergency numbers, rules and regulations including regulatory restrictions, general information, as well as information about keeping New York City’s drinking water clean.

d. Issues

Numerous issues are of concern to the public and the Department in the Peekamoose Valley section:

1. Overuse and Permit System Implementation

Beginning in the summer of 2015, use of the area referred to as the “Blue Hole” increased significantly over previous years. Public use skyrocketed along with human waste, refuse, fires, broken glass, and an overwhelming of the parking areas which spilled out along Peekamoose Road. The Town of Denning was concerned with the road not being passable by emergency service vehicles due to blockage with illegally parked cars and the sheer number of visitors walking and standing in the road. Special Regulations were developed in 2016 to address issues stemming from overuse of the area. These special regulations were modified in 2018 to include a permit requirement.

In the summer of 2018, the permit system was implemented in the Peekamoose Valley Riparian Corridor. The Department will adjust permit numbers as necessary to ensure resource protection and user satisfaction. The day-use

V. Sundown Wild Forest Projected Use and Management

permit will only be required for the Peekamoose Valley Riparian Corridor upstream of the camping areas on the Rondout Creek (County highway bridge upstream to and including the Blue Hole and on to the State boundary line, a 2-mile stretch of the Rondout Creek). Permits are available at Reserve America at: <https://newyorkstateparks.reserveamerica.com/>

2. Camping within 150 feet of water

To protect water quality, prevent stream bank erosion, and allow all visitors equal access to the stream, the Department has promulgated rules and regulations prohibiting indiscriminate camping within 150 feet of water. The Peekamoose Valley is a relatively narrow and steep-sided valley which affords very few natural camping sites that are 150 feet or more from road, trail or water. In fact, most of the sites presently in use in the valley are within 150 feet of the water. Elimination of all campsites within 150 feet of road, trail or water would all but eliminate camping within the valley. DEC has the authorization to designate sites within 150 feet of road, trail or water. Only sites designated by the Department may be used in this area.

3. Human Waste Disposal

DEC currently contracts, on an annual basis, 6 port-a-johns that are spread out through the 4 fields in the camping area. These port-a-johns are maintained weekly to provide visitors with proper sanitation facilities. Sanitation problems still exist due to the units filling with garbage, vandalism, and refusal by some visitors to use them. In addition to the campsites, public use of the Blue Hole has increased exponentially, causing significant damage to the resource through excessive garbage and human waste left behind.

4. Garbage Disposal

Until recently, garbage disposal had improved with the removal of the garbage pits and placing of the “Carry In-Carry Out” signs throughout the valley. Currently, garbage is left behind in the campsites and the parking areas, especially after holiday weekends. In recent years, garbage has become a major problem in and around the Blue Hole. Garbage left behind detracts from the area and can cause unsanitary conditions. It also attracts animals such as bears and raccoons to the area, further scattering the garbage and raising the potential for wildlife and human conflicts to occur.

5. Parking and Pedestrian Use of County Route 42

In the past, the demand for parking exceeded the available parking, especially during the popular summer holiday weekends such as Memorial Day and Labor Day. Currently, the demand for parking far exceeds the available parking on weekends from mid-May through Labor Day weekend. The current parking demand is strictly for access to the Blue Hole. Recreationists wishing to utilize this popular swimming area are now utilizing any available space for parking, including areas more than a mile away from the Blue Hole. This situation presents at least two problems. First, it undermines the intent of the parking areas which were sized to limit use of the area to an appropriate number of visitors. Secondly, it creates a public safety hazard as pedestrians use a section of County Route 42 that has limited visibility to access the Blue Hole because there is no designated trail from the remote parking areas to the swimming area.

The Department has considered several trail and parking proposals to provide a safer route for the public to travel to the popular swimming area. Four alternative management scenarios have been considered and a preferred alternative has been identified. The alternative management scenarios are provided in detail in Appendix I. Alternative Analysis.

6. Alcohol and Drug Abuse

Although alcohol and drug use in this area was more problematic during the 1970s and early 1980s, problems still arise due to overindulgence, especially on holiday weekends. Currently, there are no laws or regulations prohibiting the use of alcohol on Forest Preserve lands. Increased patrols by law enforcement agencies are necessary on busy weekends to curb inappropriate behavior.

7. Use of Motorized/Power Equipment

Generators, chainsaws, water pumps, radios, electric guitars and other types of motorized or power equipment are commonly utilized by campers in the valley. The noise created by motorized/power equipment disrupts the wild character of the area and can disturb other campers. Special regulations for Peekamoose Valley Riparian corridor prohibit radios and audio devices and portable generators. Motorized vehicles are prohibited beyond the designated parking areas.

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8. Use of Firearms

Some campers bring and use firearms in the camping area, often for hunting or target shooting purposes. The practice of target shooting can endanger the safety of others nearby if done carelessly and can cause damage to trees, which often are used as targets. There are few rules or regulations regarding the use of firearms on Forest Preserve lands. Firearms cannot be used on lands designated as intensive use. They also cannot be used for indiscriminate shooting, including the defacing of trees, rocks or another flora or fauna. Firearms are allowed during all open seasons as defined in New York State Hunting Regulations.

9. Rope Swings

The erection of rope swings, especially at the Blue Hole, is an ongoing management problem for the Department. Because of the hazard associated with these rope swings, the Department must remove them as soon as they are found on State land.

10. Malloy Parcel Classification

The Malloy Parcel was an in holding that was acquired in 2015 and will be classified as wild forest in accordance with the CPSLMP through the completion and adoption of the Sundown Wild Forest/ Vernooy Kill State Forest UMP. This property increases contiguous habitat proximity to Stone Cabin Brook.

e. Proposed Projects

1. Construct a new parking lot south of County Route 42 and east of Bear Hole Brook large enough for 30-40 cars to accommodate most Blue Hole users on an average day. Connect the parking area to the Blue Hole through construction of a 1,500-foot accessible trail. The established lot will include two parking spaces that meet accessibility standards. An accessible port-a-john will be provided at the parking lot. (An alternative analysis for various management options for addressing public safety concerns at the Blue Hole is provided in Appendix I.)
2. Enforce the Peekamoose Valley Riparian Corridor Special Regulations and Blue Hole Permit Requirement. Details are provided in Section IV. F. Special Regulations on page 138.

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3. Convert all existing primitive campsites at the “Trailer Field” to accessible campsites and rename the “Trailer Field” as the “Peekamoose Accessible Camping Field”.
4. Continue to monitor the designated campsites (currently 35) for adverse impacts. Campsites which exceed the thresholds that will be established through the Limits of Acceptable Change (LAC) process will be subject to management actions which may include: permanent closure, temporary closure for site rehabilitation purposes, or they may be utilized on a rotating basis with other sites to allow for a continual rehabilitation and improvement of all sites.
5. The 6 campsites at the Trailer Field will continue to be by permit only. The local Forest Ranger will issue camping permits and inform potential visitors that use of the area will remain on a first come, first served basis.
6. Maintain accessible facilities located in the trailer field in accordance with established standards and guidelines.
7. Monitor the Peekamoose Valley for rope swings and ensure that they are removed immediately and maintain the access trail to the Blue Hole for safe public access.
8. Maintain the 2 trail registers located on this section of the Long Path so that public use can be estimated. Monitor this section of trail for potential erosion problems, especially in Bull Run where the trail ascends Bangle Hill. Sections of this trail may need additional water control structures or require a short re-route in the future.
9. Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Lower Field. Without this bridge, crossing the creek would prove difficult for users, likely putting more pressure on the other 3 fields.
10. Maintain all parking areas, kiosks, gates, and barriers to ensure that inappropriate use of the Forest Preserve is discouraged.
11. Supply sanitary facilities such as port-a-johns to aid in the protection of the natural resources. Sanitary facilities have been increased from 6 to 8 port-a-johns in the Peekamoose Valley Riparian Corridor. Two were added in the spring of 2016 at the Peekamoose/Table Trailhead to help alleviate unsanitary conditions found at the Blue Hole.
12. Maintain all signage in the area, especially the “Carry In-Carry Out” signs to discourage litter. Garbage should be removed immediately from the area upon sight or notification. Studies have shown that if an area looks neat upon arrival by potential visitors, they are less likely to leave their own refuse when they vacate the area. This rapid response for garbage removal also helps deter unwanted visitors such as black bears and raccoons from getting a “reward” for

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visiting the campsites. This helps to reduce wildlife - human conflicts that can occur. The department has installed two seasonal bear proof dumpsters. One located at the Peekamoose/Table Trailhead (within a short distance of the path leading to the Blue Hole) and a second at the Lower Field parking area. This was done to curtail the extreme amount of garbage being left behind in this area. The Department will continue to provide these seasonal refuse containers on an annual basis or as needed.

13. Visitors arriving in groups of 10 or more will need to obtain a camping permit from the local Forest Ranger. Camping permits will only be issued for groups up to 20. Groups larger than 20 may be accommodated through a Temporary Revocable Permit (TRP) issued by the department. Group camping need to be monitored to ensure environmental degradation does not occur or falls within the parameters set through the LAC process. In addition, any person/group of any size wishing to camp at the same location for more than 3 nights must obtain a camping permit from the local Forest Ranger.
14. Enforce the signage and laws pertaining to public parking of vehicles along Peekamoose Road in cooperation with the Town of Denning and local law enforcement agencies. This road must remain open for the traveling public as well as emergency service vehicles. Parking will be limited to the designated parking areas which are sized and designed for the carrying capacity of the area.

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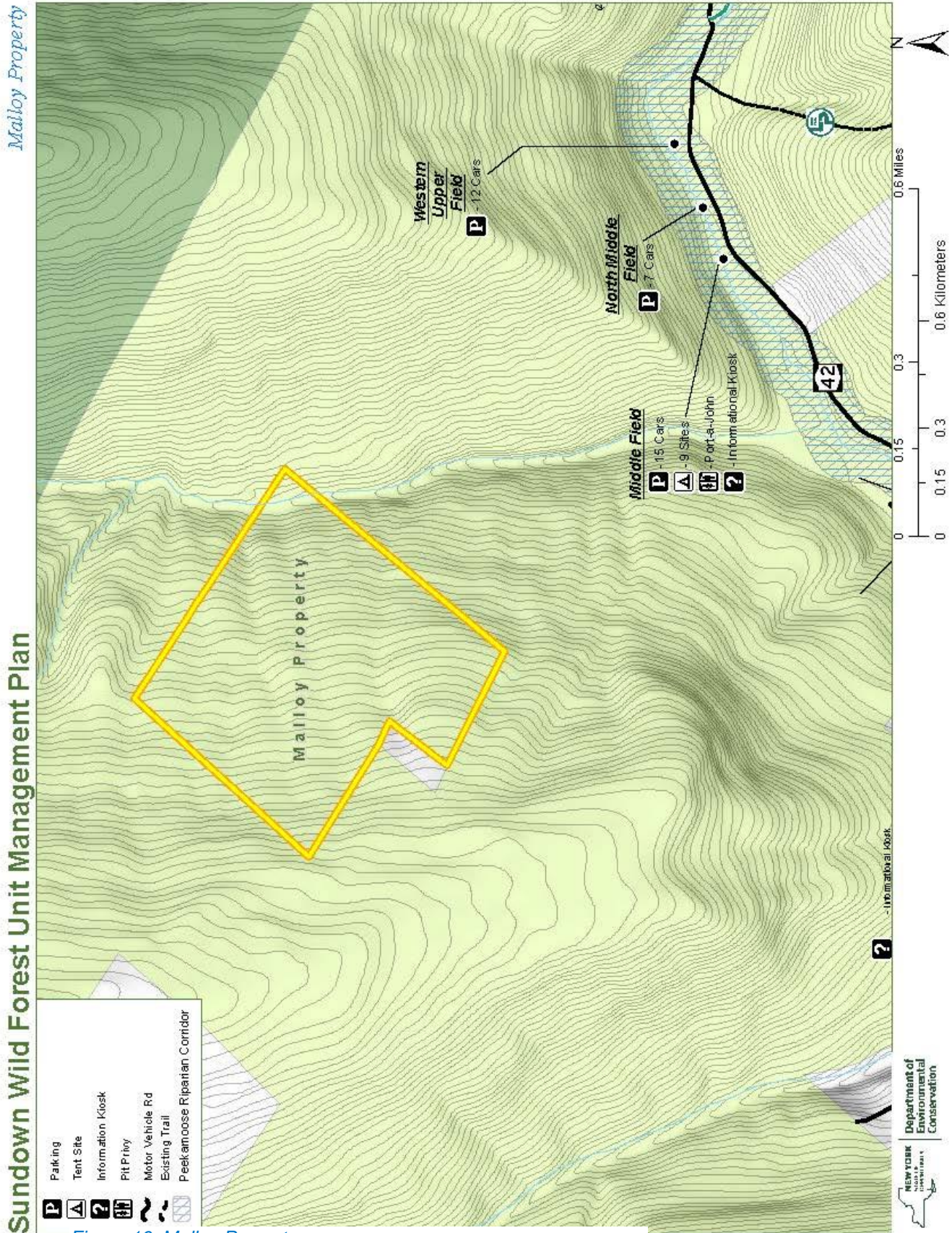


Figure 16. Malloy Property map

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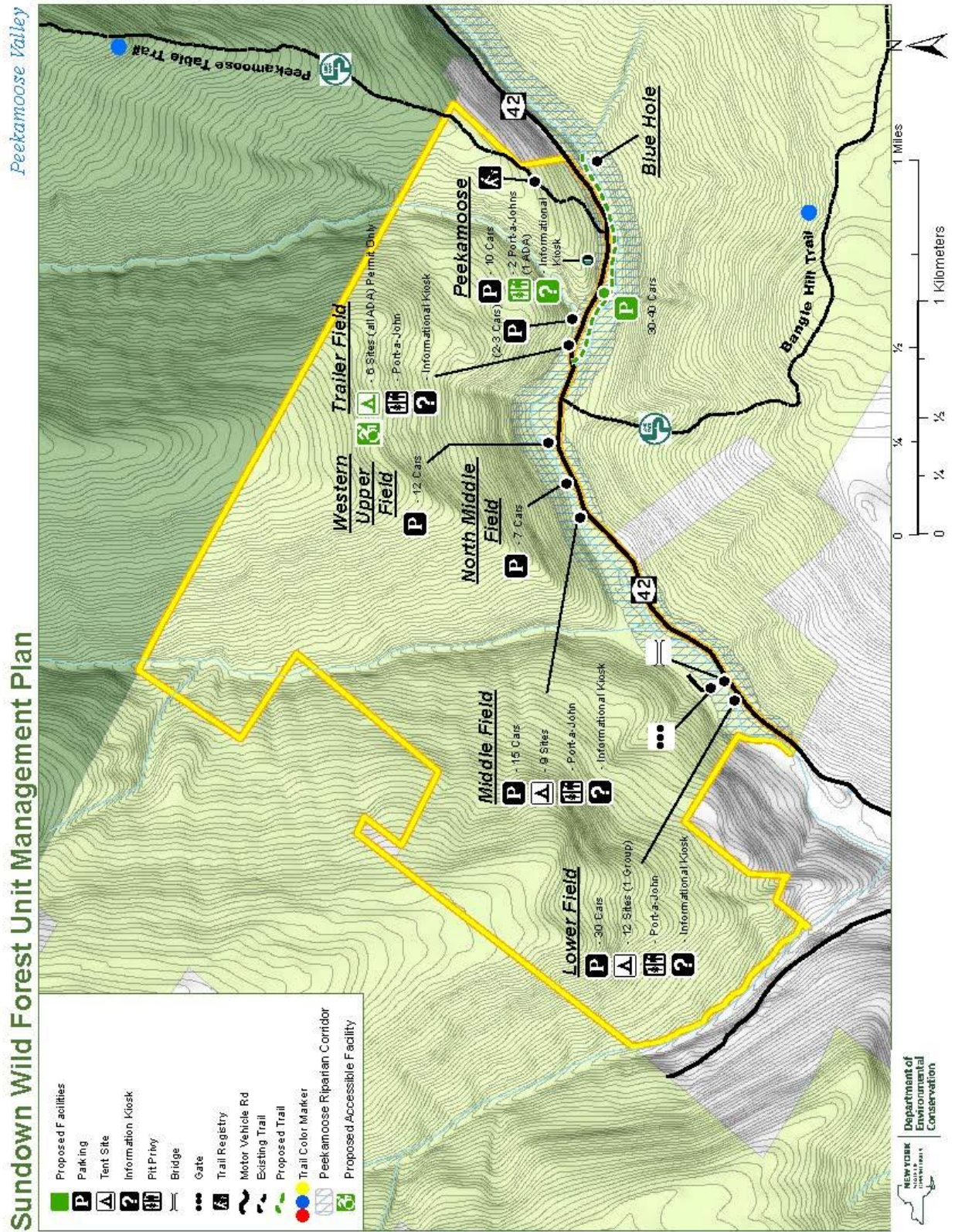


Figure 17. Peekamoose Valley Map

VI. Vernooy Kill State Forest Management and Projected Use

The public land comprising the Vernooy Kill State Forest plays a unique role in the landscape. The Vernooy Kill State Forest can generally be described as follows:

- A large, publicly owned land area;
- Managed by professional Department of Environmental Conservation foresters;
- Green certified jointly by the Forest Stewardship Council and the Sustainable Forestry Initiative (SFI);
- Set aside for the sustainable use of natural resources, and;
- Open to recreational use.

Any management actions will ensure the sustainability, biological diversity and protection of functional ecosystems and optimize the ecological benefits that these State lands provide, including the following:

- Maintenance/increase of local and/or regional biodiversity
- Response to shifting land use trends that affect habitat availability
- Mitigation of impacts from invasive species
- Response to climate change through carbon sequestration and habitat, soil and water protection

The management proposals contained within the Vernooy Kill State Forest section of this unit management plan are based on a long-term vision for this State asset. This section addresses management activities for the next ten years, though some management recommendations will extend beyond the ten-year period. Factors such as wood product markets, and forest health problems may necessitate deviations from the scheduled management activities.

Legal Considerations

Article 9, Titles 5 and 7, of the Environmental Conservation Law authorize the Department to manage lands outside of Adirondack and Catskill State Parks. The management includes watershed protection, production of timber and other forest products, recreation and kindred purposes.

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For additional information on the Departments rights and responsibilities, please review the statewide Strategic Plan for State Forest Management (<http://www.dec.ny.gov/lands/64567.html>). Refer specifically to pages 33 and 317.

DEC's Management Approach and Goals

Forest Certification of State Forests

In 2000, New York State DEC's Bureau of State Land Management received Forest Stewardship Council (FSC)[™] certification under an independent audit conducted by the National Wildlife Federation SmartWood Program. This certification included 720,00 acres of State Forests in DEC Regions 3 through 9 managed for water quality protection, recreation, wildlife habitat, timber and mineral resources (multiple-use). To become certified, the Department had to meet more than 75 rigorous criteria established by FSC. Meeting these criteria established a benchmark for forests managed for long-term ecological, social and economic health. The original certification and contract were for 5 years.

By 2005, the original audit contract with the SmartWood Program expired. Recognizing the importance and the value of dual certification, the Bureau sought bids from prospective auditing firms to reassess the Bureau's State Forest management system to the two most internationally accepted standards - FSC and the Sustainable Forestry Initiative (SFI)[™] program. However, contract delays and funding shortfalls slowed the Department's ability to award a new agreement until early 2007.

The Department was again audited for dual certification against FSC and SFI program standards on over 762,000 acres of State Forests in Regions 3 through 9. This independent audit of State Forests was conducted from May until July 2007, with dual certification awarded in January 2008.

State Forests continue to maintain certification under the most current FSC and SFI standards. Forest products derived from wood harvested off State Forests from this point forward may now be labeled as "certified" through chain-of-custody certificates. Forest certified labeling on wood products may assure consumers that the raw material was harvested from well-managed forests.

The Department is part of a growing number of public, industrial and private forest land owners throughout the United States and the world whose forests are certified as sustainably managed. State Forests can also be counted as part a growing number of working forest lands in New York that is third-party certified as well-managed to protect

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habitat, cultural resources, water, recreation and economic values now and for future generations.



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FSC® C002027



Ecosystem Management Approach

State Forests on this unit will be managed using an ecosystem management approach which will holistically integrate principles of landscape ecology and multiple use management to promote habitat biodiversity, while enhancing the overall health and resiliency of the State Forests.

Ecosystem management is a process that considers the total environment, including all non-living and living components, from soil micro-organisms to large mammals, their complex interrelationships and habitat requirements and all social, cultural and economic factors. For more information on ecosystem management, see SPSFM page 39 <http://www.dec.ny.gov/lands/64567.html>.

Multiple-use Management

DEC will seek to simultaneously provide many resource values on the unit such as fish and wildlife, wood products, recreation, aesthetics, minerals, watershed protection and historic or scientific values.

Landscape Ecology

The guiding principle of multiple use management on the unit will be to provide a wide diversity of habitats that naturally occur within New York, while ensuring the protection of rare, endangered and threatened species and perpetuation of highly ranked unique natural communities. The actions included in this plan have been developed following an analysis of habitat needs and overall landscape conditions within the planning unit (i.e. the geographical area surrounding and including the State Forests) the larger ecoregion and New York State.

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Ecosystem Management Strategies

The following strategies are the tools at DEC's disposal, which will be carefully employed to practice landscape ecology and multiple-use management on the unit. The management strategy will affect species composition and habitat in both the short and long term. For more information on these management strategies, please see SPSFM page 81 (<http://www.dec.ny.gov/lands/64567.html>).

Passive Management

DEC foresters will employ passive management strategies through the designation of natural and protection areas, and buffers around those areas, such as along streams, ponds and other wetlands, where activity is limited.

Silviculture (Active Management)

DEC foresters will practice silviculture, the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands, in an effort to promote biodiversity and produce sustainable forest products. There are two fundamental silvicultural systems which can mimic the tree canopy openings and disturbances that occur naturally in all forests- even-aged management and uneven aged management. Each system favors a different set of tree species. In general, even-aged management includes creating wide openings for large groups of trees that require full sunlight to regenerate and grow together as a cohort, while uneven-aged management includes creating smaller patch openings for individual trees or small groups of trees that develop in the shade but need extra room to grow to their full potential.

State Forest Management Goals

Goal 1 – Provide Healthy and Biologically Diverse Ecosystems

Ecosystem health is measured in numerous ways. One is by the degree to which natural processes are able to take place. Another is by the amount of naturally occurring species that are present, and the absence of non-native species. No single measure can reveal the overall health of an ecosystem, but each is an important part of the larger picture. The Department will manage State Forests so that they demonstrate a high degree of health as measured by multiple criteria, including the biodiversity that they support.

Goal 2 – Maintain Man-made State Forest Assets

Man-made assets on State Forests include structures, boundary lines, trails, roads and any other object or infrastructure that exists because it was put there by people. Many of these items need no more than a periodic check to make sure they are still in working order. Others need regular maintenance to counteract the wear of regular use. The Department intends to ensure that all man-made items on State Forests are adequately maintained to safely perform their intended function.

Goal 3 – Provide Recreational Opportunities for People of all Ages and Abilities

State Forests are suitable for a wide variety of outdoor recreational pursuits. Some of these activities are entirely compatible with one another, while others are best kept apart from each other. Equally varied are the people who undertake these activities, as well as their abilities, and their desire to challenge themselves. While not all people will be able to have the experience, they desire on the same State Forest, the Department will endeavor to provide recreational opportunities to all those who wish to experience the outdoors in a relatively undeveloped setting.

Goal 4 – Provide Economic Benefits to the People of the State

ECL §1-0101(1) provides in relevant part that “It is hereby declared to be the policy of the State of New York to conserve, improve and protect its natural resources and environment and to prevent, abate and control water, land and air pollution, to enhance the health, safety and welfare of the people of the state and their overall **economic** and social well-being.” (Emphasis added) In considering all proposed actions, the Department will attempt to balance environmental protection with realizing potential economic benefit.

Goal 5 – Provide a Legal Framework for Forest Conservation and Sustainable Management of State Forests

Staff must have clear and sound guidance to direct their decisions and actions. Likewise, the public must have clear information regarding what they are and are not allowed to do on State Forests. Both of these are provided by well-written laws, regulations and policies. The Department will work to improve existing legal guidance that has proved to be inadequate and create new guidance that is needed but does not yet exist.

Information on the Vernooy Kill State Forest

The Vernooy Kill State Forest consists of 3,660 acres of land located immediately outside the Catskill Park “Blue Line” boundary which directly abuts the Sundown Wild Forest. This area was once part of the former Lundy Estate owned by restaurateur Frederick William Irving Lundy, owner of the famed F.W.I.L. Lundy Brothers Restaurant in Sheepshead Bay. A portion of the former Lundy Estate was acquired by the State in 2001 and all acquired lands located within the blue line of the Catskill Park became part of the Forest Preserve. About 1,102 acres were added to the Vernooy Kill section of the Sundown Wild Forest. The remaining 3,660 acres of the former Lundy Estate acquired by the State outside the Catskill Park boundaries became the Vernooy Kill State Forest. Much of this land saw periods of active farming as well as the harvesting of timber and use by other forest related industries such as sawmills and hoop shavers from the late 1700s through the 1900s.

A web page has been developed for Vernooy Kill State Forest which features a map of the facility with recreational information and natural features

(<http://www.dec.ny.gov/lands/106434.html>).

High Conservation Value Forests

High Conservation Value Forests (HCVFs) are those portions of State Forests which have known high conservation values that the Department feels should take precedent over all other land use and management decisions. HCVFs may not be identified on every Unit and State Forests that have a designated HCVF will not necessarily have multiple classifications. Areas that are identified as having exceptional values may be managed for timber, wildlife and/or recreation, however management activities must maintain or enhance the high conservation values present.

Currently, HCVFs are assigned to one or more of five land classifications, four of which may be found on State Forests:

Rare Community - Forest areas that are in or contain rare, threatened or endangered ecosystems.

Special Treatment - Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, and refugia).

Cultural Heritage – Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and are critical to their traditional cultural identity

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(areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Watershed - Forest areas that provide safe drinking water to local municipalities.

Forest Preserve* - Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.

*Forest Preserve lands are located inside both the Adirondack and Catskills Park Blue line. Although Forest Preserve is not considered State Forest, they offer a significant high conservation value for lands managed by the Department.

Portions of the Vernooy Kill State Forest have been identified as having high conservation value. There are 405 acres of Special Treatment HCVF on Vernooy Kill State Forest. For more information on HCVFs please go to <http://www.dec.ny.gov/lands/42947.html>.

Soils

Soils provide the foundation, both figuratively and literally, of forested ecosystems. They support an immense number of microorganisms, fungi, mosses, insects, herpetofauna and small mammals which form the base of the food chain. They filter and store water and also provide and recycle nutrients essential for all plant life. For information on DEC's policies for the protection of forest soils, as well as water resources please see the soils map on page 237 or the SPSFM page 108 at <http://www.dec.ny.gov/lands/64567.html>. Additional soils information for this unit is also provided in Section IV. C.(2). Soils series descriptions are listed in Appendix G.

Water Resources

DEC's GIS data contains an inventory of wetlands, vernal pools, spring seeps, intermittent streams, perennial streams, rivers and water bodies on the unit. This data is used to establish special management zones and plan appropriate stream crossings for the protection of water resources.

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Table 15. Water Resources in Vernooy Kill State Forest		
Watersheds		
Hydrologic unit(s)		Vernooy Kill-Rondout Creek, Peterskill-Rondout Creek
Wetlands		
All Wetlands		143.3 ac.
Streams/Rivers *		
Perennial streams/rivers	AA or A	1.2 mi.
	B	0 mi.
	C	0 mi.
	D	0 mi.
Trout streams/rivers	AA (T), A (T), B (T) or C (T)	5.1 mi.
Water Bodies		
Water bodies (open-water ponds and lakes)		13.8 ac.

*For information regarding stream classifications please refer to <http://www.dec.ny.gov/permits/6042.html>. Additional water resource information is provided in Section IV. (C)(1). Stream and water classification descriptions are included in Appendix H.

Biodiversity

Information regarding biodiversity has been gathered to support the following goals:

- “Keep Common Species Common” by maintaining landscape-level habitat diversity and a wide variety of naturally occurring forest-based habitat as well as managing plantations according to DEC natural resources policy.
- Protect, and in some cases, manage, known occurrences and areas with potential to harbor endangered plants, wildlife and natural communities.
- Consider other “at-risk species” whose population levels may presently be adequate but are at risk of becoming imperiled due to new incidences of disease or other stressors.

Common Species

The following information sources indicate which common species (among other species) are present over time:

NYS Breeding Bird Atlas Block Numbers 5462A, 5462B, 5462D

Breeding Bird Atlas blocks can be searched at <http://www.dec.ny.gov/cfmx/extapps/bba/>

Herp Atlas Block Numbers: Kerhonkson, Rondout Reservoir

Herp Atlas information on amphibians, toads, frogs, turtles, lizards and snakes can be found at <http://www.dec.ny.gov/animals/7140.html>

Game Species Harvest Levels WMU Numbers: 3C

(Deer take, bear take, turkey harvest, etc.) (Refer to Section II. (I). (3). Carrying Capacity of Wildlife Resources of the plan for species take information, as well as Appendix D for Breeding Bird Atlas Species information).

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Habitat

The following information provides several representations of habitat types on the unit:

Vegetative Types and Stages

Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	Other	
Natural Forest Hardwood	-	2,443.9	948.5	-	95.1%
Plantation	-	-	-	16.5	0.5%
Open/ Brush	-	-	-	73	2.1%
Other	-	-	-	66.5	1.9%
Ponds	-	-	-	3	0.1%
Total (Acres)	-	2,458.7	948.5	159	100%

Representative Sample Areas

Representative Sample Areas (RSA) are stands which represent common ecological communities (i.e. forest types) of high or exceptional quality in their natural state. RSAs are setup to serve one or more of the following purposes:

To establish and/or maintain an ecological reference condition; or

To create or maintain an under-represented ecological condition (i.e. includes samples of successional phases, forest types, ecosystems, and/or ecological communities); or

To serve as a set of protected areas or refugia for species, communities and community types not captured in other protection standards such as an endangered species or a High Conservation Value Forest.

RSAs can simply be viewed as an effort to keep high quality examples of common ecosystems or assemblages from becoming rare in the landscape. An RSA designation does not prevent future management and in certain cases might require silvicultural treatment to achieve site conditions that will perpetuate the representative community.

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In addition, treatment of an RSA to mitigate unfavorable conditions that threaten the continuation of the target community will be allowed (ex. fire, natural pests or pathogens). Although allowed, silvicultural treatment or infrastructure development should not impact the RSA in a way that will degrade or eliminate the viability of the specific assemblage or community. For more information on RSAs please go to <http://www.dec.ny.gov/lands/42947.html>.

Table 17. RSAs and Rare Community HCFVs within the Unit				
Community Name	Vegetative Type	Facility Name / Stand Numbers	NYNHP Rank	Acreage
Representative Sample Areas of Commonly Occurring Natural Communities				
Chestnut Oak Forest	Special Treatment Area	Ulster 08 Vernooy Kill SF	S4G5	405
Rare Community HCFV				
Timber Rattlesnakes	Rare Community	Ulster 08 Vernooy Kill SF	S3G4	6.0

Resource Protection Areas

In the course of practicing active forest management, it is important to identify areas on the landscape that are either reserved from management activity or where activity is conducted in such a manner as to provide direct protection and enhancement of habitat and ecosystem functions. For more information on these protective measures, see SPSFM page 85 at <http://www.dec.ny.gov/lands/64567.html>.

Special Management Zones (SMZs) provide continuous over-story shading of riparian areas and adjacent waters, by retaining sufficient tree cover to maintain acceptable aquatic habitat and protect riparian areas from soil compaction and other impacts. DEC's buffer guidelines also maintain corridors for movement and migration of all wildlife species, both terrestrial and aquatic. Buffers are required within SMZs extending from wetland boundaries, high-water marks on perennial and intermittent streams, vernal pool depression, spring seeps, ponds and lakes, recreational trails, campsites and other land features requiring special consideration. For more information regarding

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Special Management Zones please see www.dec.ny.gov/sfsmzbuffers.pdf. A map of Special Management Zones is provided on page 239.

The identification of large, unfragmented forested areas, also called matrix forest blocks, is an important component of biodiversity conservation and forest ecosystem protection. In addition, securing connections between major forested landscapes and their imbedded matrix forest blocks is important for the maintenance of viable populations of species, especially wide-ranging and highly mobile species, and ecological processes such as dispersal and pollination over the long term.

Maintaining or enhancing matrix forest blocks and connectivity corridors must be balanced against the entire array of goals, objectives and demands that are placed on a particular State Forest. Where matrix forest block maintenance and enhancement is chosen as a priority for a given property, management actions and decisions should emphasize closed canopy and interior forest conditions. The following areas have been identified to meet demands at the landscape level:

Matrix Forest Block 3,432.22 acres

The majority of the lands within the Unit fall within either a Forest Matrix Block or a Connectivity Corridor. Forest Matrix Blocks are identified as large unfragmented forested areas. These areas are considered important for conservation and biodiversity protection. Connectivity Corridors are forested pathways between Forest Matrix Blocks that allow for the efficient movement of species between the blocks. Maintaining the integrity of the Forest Matrix Block and their Connectivity Corridors while also perpetuating a species that is dependent upon heavy disturbance such as oak can be challenging but entirely feasible. Various techniques utilized to mimic natural overstory such as “feathering” hard edges and using various levels of retention within the harvested area can serve to regenerate these forests while maintaining their role within the context of the forested landscape.

More information regarding Matrix Forest blocks, connectivity corridors and associated management considerations can be found in the SPSFM page 85 at <http://www.dec.ny.gov/lands/64567.html>.

At-Risk Species

The presence of at-risk species and communities on the Vernooy Kill State Forest and in the surrounding landscape has been investigated to inform appropriate management actions and protections. This investigation was conducted in development of this UMP

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and the associated inventory of State Forest resources. A more focused assessment will be conducted before undertaking specific management activities in sensitive sites. Appropriate protections may include reserving areas from management activity or mitigating impacts of activity. For more information on protection of at-risk-species, please see SPSFM page 115.

Investigation included the following:

- A formal plant survey was conducted on this Unit in the spring of 2005 by the New York Natural Heritage Program.
- Element Occurrence Records for the New York Natural Heritage Program’s Biological and Conservation Data System were consulted for information.
- Consultation of NHP species guides.
- Consultation of the NY State Wildlife Action Plan (2015).

Table 18. At-Risk Species *				
Species Name	NYNHP Rank	Habitat	Record Source	NYS Status
Confirmed or Predicted within the Unit				
Timber Rattlesnake	S3	Rocky, Hardwood Forests	Herp Atlas	Threatened, SGCN
Queen Snake		Coniferous	SGCN	
Northern Goshawk		Northern Deciduous	BBA, SGCN	Protected-Special Concern
Eastern Box turtle	S3	northern deciduous	Herp atlas	
Wood Turtle	S3	Small streams, springs, and seepages	Herp atlas	
Snapping Turtle	NR	Permanent wetlands	Herp atlas	
Coal skink		Shrub swamp	Herp atlas	

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Eastern ribbonsnake	S4	Aquatic woodland edges	Herp atlas	Protected-Special Concern
Frosted elfin		Mixed woodlands	Herp atlas	Protected-Special Concern
Henry's elfin		Deciduous	Herp atlas	Protected-Special Concern
Silvery blue	S1S2	Pitch-pine oak forest		
American Black Duck	S3B, SNRN	Perennial wetlands	BBA	SGCN HP, Game Species
Whip-poor-will	S4	Coniferous, Mixed woodland	BBA	Special Concern
Osprey	S5	Large waterbodies, wetlands	BBA	Protected-Special Concern
Bald Eagle	S4	Coniferous, Mixed Woodland	BBA	Protected, Threatened
Gold Eagle		Open Grasslands	CWCS	Threatened
Black ratsnake			Herp	Special Concern SGCN
Black-Throated Blue Warbler	S3	Mixed Woodland, Forested Wetland	BBA	Special Concern SGCN
Bicknell's Thrush	NR	Alpine, summit	BBA	Special Concern

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				SGCN
Canada warbler	S2	Mixed Woodland	BBA	Special Concern SGCN
Cerulean warbler	S3	Deciduous Forest	BBA	Special Concern SGCN
Common Nighthawk	S2S3B	Woodlands, Farmlands, suburban areas	BBA	Special Concern, SGCN HP
Cooper's hawk	S4	Interior Woodlands	BBA	Special Concern, SGCN
Eastern red bat	S5B, SZN	Woodlands	NYS CWCS	SGCN
Four-toed salamander	NR	Vernal pools	Herp Atlas	SGCN
Hoary bat	S4B	Woodlands	NYS CWCS	SGCN
Louisiana water thrush	NR	Woodland mountain streams		
Northern black racer	S4	Shrublands, woodland openings	Herp Atlas	Special Concern
Northern copperhead	S3	Rocky woodlands	Herp Atlas	Protected-Special Concern
Queen Snake	NR	Coniferous Forest	SGCN	SGCN
Blue-winged warbler		Deciduous Forest	BBA	SGCN

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Grasshopper sparrow	S3B	Grassland, Old Field	BBA	SGCN
Henslow's sparrow	S3B	Grassland, Old Field	BBA	SCGN
Horned lark	S3S4B	Open Fields	BBA	Special Concern, SGCN HP
Short-eared owl			BBA	
Short-headed garter snake	NR	Mixed Forest	Herp Atlas	SGCN
Northern red salamander	S3S4	Small streams, springs, and seepages	Herp Atlas	SGCN
Prairie Warbler	S5	Shrublands	BBA	SGCN
Pied Billed Grebe	S3B, S1N G5	Wetlands	BBA	<i>Threatened</i>
Red-shouldered hawk	S4B, SZN	Interior Woodlands	BBA	Special Concern
Ruffed grouse	S5	Early Successional	BBA	SCGN, Game Species
Sedge wren	S3B	Wetlands	BBA	Special Concern SGCN
Long-eared owl	NR	Woodlands	BBA	Special Concern SGCN

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Sharp-shinned hawk	S4	Interior Woodlands	BBA	Special Concern SGCN
Scarlet tanager	S5B	Deciduous Woodlands	BBA	Special Concern SGCN
Silver-haired bat	S4B SZN	Woodlands	NYS CWCS	SGCN
American woodcock	S3	Shrublands, Wetlands, Disturbed areas	BBA	Special Concern SGCN
Black-billed cuckoo	S5B	Woodlands	BBA	SGCN
Bobolink	S5B	Grasslands	BBA	SGCN HP
Brown thrasher	NR	Shrublands	BBA	Special Concern SGCN
Worm-eating warbler	S4	Woodland understory	BBA	Special Concern SGCN

**Defined as NYNHP rank S1, S2, S2-3, G1, G2 or G2-3 OR identified as an SGCN
Additional species information can be found in Appendix C. Wildlife*

Key to Codes

BBA- Breeding Bird Atlas

(CONF)-Confirmed

(PRED)- Predicted Species

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Status

E-Endangered (New York)

T-Threatened Species (New York)

PSC-Protected, Special Concern Species (New York)

SGCN-Species of Greatest Conservation Need

Visual Resources

The aesthetic quality of State Forests is considered in management activity across Vernooy Kill State Forest. However, some areas have greater potential to preserve or create unique opportunities for public enjoyment. Scenic areas of significance are inventoried below. For information on the protection of visual resources please see SPSFM page 81 at <http://www.dec.ny.gov/lands/64567.html>.

Few panorama type vistas are found within the Vernooy Kill State Forest. Several of the higher ridges offer glimpses of views, especially after leaf drop. A nice view of the Vernooy Kill valley can be had from the height of land north of the Terwilliger Farm Road and east of Lundy Road. This view is from a rock outcrop (located just north of the State Forest/Wild Forest boundary) and gives the viewer a glimpse of the valley as it descends towards Wawarsing.

Many spectacular local views are found along the Vernooy Kill, especially at the swimming hole and plunge pool located off the southeastern corner of the long, narrow Dunlop Farm field and a short distance from the old Burhan's Farmstead. The former airstrip offers views of the surrounding ridges and leads visitors to the Brownville pond, a peaceful site where one can view waterfowl such as wood ducks and geese. Several wetlands are found south of the privately held Lyons Lake offering outstanding opportunities to view wildlife such as waterfowl and the great blue herons that inhabit the area.

Historic and Cultural Resources

Details on the historic and cultural resources within Vernooy Kill State Forest are provided in Section II. (B). of this plan.

Real Property

DEC's Bureau of Real Property GIS system contains maps and some deeds for State Forest properties. Original deeds were also consulted to complete the information provided in this plan. Please refer to Section I.C.1 of this plan for easement information and Section IV. (D).(14). for boundary line maintenance goals, objectives and schedules.

Land Acquisition

Acquisition of property from willing sellers on the landscape surrounding Vernooy Kill Falls may be considered in the following priority areas:

1. Inholdings and adjoining properties that would reduce management costs and benefit resource protection and public access goals.
2. The mineral estate whenever it is split from a State Forest tract.
3. Properties within identified matrix forest blocks and connectivity corridors.
4. Forested lands in underserved areas of the State.
5. Forested lands that need watershed protection.
6. The Department is currently in the process of acquiring an additional 33 acres of land along the banks of the Vernooy Kill that will extend northward to the other side of Lundy Road and consolidate two small detached parcels of the Vernooy Kill State Forest with the main body of the property. This will provide additional access to Vernooy Kill State Forest from Lundy Road and fishing access to the Vernooy Kill. This pending acquisition is shown on the Recreation Map for Vernooy Kill State Forest. This parcel will consolidate two small detached parcels of Vernooy Kill State Forest and provide additional road front access to Vernooy Kill State Forest.

Infrastructure

State Forests are managed with a minimal amount of improvements to accommodate rustic, forest based recreational opportunities while providing for resource protection; public health and safety; and access for individuals of all ability levels. Minimal development is in harmony with the open space and ecological goals of these lands, which are of increasing importance, as the surrounding landscape continues to be subdivided and, in some cases, developed. Forest management can provide the main means of public and administrative access to a State forest unit.

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Roads initially built for the removal of forest products are often utilized by the public for recreational access. Costs associated with the building and maintenance of these roads can be substantial and, in some cases, be borne by the timber harvester. This tradeoff can ultimately save the state money and resources. The roads built during a harvest are the greatest and longest-lasting impact associated with forest management. Pre-harvest planning by a DEC Forester is necessary to minimize any negative impacts these roads can have on the environment. Poorly planned roads can be susceptible to erosion and costlier to maintain. More importantly, erosion associated with these roads could impact water quality by introducing sediment into streams. DEC Foresters will be intimately involved in the planning and use of the forest roads within Vernooy Kill State Forest. All roads will utilize NYS Best Management Practices to minimize their impacts upon the resources of the forest and provide public recreational access for many years. Vernooy Kill State Forest has an extensive network of roads that were created by the previous landowner's management activities and perpetuated through the illegal use of ATVs on the property. Many sections of these roads were not built to the standards which State Land Managers strive for when they design a road system and have subsequently fallen into disrepair. In these cases, a DEC Forester will install erosion controls or even close some sections and re-route the road so that it fulfills the mission of the State forest. Road and trail information is provided for Vernooy Kill State forest in Section IV.D of this plan.

For more information on infrastructure policies and general guidelines, please see SPSFM page 157 at <http://www.dec.ny.gov/lands/64567.html>.

Recreation

Recreation is a major component of planning for the sustainable use of State Forests. DEC accommodates diverse pursuits such as snowmobiling, horseback riding, hunting, trapping, picnicking, cross country skiing, bird watching, geocaching, hiking and mountain biking. Outdoor recreation opportunities are an important factor in quality of life. We often learn to appreciate and understand nature by participating in these activities. However, repeated use of the land for recreational purposes can have significant impacts. For further discussion of recreational issues and policies, please see SPSFM page 187 at <http://www.dec.ny.gov/lands/64567.html>. Recreational maps and geographic data are available at DEC's Mapping Gateway <http://www.dec.ny.gov/pubs/212.html>

Mineral Resources

Oil, Gas and Solution Mining Exploration and Development

Oil and gas production from State Forest lands, where the mineral rights are owned by the State, are only undertaken under the terms and conditions of an oil and gas lease. As surface managers, the Division of Lands and Forests will evaluate any concerns as they pertain to new natural gas leases on State Forest lands. Consistent with past practice, prior to any new leases, DEC will hold public meetings to discuss all possible leasing options and environmental impacts. A comprehensive tract assessment will be completed as part of this process. For more information on natural gas and other mineral resource policies, please see SPSFM page 225 at <http://www.dec.ny.gov/lands/64567.html>. Currently, there are no existing or planned leases on Vernooy Kill State Forest.

Mining

There are no mining contracts, permits, or operations located within the limits of any of the State and Wild Forests associated with this Unit. Under Article 7 of the New York consolidated Laws/Public Lands, any citizen of the United States may apply for permission to explore and/or extract any mineral on State lands. However, current Department policy is to decline any commercial mining application(s) associated with lands in this Unit. Any mine operated over the regulatory threshold of 750 cubic yards or 1,000 tons of material removed within any 12 successive calendar months is subject to jurisdiction under the Mined Land Reclamation Law and requires a New York State mining permit.

Most of the mines in this part of New York are small and are operated by the towns or local construction companies. Although there are no active mines within the lands associated with the Sundown Wild Forest and Vernooy Kill State Forest Unit, there are two sand and gravel facilities located within four miles southwest of the westernmost portion of Sundown Wild Forest and ten sand and gravel mines located within five miles to the south and east of Vernooy Kill State Forest. There is also a bluestone quarry, a couple of shale quarries, and a limestone quarry located within five miles to the east of Vernooy Kill State Forest. No other consolidated material quarries exist within five miles of the unit.

Supporting Local Communities

State Forests can be an economic asset to local communities that surround them. It is estimated that more than three out of every four Americans participate in outdoor recreation of some sort each year. When they do, they spend money, generate jobs, and support local communities. For more information, please see SPSFM page 245 at <http://www.dec.ny.gov/64567.html>.

Taxes Paid

The New York State Real Property Tax Law provides that all reforestation areas are subject to taxation for school and town purposes. Some reforestation areas are also subject to taxation for county purposes. Most unique areas and multiple use areas are exempt from taxation. All of these lands are assessed as if privately owned.

2017 Taxes paid for Vernooy Kill State Forest (incl. highway, general, fire taxes, etc):
\$31,754:

- Total School Tax: \$112,581
- Total County Tax: 0
- Special District Taxes: \$6,552

Summary of Eco-Region Assessments

To practice ecosystem management, foresters, must assess the natural landscape in and around the management unit. State Forest managers utilized The Nature Conservancy Eco-Region Assessments to evaluate the landscape in and around this management unit. The Vernooy Kill State Forest falls within two eco-regions; the New York Allegheny High Plateau and just over 200-acres crosses into the Lower New England/Lower Piedmont ecoregions.

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Table 19. Land Use and Land Cover for the Landscape Surrounding Vernooy Kill State Forest

Land Use and Land Cover	Approximate Acreage	Percent of Landscape
Mixed Forest	1,058,257	12.2
Agriculture	1,925,078	22.1
Conifer Forest	591,826	2.9
Deciduous Forest	4,093,324	47
Developed lands	406,261	8.6
Shrub and Brush lands	186,258	2.1
Open Water	91,564	1.1
Forested Wetlands	253,798	2.9
Non-Forested wetlands	19,066	0.2
Grasslands	72,418	0.8
Barren lands	11,559	0.1
Total	8,709,409	100

High Allegheny Plateau Ecoregion

The High Allegheny Plateau (HAP) Ecoregion is located along the southern tier of New York and the northern tier of Pennsylvania (Zaremba and Anderson et. al. 2003). It includes a small portion of New Jersey. Well known features in HAP include the Catskills, The Shawangunks, The Kittatinny Ridge, The Poconos, Allegany State Park, Allegheny National Forest, and a large mass of Pennsylvania state-owned land. The HAP ecoregion is defined by high elevation features at the northern end of the Appalachian Plateau. Most of the ecoregion is above 1,200 feet. The general land form of the area is mid-elevation hills separated by numerous narrow stream-cut valleys. One of the main features of the ecoregion is an abundance of rivers and streams. The Delaware, Susquehanna and Allegheny rivers and their many tributaries cover the entire ecoregion. The Delaware River drains into Delaware Bay; the Susquehanna River flows into the Chesapeake Bay; the Allegheny River flows into the Ohio River and eventually into the Mississippi River. These three different drainages contribute to the high overall aquatic diversity in the ecoregion. The northern and eastern portions of the ecoregion were glaciated, while the southwest portion was not. Many northern species and communities reach their southern limit in the HAP, while many southern species

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extend into the ecoregion but not beyond. Species and communities associated with glaciated landforms occur in the north and east; biodiversity associated with older substrate and deeper erosional soils occurs in the southwest. Another prominent feature of the ecoregion is its currently low population density, although major population centers are nearby. The overall population trend in HAP indicates that people are moving out of the ecoregion with the notable exception of the areas within reach of New York City by major highways. There are large and significant managed areas in the HAP, including three large, intact forested areas: the Catskills, the Allegheny National Forest/Alleghany State Park complex, and the Pennsylvania state land in central Pennsylvania.

Lower New England/ Northern Piedmont Ecoregion

The Lower New England- Northern Piedmont Eco-Region includes portions of 12 states and the District of Columbia (Barbour et al. 2000). The Lower New England ecoregion extends from southern Maine and New Hampshire, with their formerly glaciated, low mountain and lake studded landscape through the limestone valleys of Western Massachusetts and Connecticut, Vermont and eastern New York. Rhode Island, eastern Massachusetts and Connecticut are distinctive in that the communities are more fire adapted, including pitch pine and oak dominated forests on glacially deposited sandy till that forms a broad plain with many ponds. In New York, the LNE-NP Ecoregion consists primarily of the Hudson Valley region from below Lake George, south to New York City.

Local Landscape Conditions

Local landscape level conditions are evaluated by comparing local land cover conditions with an Eco-Regional GAP Analysis performed by the Nature Conservancy to identify land cover gaps within New York State. While 200 acres of Vernooy Kill State Forest is within the Lower New England Northern Piedmont Ecoregion, most the Sundown Unit Management Plan is within the Alleghany High Plateau Eco-region. It is the focus on this plan to discuss the local landscape conditions and discuss how those conditions relate to the High Alleghany Plateau Ecoregion.

Early Successional Forest

Shrub and brush land are listed as needed across all ecoregions within the State. Vernooy Kill State Forest is lacking adequate early successional forest cover. Early successional forest or young forest is included within this land cover type. Forest

management to regenerate even-aged stands will improve early successional cover. Seedling/sapling land cover which is included in early successional land cover type will be improved through normal forest management actions.

Grasslands/Shrub

Grassland and shrub habitat are limited within the Eco-region, but historically on a landscape level assessment of the New York Alleghany Plateau Ecoregion grasslands were a geographically isolated occurrence. While these two land cover types are separate within the Eco-Regional Assessment Gap Analysis, management on Vernooy Kill State Forest will focus on maintaining grassland/shrub or old field habitat through the adoption of a mowing schedule.

Mixed Forest

57% of Vernooy Kill State Forest falls within the mixed forest land cover type well above the Eco-Regional Assessment. This cover type will be stable or slightly decrease as white pine becomes established in many forest stands where significant white pine regeneration is present in the understory. Mixed forest land cover type will be stable or slightly decrease within Vernooy Kill State Forest.

Deciduous Forest

Deciduous forest land cover is listed as adequate for the High Alleghany Plateau ecoregion. Vernooy Kill State Forest is significantly below the Eco-regional assessment with only 24% (844 acres) in deciduous forest land cover. Deciduous forest cover is expected to decrease within Vernooy Kill State Forest where stand conditions favor white pine. The decrease in deciduous forest cover will result in an increase in evergreen and mixed forest land cover types. Where conditions favor deciduous forest stand cover types management will continue to focus on maintaining deciduous forest land cover and improve existing forest stands.

Evergreen Forest

The High Alleghany Plateau Eco-Regional Assessment lists evergreen forest land cover as, “potentially needed”, representing only 2% of the total acreage within this region. Evergreen forest cover and hardwood-evergreen forest cover types are well represented within Vernooy Kill State Forest. Approximately 3.5% (124.6 acres) within Vernooy Kill State Forest are evergreen forest land cover type. This includes both

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natural regeneration and artificial (planted) evergreens. Management actions will focus on maintaining and improving evergreen forest land cover type with appropriate forest management activities.

Wetlands

Both herbaceous and forested wetlands are listed as needed within the Alleghany High Plateau ecoregion. Both forested and herbaceous wetlands are present on Vernooy Kill State Forest approximately 143 acres or 4% of the total land cover on the property, above the Eco-regional assessment. Protecting existing wetlands is the only feasible management action, since creating wetlands is not a feasible management action.

Forest Products

Timber

Timber management provides a renewable supply of sustainably-harvested forest products and can also enhance biodiversity. The products harvested may include furniture quality hardwoods, softwoods for log cabins, fiber for paper making, firewood, animal bedding, wood pellets, biofuel and chips for electricity production. For more information, please see SPSFM page 251 at <http://www.dec.ny.gov/lands/64567.html>.

Information on upcoming timber expected to be produced from timber management activities on the unit is contained in the land management action schedules. The authority to sell forest products from Department administered lands is provided by the Environmental Conservation Law. To perpetuate the growth, health and quality of the forest resources, the Department has implemented a sustained yield timber management program for State Forest lands.

- Forest stands being considered for timber harvesting are selected based on the following criteria:
- Adequate access;
- Wildlife considerations;
- Present and future forest health concerns (including invasive plants and pests);
- Current distribution of vegetative stages within the unit management land area and surrounding landscape, including the eco-regional habitat gaps as per the Strategic Plan for State Forest Management;
- Ability to regenerate stands (if a regeneration harvest);

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- Existing timber and vegetation management needs from other unit management plans;
- Market conditions;
- Potential growth response of stands to treatment;
- Presence of rare, threatened and endangered species and unique natural communities.

By law, any trees to be removed in a harvest must be designated and paid for prior to removal. Designation (marking) of trees is made by DEC forestry staff. After designation is completed, a fair market appraisal is conducted. No products may be sold at less than the fair market value. Forest stands are selected for harvest based on the criteria outlined above, and the desired future conditions identified by this Unit Management Plan.

The Environmental Conservation Law requires that different procedures are employed based on the appraised value of a timber sale. Sales that are appraised greater than \$10,000 are called revenue sales and sales that are appraised at less than \$10,000 are known as local sales. Revenue sales contracts must be approved by DEC's Central Office staff, and revenue sale contracts valued at \$25,000 or more must be approved by the Office of the State Comptroller. The Regional Forester has the authority to execute local sale contracts. All sales valued at more than \$500 (and those less than \$500 which are thought to have substantial public interest) are publically advertised and competitively bid.

Forest Health

Forest health is pursued with the goal of maintaining biodiversity. Any agent that decreases biodiversity can have a deleterious effect on the forest and its ability to withstand stress. Forest health in general should favor the retention of native species and natural communities or species that can thrive in site conditions without interrupting biodiversity. For more information on forest health, please see SPSFM page 277 at <http://www.dec.ny.gov/lands/64567.html>.

Invasive Species

As global trade and travel have increased, so have the introduction of non-native species. While many of these non-native species do not have adverse effects on the areas in which they are introduced, some become invasive in their new ranges, disrupting ecosystem function, reducing biodiversity and degrading natural areas.

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Invasive species have been identified as one of the greatest threats to biodiversity, second only to habitat loss. Invasive species can damage native habitats by altering hydrology, fire frequency, soil fertility and other ecosystem processes.

Table 20. Invasive Species, Pests and Pathogens	
Plants	Status
Japanese Barberry	Observed within the Unit.
Multi-Flora Rose	Observed within the Unit.
Tree of Heaven	Observed within the Unit.
Japanese Stiltgrass	Observed within the Unit.
Oriental Bittersweet	Observed within the Unit.
Insects	Status
Hemlock Woolly Adelgid	Observed within the Unit.
Emerald Ash Borer	Observed within the Unit.
Southern Pine Beetle	Confirmed in Ulster County. Not observed within the Unit.
Diseases	Status
Chestnut Blight	Observed within the Unit.
Beech Bark Disease	Observed within the Unit.
Dutch Elm Disease	Confirmed in all Counties containing the Unit. Observed within the Unit.
Animals	Status
None	

For management policies pertaining to invasive species refer to Section IV. C. 5 of this plan.

*The above list includes some of the more commonly occurring species within the Unit or species that are considered an immediate threat to the forests within the Unit.

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DEC will act to eradicate invasive species where and when it is feasible to do so. Certain invasive pests and diseases are impossible to eradicate while others can be contained if they are managed early in the establishment process. All accepted forms of Integrated Pest Management may be used to mitigate the ecological and economic impacts associated with these pests when possible. DEC will continue to work cooperatively with Federal, State and local governments as well as other interested organizations in managing invasive threats.

Managing Deer Impacts

There is limited ability to manage deer impacts using silvicultural systems. The most effective method of keeping deer impacts in line with management objectives is to monitor impacts while working with the Division of Fish, Wildlife and Marine Resources to observe and manage the herd. On properties where deer are suspected of impacting values and objectives associated with biodiversity and timber management, such impacts must be inventoried and assessed. For more information on managing deer impacts, please see SPSFM page 291 at <http://www.dec.ny.gov/lands/64567.html>.

Preliminary assessments conducted during our forest inventory process of State Lands within the unit indicate that deer density levels are not having an adverse impact on the ability of the forest to regenerate. This is primarily since all DEC lands within the unit are open to public hunting and there has been an abundance of antlerless deer management permits available for the Wildlife Management Units (WMU) containing the subject parcels. DEC has and will continue to monitor deer impacts within the Vernooy Kill State Forest and take more aggressive action if necessary. Actions available are specified in the Strategic Plan for State Forest Management (SPSFM). These actions include efforts to increase hunter access, work within the deer management task force process to adjust antlerless harvest within the WMU, and instituting a property specific deer reduction program using deer hunting as the primary tool of implementation.

Fire Management

Statewide, fire currently plays a small role in shaping New York's forests, but in some areas it is an ever-present danger. In some ecological regimes, it is a necessary component. Some natural communities are dependent on fire for renewal and growth.

Fire management on State Forest lands will entail the suppression of fires, both natural and human-induced, as well as the application of prescribed fire under appropriate conditions. The goal of this is to maintain fire-replicated natural communities and prevent extreme fire danger that could threaten natural and human communities. The

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cumulative impact related to suppression of fire over time can lead to excessive fuel loads that can be dangerous in drought conditions. Maintaining the presence of fire in appropriate areas can keep fuel loads in check. For more information on the Departments policy and guidelines for fire management on State Forest lands please see SPSFM page 308 at <http://www.dec.ny.gov/lands/64567.html>.

Several fires have occurred in this area. The two most recent fires involved a 175-acre fire on the east side of Lundy Road and north of the Terwilliger Farm access road in 1999. A second fire occurred in 2002 and burned about 130 acres off of the nearby Baker Road, located to the east of the Lundy/Cherrytown Ridge.

Current Management Issues

1. The Vernooy House was damaged by fire in early spring of 2019. The building poses a health and safety risk to the public.
2. ATV and 4-wheel drive vehicles continue to plague the Vernooy Kill State Forest. These vehicles access the forest through town roads, logging roads, power line rights of way and through private lands and are causing erosion problems in many of these areas.
3. Administrative and public access is difficult in many areas due to the presence of the Vernooy Kill. Several crossings no longer exist, making access to the west side difficult during periods of high water. The Cutler Road Bridge was washed out in a flood event, as was the crossing in Potterville. Only the old abutments exist at former crossings such as the Dunlop Farm access road and the crossing at Brownville. Without improved crossings, management of this State Forest for timber, wildlife and recreational purposes will be difficult.
4. Four (4) inholdings are found within this section. Common boundary lines between the State and these 4 parcels need to be monitored to ensure encroachments do not materialize. Two (2) of these parcels are subject to conservation easements with the Department, which need to be monitored for compliance.
5. The boundary between the Vernooy Kill State Forest and the adjacent Sundown Wild Forest has not been marked. This boundary needs to be marked to clearly distinguish between the 2 types of State Land, each having distinctly different management objectives. The Vernooy Kill State Forest will receive more active management. Marking of the boundary will help educate users regarding the differences between the two areas.

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6. There are no formally marked and maintained public parking areas. Currently, visitors park wherever they want and in some instances, cause damage through rutting and trampling of vegetation.
7. There are no formal trails or trailheads in this section of the unit. A request has been made for foot trails, including the Long Path, as well as snowmobile, equestrian, and mountain bike trails to be created. See map on page 223 for an illustration of the proposed Long Path relocation.
8. Protected species, such as the eastern timber rattlesnake, are found in high numbers in this area. All facilities and proposed management activities need to consider the presence of this species.
9. A survey of all the exterior boundary lines has not been done by the Department. The Department has posted signs along where the boundaries are currently understood to be. In many cases, the posters were put well inside of the presumed boundaries. These boundaries need to be surveyed, blazed and painted to discourage encroachments from private lands.
10. Public use of the swimming hole located southeast of the Dunlop Farm Field can be extensive during the summer months. At times, trash has been left behind along with broken bottles. Use of this area needs to be monitored.
11. An old building, likely a former hunting shack, is found on the ridge on the west side of the Vernooy Kill, north of the pull-off on State Route 55. This structure is in poor condition and is considered an attractive nuisance on State land. This structure will be removed.
12. Trash is an ongoing problem along Cutler Road, spilling over into the gravel pit and the end of Philips Road. Truckloads of trash need to be removed from these sites. Additional patrols are needed to curb this problem.
13. A small cemetery is found off of the south side Rouge Harbor Road. This cemetery contains the graves of Jacob Turner Jr. and his wife, Sally, the original occupants of the Turner farmstead. Jacob's headstone dates begin with May 24, 1786 and end with January 28, 1870. Descendants of the Turner family continue to maintain this cemetery.
14. Informal Target shooting in the gravel pit near Cutler Road has led to overuse issues and littering. This use is incompatible with the parking lot proposal number one listed on page 224 of this plan. The Department will sign the immediate area surrounding the proposed parking lot against target shooting. Areas outside of the Cutler road gravel pit area will remain open to target shooting at this time. The Department may re-evaluate the need to further restrict target shooting should it cause natural resource degradation or become a safety risk.

Summary of Completed Projects in Vernooy Kill State Forest

1. Six (6) gates were installed by DEC at the following locations to prevent unauthorized motor vehicle access:
 - Phillips Road at junction with Cutler Road.
 - Gravel pit entrance from Cutler Road.
 - Power line access road at junction with Lundy Road.
 - Dunlop Farm access road at junction with Lundy Road.
 - Terwilliger Farm access road at bridge crossing near former house site.
 - Lundy Road at Potterville, just before the Potterville Bridge (This gate was destroyed by vandals immediately after installation. Soon after, a flood removed the 3-culvert stream crossing, eliminating the need for replacement of the gate.).
2. Large rocks were placed at various locations to prohibit unauthorized motor vehicle access. Areas such as Terwilliger Farm, Potterville and numerous logging roads were damaged from ATVs and 4-wheel drive vehicles. Boulders were placed to discourage such use.
3. A large culvert pipe located on Lundy Road north of the Lundy Estate bridge but south of the Terwilliger Farm access road was collapsing and in poor condition, creating a hazard for visitors traveling up this section of Lundy Road. The Town of Wawarsing was contacted to see if they planned to replace it. The Department was informed that the Town had no funds to replace this structure, however, the Town would give permission to the Department to replace the culvert if the State deemed this action necessary.
4. The Department replaced this culvert, spanning a tributary of the Vernooy Kill, with a bottomless concrete arch through a Job Order Contract (JOC) during the summer of 2007. This section of Lundy Road was closed to the public for motorized use for much of the summer. The replacement of this culvert has allowed Lundy Road to reopen and continue to serve as public access to the Terwilliger Farm and Potterville areas.
5. Since State acquisition, pheasants have been stocked in several areas, including the Vernooy House field, Dunlop Farm field, Brownville, the old airstrip and the Terwilliger Farm site. The larger fields are strip mowed, with 1/3 mowed each year. This allows for various stages of succession to occur and is beneficial to game and non-game species alike. (Mowing schedule details are provided in Table 26 on page 250 of the plan).

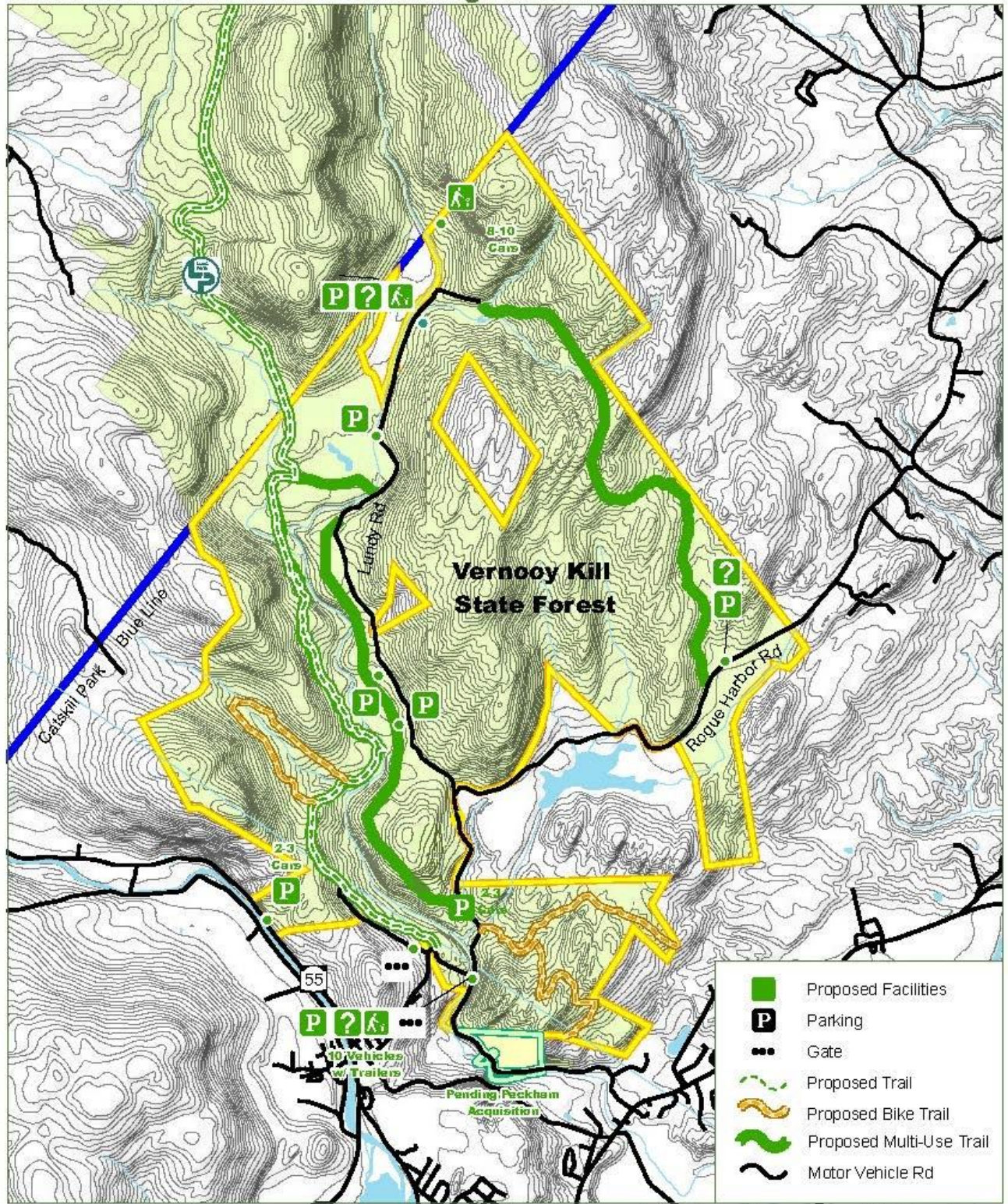
VI. Vernooy Kill State Forest Management and Projected Use

6. Firewood sales are allowed and have occurred on this section of State Forest. Visitors wishing to purchase firewood can do so under contract with the Department. Firewood is sold by the cord under local sales contracts and allows the holder of a contract to cut down and remove trees marked by State foresters. The trees marked for removal are done so as part of improving the residual stand.
7. A large amount of trash was removed from along Cutler Road, the end of Philips Road and from within the gravel pit.
8. The state is currently in the process of acquiring the adjoining Peckham property (approximately 33 acres) that will provide access to the Vernooy Kill and connect two detached parcels of State Forest land to the rest of Vernooy Kill State Forest. This will improve access to the Vernooy Kill and increase road front access to Vernooy Kill State Forest.

VI. Vernooey Kill State Forest Management and Projected Use

Sundown Wild Forest Unit Management Plan

Vernooey Kill State Forest



Vernooy Kill State Forest Management and Project Proposals

The project proposals outlined below for Vernooy Kill State Forest are designed to rectify the management issues outlined above.

** Project 1 was previously described in the Vernooy Kill Falls section (Section V. 3) of this plan, and is predominantly located in the Vernooy Kill State Forest section. Project 1 is repeated here in the Vernooy Kill State Forest section for clarity and continuity of description of the proposed reroute of the Long Path.*

Trail Proposals

1. Re-route the Long Path by removing it from the public highways. The Long Path currently follows State Route 209 to Lundy Road to Rogue Harbor Road to Upper Cherrytown Road to the DEC parking area at Upper Cherrytown Road. This project is described in conjunction with projects proposed and described in Section V. Vernooy Kill State Forest.

The Long Path will now be routed up Lundy Road in the Town of Wawarsing and will cross over to the west side of the Vernooy Kill Stream on the Cutler Road Bridge. The trail will then turn north and enter the proposed Cutler Road Parking Area and will head northwest across the gravel pit where it will join with Phillips Road. Phillips Road is a dirt road which services the Vernooy Kill State Forest as an access road and is gated at its junction with Cutler Road to prevent unauthorized motor vehicle access. The Long Path will follow Phillips Road north for about one mile to the north end of the old field area where the access road to the former Dunlop Farm crosses the Vernooy Kill. The Long Path will then continue on Phillips Road past the old Dunlop Farm site. Here the road gains elevation on its route north towards Brownville. At Brownville, the trail needs to gain the height of land on the west side of the airstrip for the trip north to Vernooy Kill Falls. This may require either a route across the airstrip and potential switch backs from the airstrip to the height of land or routing the trail on the old jeep trail which leads from Brownville to Sholam (Mechler Road) to a point where the trail can then turn north for a gradual ascent up the ridge leading towards Vernooy Kill Falls. The trail will continue north beyond the Catskill Park Blue Line boundary. This boundary defines the end of the Vernooy Kill State Forest and the beginning of the Vernooy Kill Falls section of the Sundown Wild Forest. The trail will travel north, west of the ridge, where it will join the Greenville section of the existing

VI. Vernooy Kill State Forest Management and Projected Use

snowmobile trail on the west side of the upper Vernooy Kill Falls. This section of the proposed relocation of the Long Path from State Route 209 north to Vernooy Kill Falls will be about 10 miles. This proposed trail will enhance the existing Vernooy Kill Falls snowmobile trail and will provide a viable trail system of about 20 miles for all users of this trail. The Long Path at this location will be a DEC marked and maintained multi-use trail, and will include the use of snowmobiles. The trail leading from the Upper Cherrytown Road Parking Area up to Vernooy Kill Falls will no longer be marked as part of the Long Path, but will remain a DEC marked and maintained multi-use trail. The Long Path will cross the West Branch of the Vernooy Kill, as well as other tributaries to the Vernooy Kill Stream, and may require bridges at several locations.

2. A multiple-use trail will begin from the proposed Cutler Road Parking Area near the intersection of Cutler Road and Lundy Road. This trail will share the old Phillipstown Road with the proposed Long Path up to the former Dunlop Farm field complex. At the northern end of the Dunlop field, the proposed multi-use trail will split from the Long Path. This section of the proposed multiple use trail will be built to ADA specifications to provide access across the Vernooy Kill to the Brownsville Pond area. The multiple use rail will cross the Vernooy kill using a foot bridge built on the existing bridge abutments near the Brownsville pond.
3. A multiple use trail will be built between the East bank of the Vernooy Kill and west of Lundy Road. The trail will begin at the proposed parking lot on the former Van Steenberg Farm and use the existing logging road. This trail will continue along the existing logging road north until it reaches the utility line corridor where new trail will have to be constructed. This trail will end in the recent log landing along the west side of Lundy Road. The two proposed multiple use trails will provide an additional trail loop opportunity for people willing to walk portions of Lundy and Cutler Road.
4. The existing bicycle trail that connects Lippman Park to Vernooy Kill State Forest will be formalized. If necessary, portions of new trail will be constructed to avoid steep grades or poorly drained areas along the existing skid roads that are currently being used to access Vernooy Kill State Forest from Lippman Park.
5. Formalize the existing skid road that splits from the trail connection to Lippman park described in the above trail proposal. This trail will be a designated mountain bike trail and provide access to a scenic view of an open wetland east of Vernooy Kill State Forest. This trail will become a popular destination for hikers and bicycle riders.
6. A loop bicycle trail will be constructed that runs west of the proposed multi-use trail/long path bypass along the Old Phillipstown Road. This trail will include

portions of existing old skid road and will require a bridge to cross an unnamed intermittent tributary of the Vernooy Kill.

7. A multiple use trail will be constructed beginning at the Terwillger Farm Cul-de-sac and head south to Rouge Harbor Road. This trail will be accessed by following the existing Lundy Road from the proposed parking lot at the end of the maintained portion of Lundy Road. This trail will begin at the former Twerliger Farm and head east through the old barn site where it will pick up remnants of an old road. The trail will continue east past the small beaver ponds as it ascends to the saddle on the ridge near the State boundary. Here, the trail will turn south toward Rouge Harbor Road. This trail can also be accessed via the proposed parking areas along Rouge Harbor Road.
8. Pending Public access to Colony Farm, the Department will work with partner organizations to develop a trail connection to the former prison farm. The Department will evaluate the feasibility of any potential future trail connections to support long distance trail corridors.

Parking Area Proposals

Parking areas are proposed in the following locations to enhance and disseminate public access:

1. A large parking area, capable of handling 20 vehicles with trailers, will be constructed within the gravel pit located near the bridge on Cutler Road. Once the Cutler Road Bridge has been replaced by Ulster County, this parking area will serve as one of the main accesses to the proposed trails listed in numbers 1 and 2 above. The immediate area surrounding the Cutler Road Parking lot will be posted against target shooting to address safety concerns.
2. A 2-car parking area will be built on the informal access located on the north side of State Route 55, west of the Cutler Road intersection. This parking area will provide general access to the southern-most portion of the Vernooy Kill State Forest.
3. A 2-3 car parking area will be constructed on the log landing near the former site of the Van Steenberg Farm.
4. Construct a 6-8 car parking area on the north side of Rouge Harbor Road near the Norway spruce planting at the former Jacob Turner, Jr. farmstead. This parking area may also serve as a trailhead for the trail proposed in #4 above in the trail proposal section. The road located beyond this proposed parking area will need to be appropriately blocked to prohibit motor vehicle trespass.

VI. Vernooy Kill State Forest Management and Projected Use

5. A 4-car parking area will be located at the informal site currently being used on the west side of Lundy Road adjacent to the power line. This parking area will utilize the old schoolhouse foundation that was filled to grade after demolition.
6. A 2-car pull-off will be established in front of the Vernooy House, located on the west side of Lundy Road, just north of the gated Dunlop Farm access road. Boulders will be used to define this parking area and a gate installed on the north side of the house to prohibit unauthorized motor vehicle access to the Vernooy Farm field. This gate will allow for administrative access for maintenance of the farm field. A 4-car parking area will be constructed on the west side of Lundy Road, across from the airstrip, north of the old bridge abutments leading to Brownville. An informal parking area already exists at this location, providing access to the airstrip on the west side of the Vernooy Kill and points east. Parking will be developed on the east side of the Lundy Road cul-de-sac opposite of the Lundy estate and will accommodate 8-10 cars. Secure the Vernooy House from public access by installing perimeter fencing.. Evaluate the historic significance of the Vernooy House and its structural stability. A fire damaged the building and it currently poses a health and safety risk to the public. Pending a final evaluation by Department Engineers and the New York State Office of Historic Preservation, the building will be secured to make the surrounding area safe for the public.
7. A cable gate exists on the west side of Lundy Road, just north of the Vernooy House. This cable will be replaced with a gate to prohibit unauthorized motor vehicle access. This gate will allow for administrative access for forest management activities.

Trail Register Proposals

1. Along the proposed Long Path, just north of the Cutler Road parking area at the gravel pit.
2. Along the proposed loop trail (see # 3 above) from the Terwilliger Farm to Potterville. A likely location would be on the west side of Lundy Road along the section of trail from Lundy Road to the Vernooy Kill.
3. Along the multi-use trail described in # 4 above in the trail proposal section. A good location may be near the beaver ponds, east of the Terwilliger Farm field.

Informational Kiosk Installation Proposals

1. Install an informational kiosk at the proposed Cutler Road Parking Area.
2. Install an informational kiosk at the end of the maintained portion of Lundy Road parking area.

Accessible Project Proposals

1. Construct an accessible trail to the Brownville Pond area using portions of the proposed multi-use trail and Vernooy Kill foot bridge.

Boundary Line Maintenance, Monitoring Proposals

1. Survey, blaze, paint and post all boundary lines.
1. Post the boundary line between the Vernooy Kill State Forest and the Sundown Wild Forest.
2. Monitor all inholdings for encroachments. Ensure all conservation easements are monitored frequently to insure compliance.
3. Post signs at all woods road entries from private lands prohibiting ATV and unauthorized motor vehicle use.

Facility Removal and Maintenance Proposals

1. Evaluate the historic significance and structural stability of the Vernooy House. Pending a final evaluation by Department Engineers and the New York State Office of Historic Preservation, the area surrounding the Vernooy House will be made safe for the public.
2. Remove hunting shack remains located on a ridge west of the Vernooy Kill, north of the Route 55 pull-off.
3. An electric pole and transformer is located at the Potterville parking area. This pole and transformer will be removed.

Remove the 4 large culvert pipes, remnants of the stream crossing at Potterville, from the stream bank and haul away for scrap or re-use at another project site.

Ecosystem Management

Table 21. Management Objectives and Action Table

Ecosystem Management Objectives and Actions	
Objective	Actions
Active Forest Management	
AFM I – Apply sound silvicultural practices	Forest Management actions are based on forest inventory and Silvicultural guides. All management actions follow guidelines set forth in the SPFPM.
AFM II – Use harvesting plans to enhance diversity of species, habitats & structure	See table 21, 22, 23 for the treatment schedule for all forest management activities.
AFM III – Fill ecoregional gaps to maintain and enhance landscape-level biodiversity	Maintain old field/shrub land habitat by following the mowing treatment schedule in table 24.
AFM IV – Enhance matrix forest blocks and connectivity corridors where applicable	<p>Vernooy Kill State Forest falls within the Panther Mountain matrix block.</p> <p>Even-aged management activities are focused on regenerating forest. Species composition and current stand structure not appropriate for uneven-age management.</p> <p>Where appropriate un-even aged forest management will maintain closed forest canopy conditions.</p> <p>Grass/shrub land management will focus on maintaining and not converting Forest stands to non-forest habitats.</p>
AFM V – Practice forest and tree retention on stands managed for timber	All Timber harvests follow State Forest Retention Guidelines.
HCVF- Identify and maintain HCVFs	Chestnut Oak Forest RSA will be monitored and where feasible maintained by even age treatments. Chestnut Oak Forest is a disturbance dependent ecosystem.

Resource Protection

Resource Protection Objectives and Actions	
Objective	Actions
Soil and Water Protection	
SW I – Prevent erosion, compaction and nutrient depletion	Best Management Guidelines are followed for timber harvesting and trail construction
SW II – Identify and map SMZ's and adapt management for highly-erodible soils	SMZ's are identified and mapped during the planning process for any management activities.
At-Risk Species and Natural Communities	
ARS I – Protect ARS&C ranked S1, S2, S2-3, G1, G2 or G2-3 where present	Timber Rattlesnakes: Before undertaking any trail construction, timber harvesting, prescribed fire or mowing within 1.5 miles of a known rattlesnake den location between April 1 to October 31, consult with Bureau of Wildlife staff to review proposed action for potential impacts to timber rattlesnakes or critical habitat as prescribed in DEC's guidelines
ARS II – Conduct habitat restoration and promote recovery of declining species	Maintain old field/shrub habitat, refer to table 24.
ARS III - Consider protection and management of Species of Greatest Conservation Need	Refer to protection actions listed in ARS I for Timber rattlesnakes. Any potential management activities to improve habitat conditions for Species of Greatest Conservation Need will be coordinated with wildlife and follow guidelines set forth in the SPSFM.
Visual Resources and Aesthetics	
VR I – Maintain or improve overall quality of visual resources	Coordinate with the Town of Wawarsing, and Volunteers to assist with the removal of litter.
VR II – Use natural materials where feasible	Kiosks and parking areas are developed using natural materials.
VR III – Lay out any new roads/trails to highlight vistas and unique natural features	Vistas and unique natural features are taken into consideration during new trail construction.
VR IV – Develop kiosks to provide education and reduce sign pollution	Kiosks are limited to designated parking areas on Vernooy Kill State Forest.
Historic and Cultural Resources	
HC I – Preserve and protect historic and cultural resources wherever they occur	Protect the Vernooy House from further vandalism by restricting public access to the interior of the building..

VI. Vernooy Kill State Forest Management and Projected Use

Resource Protection Objectives and Actions	
Objective	Actions
HC II – Inventory resources in GIS and with OPRHP	Any potential historic or cultural resources identified will be inventoried

Infrastructure and Real Property

Infrastructure and Real Property Objectives and Actions	
Objective	Actions
Boundary Line Maintenance	
BL I – Maintain boundary lines	State land boundary lines maintained every seven years
BL II – Address encroachments and other real property problems	Coordinate with Real Property staff and DEC Rangers to address property line encroachments.
Infrastructure	
INF I – Provide and maintain public forest access roads, access trails, haul roads, parking areas, and associated appurtenances	Formal public parking areas and formalized trails are proposed within this plan.
INF II – Upgrade, replace or relocate infrastructure out of riparian areas where feasible	Vernooy Kill State Forest currently has no formal infrastructure and no proposed infrastructure within riparian areas.
INF III – Resolve issues of uncertain legal status or jurisdiction	As needed within the unit.
INF IV – Prevent over-development	<p>Parking areas are designed to concentrate use and limit the number of users on the property at any point in time to limit over use.</p> <p>Proposed infrastructure development takes into consideration the long-term maintenance requirements of proposed infrastructure.</p>

Public/Permitted Use

Public / Permitted Use Objectives and Actions	
Objective	Actions
Universal Access	
UA I – Use minimum tool approach to provide universal access to programs	No actions proposed at this time.
Formal and Informal Partnerships and Agreements	
PRT I – Collaborate with local organizations and governments to reach mutual goals	<p>Support Local organizations and governments by supporting the following long-distance trail connections.</p> <p>Formalize the trail connection to Lippman Park to Vernooy Kill State Forest.</p> <p>Develop a trail connection to Colony Farm pending public access to the property.</p>
PRT II – Consider full range of impacts associated with VSAs (formerly known as AANRs) and recurring TRPs	TRPs and VSAs [program similar to the AdoptA Natural Resource (AANR)] that are issued include conditions to address potential impacts.
Recreation	
REC I – Accommodate public use while preventing illegal activity, reducing impacts and enhancing public safety	Maintain motor vehicle barriers and coordinate with DLE to reduce illegal activities on Vernooy Kill State Forest.
REC II – Provide public recreation information	All proposed parking lots include a kiosk with a map and information. Update information on Vernooy Kill State Forest webpage and State Lands Interactive Mapper as needed.
REC III – Inventory recreational amenities and schedule recreation management actions	See VI Implementation and Budget Schedule for proposed projects and management actions for recreation infrastructure.
REC IV – Enhance fish & game species habitat	Forest Management activities improve habitat for game, non-game and fish species.
Off-Highway and All-Terrain Vehicle Use	
ATV I – Enhance recreational access by people with disabilities under the MAPPWD program	No actions proposed at this time.
ATV II – Consider requests for ATV connector routes across the unit	No actions proposed at this time.

VI. Vernooy Kill State Forest Management and Projected Use

Public / Permitted Use Objectives and Actions	
Objective	Actions
Mineral Resources	
MR I – Provide for mineral exploration and development while protecting natural resources and recreation	No actions proposed at this time.
Supporting Local Communities	
LC I – Provide revenue to New York State and economic stimulus for local communities	Commercial Timber harvests are a component of Forest Management and provide economic stimulus to local community.
LC II – Improve local economies through forest-based tourism	Proposed reroute of the Long Path and proposed trail connections to Lippman Park will promote forest-based tourism.
LC III – Protect rural character and provide ecosystem services to local communities.	Public input during the planning process address concerns of local communities and user groups of state forest lands. Ecosystem services are protected by Resource Protection actions listed below.

Forest Management and Health

Forest Management and Health Objectives and Actions	
Objective	Actions
Forest Products	
FP I – Sustainably manage for forest products	Forest Products are produced from planned forest management activities that follow the SPFSM.
FP II – Educate the public about the benefits of silviculture	Develop educational signage to disseminate the benefits of sustainable forest management
Plantation Management	
PM I – Convert plantation stands to natural forest conditions where appropriate	Convert softwood plantations to natural forest where plantations are in poor condition
PM II – Artificially regenerate plantations where appropriate	No actions proposed
Forest Health	
FH I – Use timber sales to improve forest health and the diversity of species	Timber harvests are designed in a manner to improve growing conditions for residual trees or regeneration.
FH II – Protect the unit and surrounding	Follow Rapid Response Guidelines for

VI. Vernooy Kill State Forest Management and Projected Use

lands from introduced diseases and invasive plant and animal species	Invasive Species DEC program policy. Bureau of Invasives and Forest Ecosystem Health actively surveys statewide for invasive pests and pathogens that threaten forest health.
Managing Deer Impacts	
DM I – Monitor impacts of deer browsing on forest health and regeneration	Monitoring will occur as needed, forest stands scheduled for regeneration or release treatments will be evaluated pre-and post-harvest.
DM II – Address issues of over-browsing	As needed, coordinate with Bureau of Wildlife.
Fire Management	
FM I – Support Forest Rangers in controlling the ignition and spread of wildfires	Assist Forest Rangers as requested to support wildfire suppression efforts.
FM II – Maintain naturally occurring fire-dependent communities	Coordinate with Forest Rangers and the Bureau of Wildlife for any management activities where prescribed fire may be appropriate for fields or oak dominant stands.
CS II – Enhance carbon storage in existing stands	Maintaining forest health and vigor through forest management activities improve carbon storage in existing stands.
CS III - Keep forests vigorous and improve forest growth rates	Forest Stand Improvement and stand thinning improve growth of residual trees.

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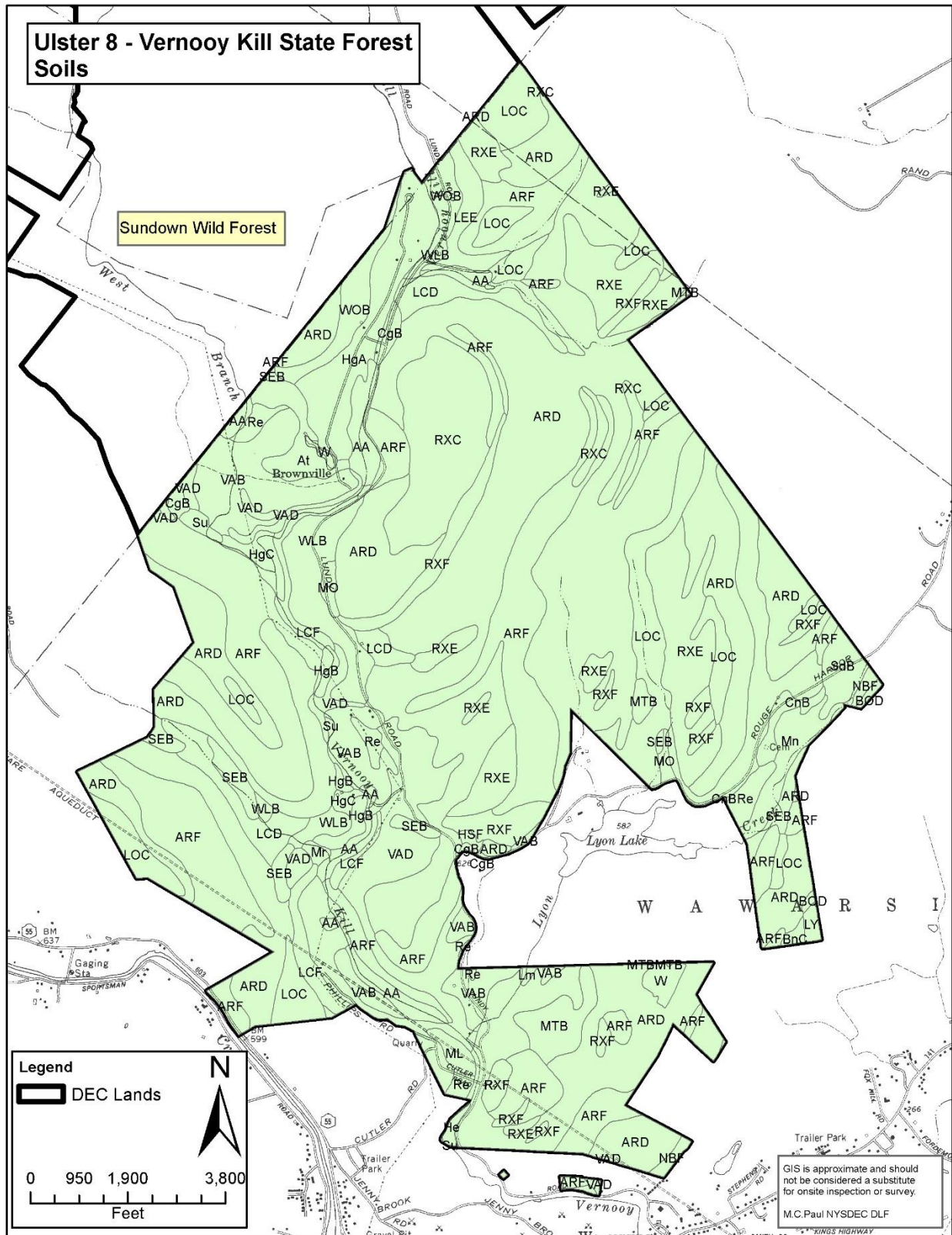


Figure 14. Vernooij Kill State Forest Soils Map

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Ulster 8-Vernooy Kill State Forest

SMZ Map

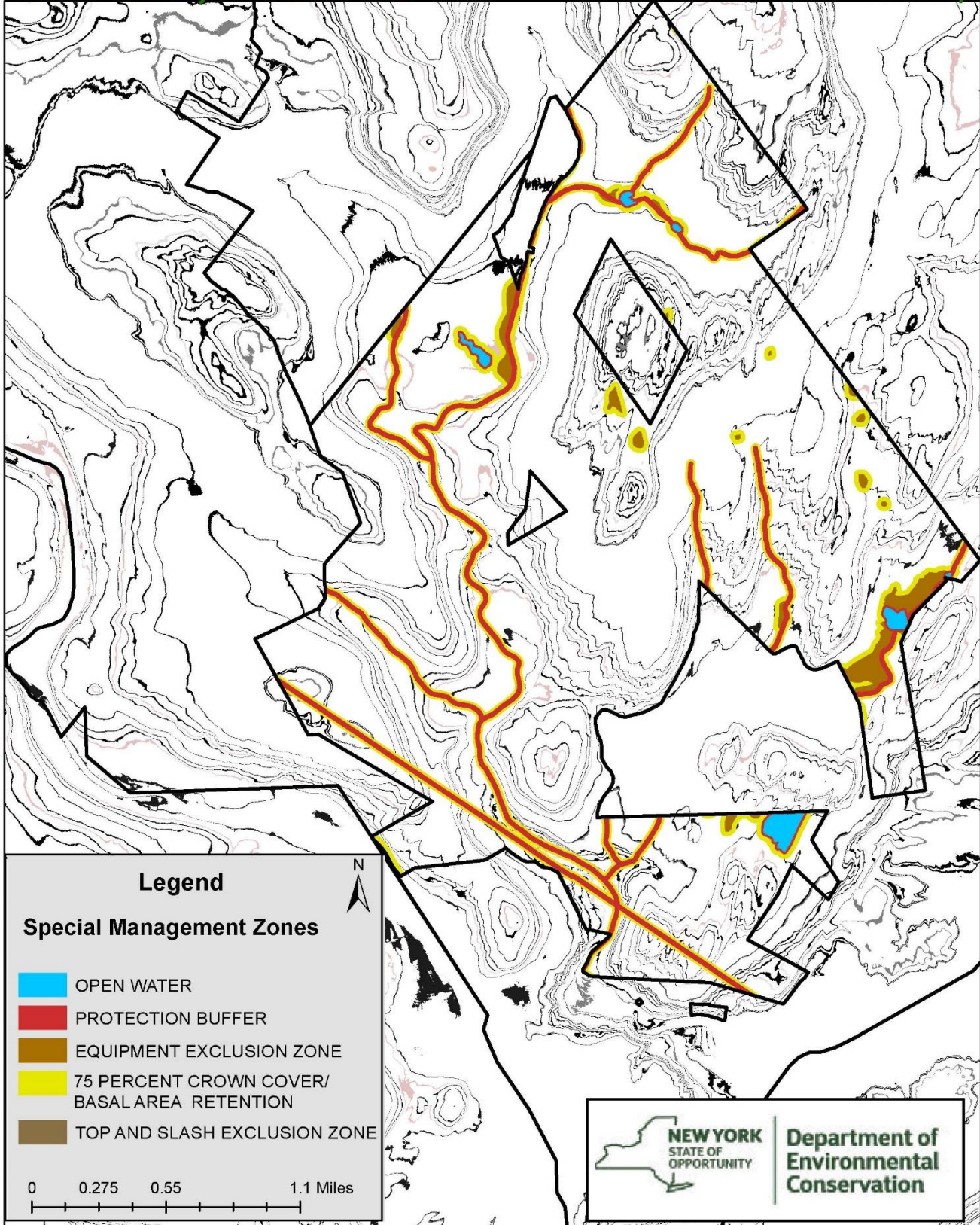


Figure 15. Vernooy Kill State Forest SMZ Map

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Ulster 8-Vernooy Kill State Forest

Current and Future Forest Management Map

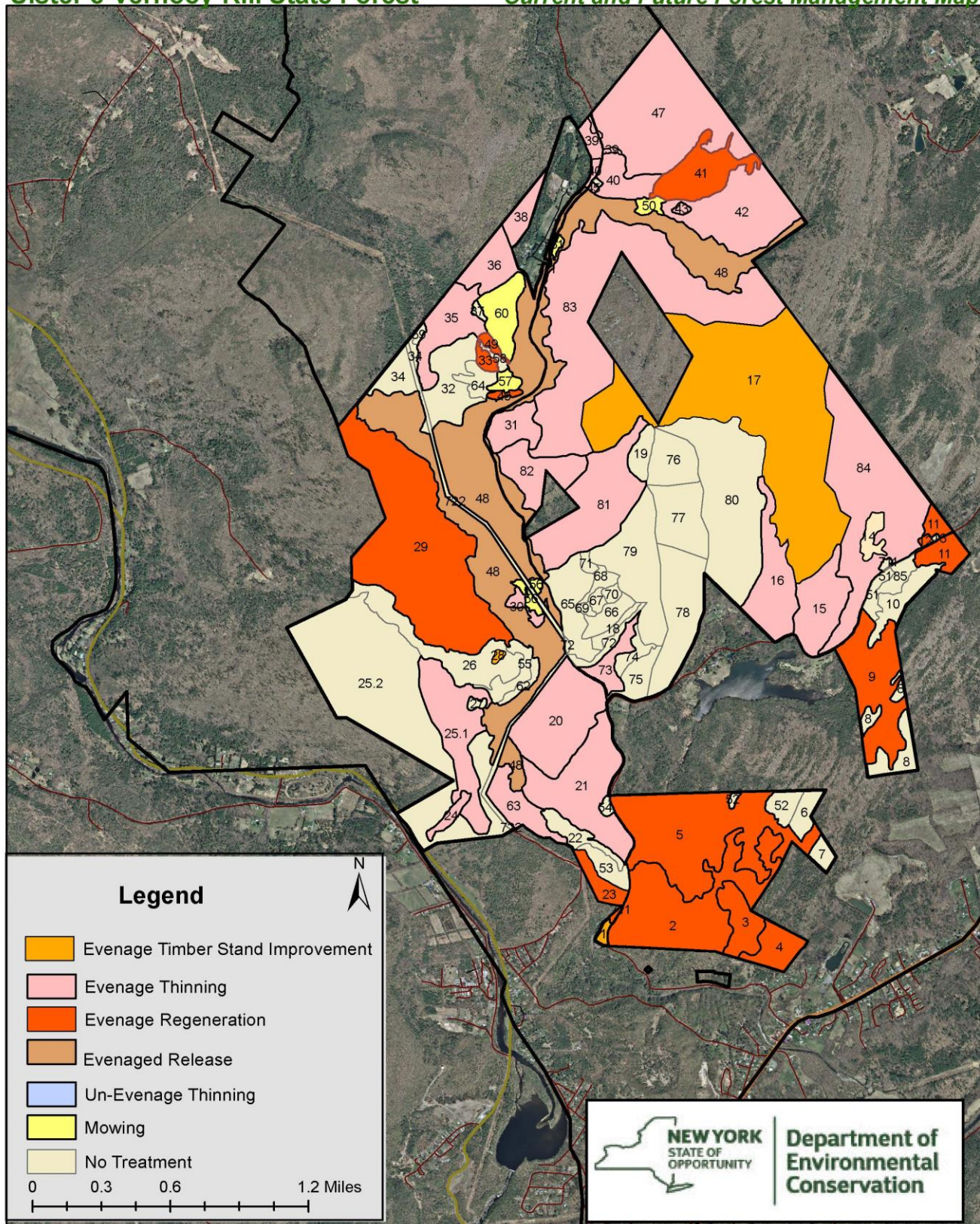


Figure 16. Vernooy Kill State Forest Management Map

VI. Vernooey Kill State Forest Management and Projected Use

Ulster 8-Vernooey Kill State Forest

Forest Stand Type Map

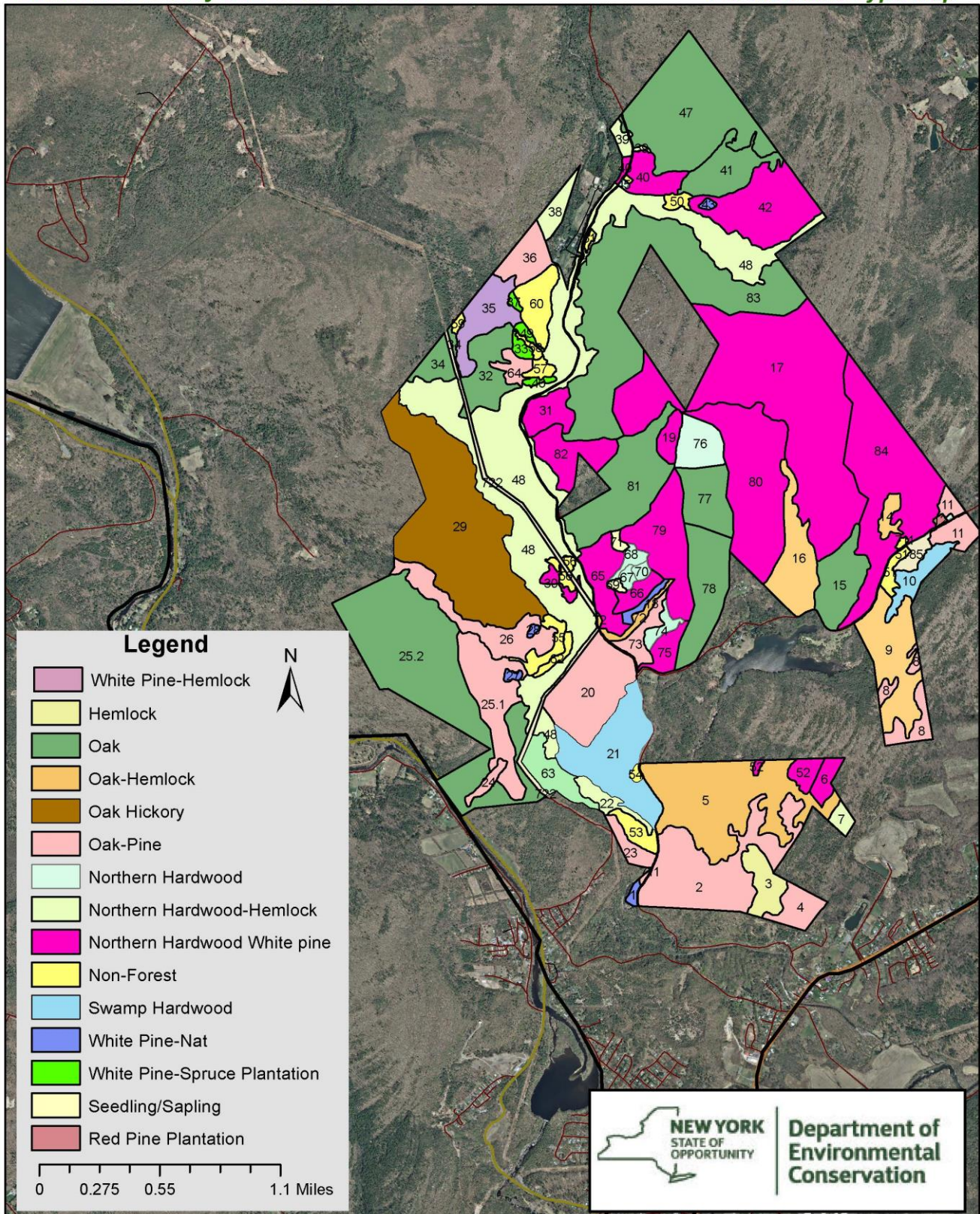


Figure 17. Vernooey Kill State Forest Forest Stand Map

Forest Stand Types

Natural Forest Types

- 10 Northern Hardwood
- 11 Northern Hardwood-Hemlock
- 12 Northern Hardwood-White Pine
- 13 Northern Hardwood-Spruce Fir
- 14 Pioneer Hardwood
- 15 Swamp Hardwood
- 16 Oak
- 17 Black Locust
- 18 Oak- Hickory
- 19 Oak- Hemlock
- 20 Hemlock
- 21 White Pine
- 22 White Pine- Hemlock
- 23 Spruce Fir
- 24 Spruce-Fir- Hemlock- White Pine
- 25 Cedar
- 26 Red Pine
- 27 Pitch Pine
- 28 Jack Pine
- 29 Tamarack
- 30 Oak-Pine
- 31 Transition Hardwood (NH-Oak)
- 32 Other Natural Stands
- 33 Norther Hardwood- Norway Spruce
- 97 Seedling-Sapling- Natural
- 99 Non-Forest
- 99 Null

Plantation Types

- 40 Plantation: Red Pine
- 41 Plantation: White Pine
- 42 Plantation: Scotch Pine
- 43 Plantation: Austrian Pine
- 44 Plantation: Jack Pine
- 45 Plantation: Norway Spruce
- 46 Plantation: White Spruce
- 47 Plantation: Japanese Larch
- 48 Plantation: European Larch
- 49 Plantation: White Cedar
- 50 Plantation: Douglas Fir
- 51 Plantation: Balsam Fir
- 52 Plantation: Black Locust
- 53 Plantation: Pitch Pine
- 54 Plantation: Misc Species (Pure)
- 60 Plantation: Red Pine- White Pine
- 61 Plantation: Red Pine- Larch
- 62 Plantation: Red Pine- Spruce
- 63 Plantation: White Pine-Spruce
- 64 Plantation: White Pine- Larch
- 65 Plantation: Scotch Pine-Spruce
- 66 Plantation: Scotch Pine- Larch
- 67 Plantation: Larch- Spruce
- 68 Plantation: Bucket Mixes
- 70 Plantation: Pine- Natural Species
- 72 Plantation: Misc. Hardwood
- 98 Plantation: Seedling-Sapling

Management Direction

- Wildlife (WL)
- Experimental (EXP)
- Recreation (REC)
- Protection (PRO)
- Non-Management (NM)
- Sugar Bush/ Maple Tapping (SB)
- Timber Management:
 - Even Age (T-EA)
 - Un-Even Age (T-UE)
 - Non- Silvicultural (T-NS)

Treatment Type

- Harvest (H)
- Release (R)
- Salvage (S)
- Sanitation (SN)
- Thinning (TH)
- Regeneration (RG)
- Habitat Management (HM)
- Sale Stands (SS)

Size Class

- Seedling/ Sapling <5" DBH (S-S)
- Pole Timber 6"-11" DBH (PT)
- Small Saw Timber 12"-17" DBH (SST)
- Medium Saw Timber 18"-23" DBH (MST)
- Large Saw Timber >24" DBH (LST)

Forest Management Actions:

Even-aged forest management is most appropriate for disturbance dependent and intermediate shade tolerant tree species. The majority of Vernooy Kill State Forest currently falls within this category. Even-aged management within stands with longer lived shade tolerant species in Northern Hardwood stand types will occur where access and stand species composition is not conducive to un-even aged management.

Even-aged management prescriptions developed for the pending timber sale (Table 24) and future land management actions will focus on managing on stands for white pine where significant understory white pine regeneration exists, while retaining oaks for hard mast and species diversity.

Oak forest stands will be managed for oak where appropriate site conditions exist. In stands with significant white pine regeneration and white pine over-story, management focus will shift to white pine while maintaining residual pockets of oak within those stands. Representative sample area chestnut oak will be monitored and if necessary management actions will be taken to perpetuate the RSA area.

Management of hemlock in Vernooy Kill State Forest will focus on reducing stress by thinning overstocked stands, and regenerating, or releasing white pine where appropriate. Vernooy Kill State Forest will be evaluated for the release of biological control agents approved by the Department and USDA-APHIS for Hemlock Woolly Adelgid. Plantations vary in age, species composition and health. Softwood plantations on Vernooy Kill State Forest are eastern white pine, red pine, Scotch pine and Norway spruce. Many of these plantations were never managed, leading to overall decline in the health of these plantations. Artificial conifer plantations will be regenerated where appropriate.

Firewood is marked and being sold within stands 20 and 21 within Vernooy Kill State Forest. Stands marked for firewood sales specifically will be marked for homeowner firewood sales. Stands marked for thinning or regeneration may also be sold for firewood to meet objectives not met by commercial timber harvests.

VI. Vernooy Kill State Forest Management and Projected Use

Table 22. Land Management Action Schedule for First Five-Year Period								
State Forests	Stand	Acres	Forest Type			Management Category		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Ulster 8 Compartment 1	1	1	21	21	21	T-EA	T-EA	FSI
Ulster 8 Compartment 1	9	69	19	19	19	T-EA	T-EA	RG
Ulster 8 Compartment 1	11	23	30	30	30	T-EA	T-EA	RG
Ulster 8 Compartment 1	12	1	40	30	30	T-EA	T-EA	RG
Ulster 8 Compartment 1	15	44.4	30	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	17	220	30	30	30	T-EA	T-EA	TSI
Ulster 8 Compartment 1	20	86	30	30	30	T-EA	T-EA	FSI
Ulster 8 Compartment 1	21	83	30	30	30	T-EA	T-EA	FSI
Ulster 8 Compartment 1	40	22	12	12	12	T-EA	T-EA	TH
Ulster 8 Compartment 1	41	44	11	11	11	T-EA	T-EA	RG

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Ulster 8 Compartment 1	42	85	12	12	12	T-EA	T-A	TH
Ulster 8 Compartment 1	45	1	31	31	31	T-EA	T-EA	TH
Ulster 8 Compartment 1	46	41	44	16	16	T-EA	T-EA	RG
Ulster 8 Compartment 1	81	88	39	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	82	109	16	16	16	T-EA	T-EA	FSI

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Table 23. Land Management Action Schedule for Second Five-Year Period								
State Forests	Stand	Acres	Forest Type			Management Category		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Ulster 8 Compartment 1	23	12.3	19	19	19	T-EA	T-EA	RG
Ulster 8 Compartment 1	24	6.6	30	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	25.1	67	30	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	29	225.6	18	18	18	T-EA	T-UA	RG
Ulster 8 Compartment 1	28	1	21	21	21	T-EA	T-EA	TSI
Ulster 8 Compartment 1	30	6.1	12	12	12	T-EA	T-EA	TH
Ulster 8 Compartment 1	31	22.6	19	19	19	T-EA	T-EA	TH
Ulster 8 Compartment 1	33	4.5	63	63	12	T-EA	T-EA	RG
Ulster 8 Compartment 1	34	19	16	16	16	T-EA	T-EA	TH

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Ulster 8 Compartment 1	36	25	30	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	37	2	41	41	41	T-EA	T-EA	RG
Ulster 8 Compartment 1	38	15	11	11	11	T-EA	T-EA	TH
Ulster 8 Compartment 1	39	7.2	22	22	22	T-EA	T-EA	TH
Ulster 8 Compartment 1	49	1	45	45	11	T-EA	T-EA	RG
Ulster 8 Compartment 1	63	26	10	10	10	T-EA	T-EA	TH
Ulster 8 Compartment 1	73	16	30	30	30	T-EA	T-EA	TH
Ulster 8 Compartment 1	83	242	16	16	16	T-EA	T-EA	TH
Ulster 8 Compartment 1	84	157	30	30	30	T-EA	T-EA	TH

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Table 24. Land Management Action Schedule Pending Timber Sale								
State Forests	Stand	Acres	Forest Type			Management Category		Treatment Type
			Current	Post Treatment	Future	Current	Future	
Ulster 8 Compartment 1	2	117.5	30	30	21	T-EA	T-EA	RG
Ulster 8 Compartment 1	3	25.2	20	20	22	T-EA	T-EA	RG
Ulster 8 Compartment 1	4	20.6	30	30	21	T-EA	T-EA	RG
Ulster 8 Compartment 1	5	145	30	30	21	T-EA	T-EA	RG
Ulster 8 Compartment 1	48	404	11	11	11	T-EA	T-EA	RL

* Portions of stand 48 are currently scheduled for treatment within this sale, approximately 47 acres.

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Table 25. Stands without Scheduled Management for 10 Years								
State Forests	Stand	Acres	Forest Type			Management Category		
			Current	Post Treatment	Future	Current	Future	Treatment Type
Ulster 8 Compartment 1	61	2	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	62	6	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	74	8	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	75	15	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	76	28	10	10	10	10	10	T-EA
Ulster 8 Compartment 1	77	40	16	16	16	16	16	T-EA
Ulster 8 Compartment 1	78	62	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	79	67	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	80	128	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	81	88	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	6	12	30	30	30	30	30	T-EA
Ulster 8 Compartment 1	7	6.9	19	19	19	19	19	T-EA
Ulster 8 Compartment 1	13	2.0	65	65	65	65	65	T-EA

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Ulster 8 Compartment 1	14	8.9	19	19	19	19	19	T-EA
Table 26. Stands without Scheduled Management for 10 Years								
Ulster 8 Compartment 1	43	1	21	21	21	21	21	T-EA
Ulster 8 Compartment 1	44	1	10	10	10	10	10	T-EA
Ulster 8 Compartment 1	45	1	10	10	10	10	10	T-EA
Ulster 8 Compartment 1	47	146	12	12	12	12	12	T-EA
Ulster 8 Compartment 1	50	5	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	51	8	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	52	12	15	15	15	15	15	T-EA
Ulster 8 Compartment 1	53	12	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	54	2	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	55	13	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	56	7	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	57	6	99	99	99	99	99	T-EA
Ulster 8 Compartment 1	58	3	99	99	99	99	99	T-EA

Field Management

Old Field Habitat

Old field habitat in southeastern New York, at maximum extent from the late 1800s to mid-1900s following widespread farmland abandonment, has diminished in recent decades because of land use changes (e.g. residential and commercial development) and natural succession to forest. This habitat type and the wildlife species that rely on it has become increasingly less common in the region. For example, the 2000-2005 New York State Breeding Bird Atlas suggests grassland and shrub land-nesting birds, 2 species guilds that frequently use old field habitat for breeding, have declined considerably in New York since the 1980s, and the New York State Comprehensive Wildlife Conservation Strategy (CWCS) lists 10 shrub land/early successional bird species and 8 grassland/meadow bird species as species of greatest conservation need (SGCN).

The vegetation structure and species composition of old field habitats can vary widely, ranging from low-growing forbes and grasses to tree seedlings and saplings, and is a result of past or current management (time since abandonment or last management, type of past management, past treatment interval, etc.) along with other locally important factors such as soil characteristics (e.g. fertility, drainage), surrounding vegetation cover types, and slope and aspect. Despite considerable variation, there are 2 basic types of old field habitat – meadow and shrub land. Meadow habitat, characterized by dominant herbaceous vegetation and <10 percent woody vegetation, is ephemeral, typically present for only 3-5 years following field abandonment in the absence of active management. Meadows are further distinguished from grasslands by the ratio of forbs (broad-leaved herbaceous plants) and grasses – in meadows, forbs generally constitute >50 percent of the cover, whereas in grasslands, grasses, sedges, or rushes are dominant. In shrub habitat, 10-100 percent of the area is dominated by woody vegetation, generally 3-15 feet tall. This woody vegetation can consist of both persistent shrub species, such as dogwoods, viburnums, or sumacs, and regeneration of old field pioneer tree species such as white pine and early successional hardwoods. Shrub habitat, because it is composed of woody vegetation, can take 5 to 15 years to develop following field abandonment and may persist for 20-30 years without management, especially if persistent shrub species dominate a site before tree species become established and a forest develops.

Management of old field habitat can range from basic to intensive depending the objectives for the habitat. Maintenance of meadow habitat is relatively easy and can be achieved through several techniques. The most basic and widely-used of these is

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mowing at a <5-year interval to preclude the establishment of woody vegetation. Prescribed fire at a similar interval can also prevent woody vegetation invasion. Woody vegetation can also be selectively removed using cutting, girdling, herbicide application, or some combination of these techniques. However, individual stem treatments can become overly time-consuming if the woody encroachment is severe or the habitat patch is large. Periodic discing or plowing can also serve to perpetuate meadow habitat and has the added benefits of increasing habitat and plant and insect species diversity. Management to perpetuate shrub habitat can be somewhat more complex because mechanized treatment of larger woody stems is often expensive, time-consuming, and requires specialized equipment. Clearly, periodic elimination of tree regeneration is necessary in shrub land habitat to prevent canopy closure and forest development. Elimination of tree species can entail chemical or mechanical single stem treatments as described previously or mowing with a hydro-axe or similar equipment at a longer interval (10 to 15 years) than used in meadow management. Perpetuation of shrub habitat can also be facilitated through the establishment of persistent shrub species through planting. Once established, these shrubs are relatively long-lived (30-40 years for some species), will inhibit the recruitment of tree species, and can be periodically reinvigorated through mowing.

The suite of wildlife species that will use and benefit from old field habitats is dependent on the vegetation community present, the surrounding landscape, and, to a lesser extent, the habitat patch size. Size dependence is especially important for some grassland breeding birds, which generally have large patch size requirements, but is of lesser concern for shrub-nesting birds and generalist species. When managing for a specific species or species group, it is important to consider such factors. For example, a small old field (<10 acres) does not meet the minimum patch size for a grassland bird such as a savannah sparrow and therefore should not be managed for this species. However, a species such as the field sparrow has a much smaller habitat patch size requirement and would benefit from the maintenance of a small old field in shrub cover.

Management Actions:

1. Map all the fields on the forest.
2. Set up a mowing schedule that is compatible with the capabilities of the equipment available. When better equipment becomes available, the length of time between treatments will increase.
3. Fields will be initially placed under a 2-3-year mowing schedule to promote old field conditions. As better equipment and methods become available, the rotation may be lengthened to allow for better establishment of shrub species.

Mowing Schedule by Stand

Management Actions:

1. Field management actions will be limited to November 1st -April 1st to protect rattlesnakes and ground nesting birds.
2. Fields will initially be placed under a 2-3-year mowing schedule to promote old field conditions.
3. Modification to the mowing plan may occur after consultation with the Division of Wildlife. Smaller fields or shrub land easily accessible with equipment may serve to supplement or replace fields currently in the mowing schedule.

**Acreage derived from delineated forest stands and may differ from actual field/shrubland acres mowed.*

Table 26. Mowing Schedule by Stand			
State Forest	Stand	Acres*	Mowing interval
Ulster 8 Compartment1	50	5.0	(2-3) years
Ulster 8 Compartment1	51	8.0	(3+) years
Ulster 8 Compartment1	56	6.0	(2-3) years
Ulster 8 Compartment1	57	5.7	(3+) years
Ulster 8 Compartment1	60	27	(2-3) years
Ulster 8 Compartment1	61	1.6	(2-3) years

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VII. Implementation Schedule and Budget

The following tables outline a schedule for implementation of the proposed management actions and their estimated costs. Accomplishments are contingent upon sufficient staffing levels and adequate funding. The estimated costs of implementing these projects is based on historical costs incurred by the Department for similar projects. Values for some projects are based on projected costs for service contracting. These cost estimates do not include capital expenditures for costs such as equipment, nor do they include the value of program staff salaries.

Year	Project	Estimated Cost
1	Expand parking area at Upper Cherrytown Road to accommodate current usage and alleviate blocking of the road leading to privately owned parcel	\$35,000
	Construct a 30-40 car parking lot east of Bear Hole Brook. 2 parking spaces in this lot will be accessible.	\$100,000
	Provide an accessible port-a-john at the 30-40 car parking area on an annual basis.	\$1,000
	Construct a 1,500-foot accessible trail from the parking lot east of Bear Hole Brook to the Blue Hole	\$300,000
	Convert an existing primitive campsite to an accessible campsite in the trailer field in the Peekamoose Valley Riparian Corridor	\$3,000
	Implement the no-cost permit system in the Peekamoose Valley Riparian Corridor	\$10,000
	Re-route the Long Path by removing it from the public highways.	\$1,000
	Convert a primitive tent site to an accessible camp site at the trailer field.	\$2,000
	Construct a multi-use trail beginning from the proposed Cutler Road parking area and joining the proposed long path trail to the west side of Vernoooy Falls	\$5000
	All accessible facilities located at the Peekamoose Trailer Field will be maintained in accordance with established standards and guidelines	\$2000
	Post signs at all woods road entries from private lands prohibiting ATV and unauthorized motor vehicle use	\$500

VII. Implementation Schedule and Budget

	Actively seek to establish a written agreement with NYC DEP to allow permanent administrative access to the Red Hill Fire Tower via the access road	\$0
	Monitor all inholdings for encroachments, ensure all conservation easements are monitored frequently to ensure compliance	\$0
	Implement the regulatory restrictions for the area now defined as the Peekamoose Valley Riparian Corridor	\$0
	Survey, Blaze, and paint all boundary lines within the Vernooy Kill State Forest	\$0
	Post the boundary line between Vernooy Kill State Forest and the Sundown Wild Forest	\$0
	Ensure that all proposed projects and forest management activities do not adversely impact protected or threatened species such as the Eastern timber rattlesnake	\$0
	Continue to monitor the Peekamoose Valley for rope swings and ensure that they are removed immediately, monitor and maintain the access trail to the Blue Hole for safe public access	\$0
	Develop 8-10 car parking area east of the former Lundy Estate on Lundy Road	\$10,000-\$15,000
	Continue to monitor the designated campsites at Peekamoose for adverse impacts	\$0
	Kanape facility maintenance and monitoring	\$500
	Monitor use of the swimming hole located southeast of the Dunlop Farm field to ensure that adverse environmental impact does not occur or is within parameters set forth using the Limits of Acceptable Change principles.	\$0
	Maintain woods road which starts near Holly Road for continued administrative access	\$500/year
	Remove all garbage found along Cutler Road and Philips Road and within the gravel pit. Provide for additional patrols to discourage further dumping.	\$500/year
	Mow sections of the Dunlop Farm field, the Vernooy House field, the fields at Brownville, and at the former airstrip to retain early successional species and grasslands periodically	\$4000-\$10000
	Maintain signage pertaining to public parking along Peekamoose Road	\$1000/year
	Continue to supply sanitary facilities such as port-o-johns to aid in the protection of the natural resources in the Peekamoose Riparian Corridor. Sanitary Facilities will be increased from 6-8 port-a-johns with additional increases as necessary.	\$6000/year

VII. Implementation Schedule and Budget

	Install seasonal bear proof refuse container(s) within a short distance of the path leading to the Blue Hole and maintain "Carry In-Carry Out" signs	\$7000/year
	Study rare and endangered species sites, particularly rattlesnake dens, and determine what management steps may be necessary to protect them	\$0
	Acquire key parcels of private land from willing sellers to enhance the viability of the Sundown Wild Forest	Variable
	Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve	\$0
	Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and required to remove them	\$0
	Monitor the Neversink parcel to ensure that no significant environmental degradation occurs through the public use of this site	\$0
	Maintain trail registers so that public use can be estimated	\$500
	Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Peekamoose Lower Field	\$0

Year	Project	Estimated Cost
2	Place boulders to block South Hollow Road beyond last campsite	\$500
	Install boulders where the Long Path joins Trails End/Spencers Road near Gray's Camp	\$1000
	Improve signage along Long Path	\$500
	Maintain and mark Bear Spring Road as public access and clarify access rights of owner of private inholding	\$500
	Remove hazardous bridge structure on illegal access road to private inholding off Spencer Road	\$1000
	Block illegal access to old field/pond site to prevent further site degradation by 4-wheel drive vehicles (near bridge site)	\$500
	Install a trail register either in the Glade Hill parking area or a short distance up the trail on the north side of Denman Mountain	\$300
	Provide a small rustic 3 cars pull off along Wild Cat Road	\$3000
	Designate a parking area near Hog Rocks, block off other access with large boulders	\$2000

VII. Implementation Schedule and Budget

	Construct 400 foot of footpath leading from the parking area on the north side of Peekamoose Road across from the Peekamoose Trailhead to the kiosk located at the start of the Blue Hole access trail.	\$7000
	Construct 4-mile foot trail loop from the proposed Terwilliger farm parking area to Potterville	\$1000
	Construct large parking area capable of handling 20 vehicles with trailers within the gravel pit on Cutler Road	\$10000- \$25000
	Construct 2 car parking access within the informal access on the north side of State Route 55, west of the Cutler Road intersection.	\$2000- \$5000
	Install a 2-3 car parking lot at the log landing on the former site of the Van Steenberg Farm	\$3000- \$7500
	Create a 6-8 car parking lot on the north side of Rogue Harbor Road near the Norway spruce plantation at the Jacob Turner Farmstead	\$8000- \$20000
	A 4-car parking lot will be built at the informal site currently being used on the west side of Lundy Road adjacent to the power line	\$4000- \$10000
	A 2 car pull-off will be established in front of the Vernooy House on the west side of Lundy Road	\$2000- \$5000
	A 4-car parking area will be constructed on the west side of Lundy Road across from the airstrip, north of the old bridge abutments leading to Brownville	\$4000- \$10000
	Construct an 8-10 car parking area at the former Terwilliger farm site located at the east end of the access road, north of the Lundy Road cul-de-sac. Parking area will be defined with boulders.	\$10000- \$25000
	Continue to monitor the Peekamoose Valley for rope swings and insure that they are removed immediately, monitor and maintain the access trail to the Blue Hole for safe public access	\$0
	Continue to monitor the designated campsites at Peekamoose for adverse impacts	\$0
	Kanape facility maintenance and monitoring	\$500
	Monitor use of the swimming hole located southeast of the Dunlop Farm field to ensure that adverse environmental impact does not occur or is within parameters set forth using the Limits of Acceptable Change principles.	\$0
	Maintain woods road which starts near Holly Road for continued administrative access	\$500
	Remove all garbage found along Cutler Road and Philips Road and within the gravel pit. Provide for additional patrols to discourage further dumping.	\$500/year

VII. Implementation Schedule and Budget

	Mow sections of the Dunlop Farm field, the Vernooy House field, the fields at Brownville, and at the former airstrip to retain early successional species and grasslands on an annual/semi-annual basis	\$4000-\$10000
	Maintain signage pertaining to public parking along Peekamoose Road	\$1000/year
	Continue to supply sanitary facilities such as port-o-johns to aid in the protection of the natural resources in the Peekamoose Riparian Corridor. Sanitary Facilities will be increased from 6-8 port-o-johns with additional increases as necessary.	\$6000/year
	Install seasonal bear proof refuse container(s) within a short distance of the path leading to the Blue Hole and maintain "Carry In-Carry Out" signs	\$7000/year
	Study rare and endangered species sites, particularly rattlesnake dens, and determine what management steps may be necessary to protect them	\$0
	Acquire key parcels of private land from willing sellers to enhance the viability of the Sundown Wild Forest	Variable
	Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve	\$0
	Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and required to remove them	\$0
	Monitor the Neversink parcel to ensure that no significant environmental degradation occurs through the public use of this site	\$0
	Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Peekamoose Lower Field	\$0
	Maintain trail registers so that public use can be estimated	\$500

VII. Implementation Schedule and Budget

Year	Project	Estimated Cost
3	Re-route the High Point loop trail	\$1000
	Formalize Haver Road access	\$4500
	Place large rocks at the Upper Vernooy Falls Trail near its junction with Trails End Road to prevent motorized vehicle access.	\$500
	Construct a 5-car parking area at Greenville with sign, sign standard and trail directional signage	\$5000
	Construct information kiosk at Greenville parking area	\$3000
	Place large rock adjacent to gate across from the Upper Cherrytown Road Parking Area	\$500
	Remove the existing trail registration box at Vernooy Kill Falls and install registration boxes at the trailheads at Upper Cherrytown, Greenville, and Trails End	\$800
	Maintain the Red Hill Fire Tower Trail and the Denman Mountain multi-use Trail	\$500
	Maintain Red Hill Fire Tower and associated buildings for public access	\$1000
	Continue to maintain all parking areas, kiosks, gates, and barriers in the Peekamoose Valley	\$5000
	The Vernooy House openings will be re-secured to prevent vandalism	\$10000
	Replace cable gate on the west side of Lundy Road just north of the Vernooy House with gate to prevent unauthorized vehicle access and allow administrative access.	\$2000
	Install trail registers along the Long Path just north of Cutler Road parking area at the gravel pit, along the proposed loop trail from Terwilliger Farm to Potterville, and along the multi-use trail near the beaver ponds east of Terwilliger Farm.	\$1000
	Install information kiosk at the proposed Cutler Road parking area	\$3000
	Install information kiosk at the proposed Terwilliger Farm parking area	\$3000
	Develop springs, where possible, along the multi-use trail on Denman Mountain	\$0
	Remove the large culvert pipe, remnants from the stream crossing at Potterville, from the stream bank and haul away for scrap or re-use at another project site	\$0
	Remove pole and transformer from the Potterville parking area	\$500
	Continue to monitor the Peekamoose Valley for rope swings and insure that they are removed immediately, monitor and	\$0

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	maintain the access trail to the Blue Hole for safe public access	
	Continue to monitor the designated campsites at Peekamoose for adverse impacts	\$0
	Kanape facility maintenance and monitoring	\$500
	Monitor use of the swimming hole located southeast of the Dunlop Farm field to ensure that adverse environmental impact does not occur or is within parameters set forth using the Limits of Acceptable Change principles.	\$0
	Maintain woods road which starts near Holly Road for continued administrative access	\$500
	Remove all garbage found along Cutler Road and Philips Road and within the gravel pit. Provide for additional patrols to discourage further dumping.	\$500/year
	Mow sections of the Dunlop Farm field, the Vernooy House field, the fields at Brownville, and at the former airstrip to retain early successional species and grasslands periodically	\$4000-\$10000
	Maintain signage pertaining to public parking along Peekamoose Road	\$1000/year
	Continue to supply sanitary facilities such as port-a-johns to aid in the protection of the natural resources in the Peekamoose Riparian Corridor. Sanitary Facilities will be increased from 6-8 port-a-johns with additional increases as necessary.	\$6000/year
	Install seasonal bear proof refuse container(s) within a short distance of the path leading to the Blue Hole and maintain "Carry In-Carry Out" signs	\$7000/year
	Study rare and endangered species sites, particularly rattlesnake dens, and determine what management steps may be necessary to protect them	\$0
	Acquire key parcels of private land from willing sellers to enhance the viability of the Sundown Wild Forest	Variable
	Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve	\$0
	Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and required to remove them	\$0
	Monitor the Neversink parcel to ensure that no significant environmental degradation occurs through the public use of this site	\$0
	Maintain trail registers so that public use can be estimated	\$500

VII. Implementation Schedule and Budget

	Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Peekamoose Lower Field	\$0
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Year	Project	Estimated Cost
4	Construct Adirondack style log lean-to along Ashokan High Point trail	\$6000
	Sign road through Krumville Plantation and establish location of permissible access	\$1000
	Maintain/stabilize all existing designated trails, bridges, trail registers, and signage throughout the Vernooey Kill Falls area.	\$3000
	Remove camp and associated structures on Lot 12(formerly Hoar/Murray) where the 40-year occupancy agreement has ended	\$40000
	Maintain State Land signs at the parking pull off on Greenville Road along Sundown Creek	\$500
	Maintain Mancuso Road to minimum standards for administrative access and place "No ATVs" and "No Motorized Vehicles" signs just beyond State land boundary	\$2000
	Reestablish the existence of the public and administrative easement access to the detached parcel south of Sugarloaf Mountain	\$500
	Sign and improve the parking area along Sugarloaf Road near the Ulster/Sullivan County lines and install kiosk	\$2000
	Construct a mountain bike/ski/hike trail from the proposed Terwilliger Farm parking area south to Rouge Harbor Road	\$4000
	Continue to monitor the Peekamoose Valley for rope swings and insure that they are removed immediately, monitor and maintain the access trail to the Blue Hole for safe public access	\$0
	Continue to monitor the designated campsites at Peekamoose for adverse impacts	\$0
	Kanape facility maintenance and monitoring	\$500
	Monitor use of the swimming hole located southeast of the Dunlop Farm field to ensure that adverse environmental impact does not occur or is within parameters set forth using the Limits of Acceptable Change principles.	\$0
	Maintain woods road which starts near Holly Road for continued administrative access	

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	Remove all garbage found along Cutler Road and Philips Road and within the gravel pit. Provide for additional patrols to discourage further dumping.	\$1000/year
	Mow sections of the Dunlop Farm field, the Vernooy House field, the fields at Brownville, and at the former airstrip to retain early successional species and grasslands periodically	\$4000-\$10000
	Maintain signage pertaining to public parking along Peekamoose Road	\$1000/year
	Continue to supply sanitary facilities such as port-o-johns to aid in the protection of the natural resources in the Peekamoose Riparian Corridor. Sanitary Facilities will be increased from 6-8 port-a-johns with additional increases as necessary.	\$6000/year
	Install seasonal bear proof refuse container(s) within a short distance of the path leading to the Blue Hole and maintain "Carry In-Carry Out" signs	\$7000/year
	Study rare and endangered species sites, particularly rattlesnake dens, and determine what management steps may be necessary to protect them.	\$0
	Acquire key parcels of private land from willing sellers to enhance the viability of the Sundown Wild Forest	Variable
	Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve	\$0
	Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and required to remove them.	\$0
	Monitor the Neversink parcel to ensure that no significant environmental degradation occurs through the public use of this site	\$0
	Maintain trail registers so that public use can be estimated	\$500
	Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Peekamoose Lower Field.	\$0

VII. Implementation Schedule and Budget

Year	Project	Estimated Cost
5	Delineate a parking area at the start of the Upper Vernooy Kill Trail at its junction with Trails End Road, install signage, and rehabilitate camp sites	\$500
	Minor trail relocations of steep portions of the Long Path from Bangle Hill to Peekamoose Road- tread work, stone stairs, and water bars	\$2000
	Construct a 2-3 car parking area in the southwest corner of the Lackawack Hill parcel just beyond the cul-de-sac on Lackawack Hill Road	\$5000
	Construct a 4-car parking area along Stone Cabin Brook Road off Porcupine Road and install signs just beyond the parking area	\$5000
	Close off Van Aiken Knolls Road with a gate above proposed 2-car pull-off on State land	\$1000
	Construct a mounting platform for equestrian use for persons with disabilities utilizing the gravel pit and parking area off Cutler Road	\$10000-\$25000
	Continue to monitor the Peekamoose Valley for rope swings and ensure that they are removed immediately, monitor and maintain the access trail to the Blue Hole for safe public access	\$0
	Continue to monitor the designated campsites at Peekamoose for adverse impacts	\$0
	Kanape facility maintenance and monitoring	\$500
	Monitor use of the swimming hole located southeast of the Dunlop Farm field to ensure that adverse environmental impact does not occur or is within parameters set forth using the Limits of Acceptable Change principles.	\$0
	Maintain woods road which starts near Holly Road for continued administrative access	\$500
	Remove all garbage found along Cutler Road and Philips Road and within the gravel pit. Provide for additional patrols to discourage further dumping.	\$500/year
	Mow sections of the Dunlop Farm field, the Vernooy House field, the fields at Brownville, and at the former airstrip to retain early successional species and grasslands periodically	\$4000-\$10000
	Maintain signage pertaining to public parking along Peekamoose Road	\$1000/year
	Continue to supply sanitary facilities such as port-o-johns and accessible port-o-johns to aid in the protection of the natural resources in the Peekamoose Riparian Corridor.	\$7000/year

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	Install seasonal bear proof refuse container(s) within a short distance of the path leading to the Blue Hole and maintain "Carry In-Carry Out" signs	\$7000/year
	Study rare and endangered species sites, particularly rattlesnake dens, and determine what management steps may be necessary to protect them	\$0
	Acquire key parcels of private land from willing sellers to enhance the viability of the Sundown Wild Forest	Variable
	Research, document, and where they clearly exist and are needed, enforce public access rights to the Forest Preserve	\$0
	Deeds on record need to be reviewed regarding the status and legality of existing utility lines to establish protocols for the eventual repair/replacement of the lines. If poles are found to be encroaching on State lands, utility companies will be notified and required to remove them	\$0
	Monitor the Neversink parcel to ensure that no significant environmental degradation occurs through the public use of this site	\$0
	Maintain trail registers so that public use can be estimated	\$500
	Monitor the Van Etten Bridge to ensure that its condition does not impede the safe crossing of the Rondout Creek for visitors to the Peekamoose Lower Field	\$0

VII. Implementation Schedule and Budget

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Appendix A – State Environmental Quality Review Act

The State Environmental Quality Review Act (SEQRA) requires that all agencies determine whether the actions they undertake may have a significant impact on the environment. The intent of the legislation is to avoid or minimize adverse impact on the resource. The guidelines established in the CPSLMP for developing unit management plans express these same concerns. Any development within the Sundown Wild Forest Unit presented in the plan must take into consideration environmental factors to ensure that such development does not degrade that environment. The overall intent of this UMP is to identify mitigation measures to avoid or minimize significant adverse environmental impacts to the natural resources of the State within the unit. Any reconstruction or developments within the confines of this unit will take environmental factors into account to ensure that such development does not degrade the resource.

SEQRA requires the consideration of environmental factors early in the planning stages of any proposed action(s) that are undertaken, funded or approved by a local regional, or state agency. A Long Environmental Assessment Form (LEAF) is used to identify and analyze relevant areas of environmental concern based upon the management actions in the UMP.

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Appendix B – General Environmental Impact Statement for State Forest Lands

STATE ENVIRONMENTAL QUALITY REVIEW ACT

This plan and the activities it recommends will be in compliance with State Environmental Quality Review (SEQR), 6 NYCRR Part 617. The State Environmental Quality Review Act (SEQRA) requires the consideration of environmental factors early in the planning stages of any proposed action(s) that are undertaken, funded or approved by a local, regional or State agency. The Strategic Plan for State Forest Management (SPSFM) serves as the Generic Environmental Impact Statement (GEIS), regarding management activity on State Forests. To address potential impacts, the SPSFM establishes SEQR analysis thresholds for each category of management activity.

Management actions in this Plan are within the thresholds established in the SPSFM, therefore these actions do not require additional SEQR. Any future action that does not comply with established thresholds will require additional SEQR prior to conducting the activity.

Reasons Supporting This Determination:

1. The Department will apply best management practices for new trail and parking facilities construction. These practices include, but are not limited to, the establishment of erosion control measures such as water bars and maximum average slope thresholds.
2. None of the other actions listed include any activities deemed outside of the scope of the SPFGIEIS for management of state lands

This Unit Management Plan (UMP) does not propose pesticide applications of more than 40 acres, any clearcuts of 40 acres or larger, or prescribed burns in excess of 100 acres. Therefore, the actions in the plan do not exceed the thresholds set forth in the Strategic Plan/Generic Environmental Impact Statement for State Forest Management.

This Unit Management Plan also does not include any of the following:

Appendix B – General EIS for State Forest Lands

1. Forest management activities occurring on acreage occupied by protected species ranked S1, S2, S3, G1, G2 or G3
2. Pesticide applications adjacent to plants ranked S1, S2, G1, G2 or G3
3. Aerial pesticide spraying by airplane or helicopter
4. Any development of facilities with potable water supplies, septic system supported restrooms, camping areas with more than 10 sites or development in excess of other limits established in this plan.
5. Well drilling plans
6. Well pad densities of greater than one well pad in 320 acres or which does not comply with the limitations identified through a tract assessment
7. Carbon injection and storage or waste water disposal

Therefore, the actions proposed in this UMP will be carried out in conformance with the conditions and thresholds established for such actions in the Strategic Plan/Generic Environmental Impact Statement, and do not require any separate site-specific environmental review (see 6 NYCRR 617.10[d]).

Actions not covered by the Strategic Plan/Generic Environmental Impact Statement

Any action taken by the Department on this unit that is not addressed in this Unit Management Plan and is not addressed in the Strategic Plan/Generic Environmental Impact Statement may need a separate site-specific environmental review.

Appendix C – Glossary

As used in this plan, the following terms shall have the following meanings:

1. Aircraft - a device for transporting personnel or material that travels through the air and is propelled by a non-living power source contained on or within the device.
2. All Terrain Bicycle - a non-motorized bicycle designed or used for cross-country travel on unimproved roads or trails.
3. All Terrain Vehicle - a motorized vehicle designed or used for cross-country travel on unimproved roads or trails. The term includes jeeps or other 4-wheel drive automobiles, dirt or trail bikes and all forms of "ATVs", "ATCs", and "ORVs", but exclude snowmobiles.
4. Campground - a concentrated, developed camping area with controlled access, which is designed to accommodate a significant number of overnight visitors and may incorporate associated day-use facilities, such as picnicking.
5. Campsite - a specific location where an individual tent, trailer or other vehicle suitable for overnight accommodation may be set up. Included are individual sites within a campground and sites found at various locations within Wilderness and Wild Forest areas. Within a campground, they are specifically designated; outside a campground they may or may not be designated.
6. Cross-Country Ski Trail - a marked and maintained path or way for cross country ski or snowshoe travel, which has the same dimensions and character and may also serve as a foot trail, designed to provide reasonable access in a manner causing the least effect on the surrounding environment and not constructed, maintained or groomed with the use of motor vehicles.
7. Fire Ring - a temporary cluster of rocks designed to contain and control campfires which may contain, in fire sensitive areas, a cement slab.
8. Fish Barrier Dam - a man-made device or structure used to prevent the upstream or downstream migration of fish for protecting a high-value fishery or population of fish indigenous to the protected body of water.
9. Foot Trail - a marked and maintained path or way for foot travel located and designed to provide for reasonable access in a manner causing the least effect on the surrounding environment.
10. Horse Barn - a rustic structure, open on at least 2 sides, designed to provide temporary shelter for a small number of horses.

Appendix C – Glossary

11. Horse Trail - a path marked and maintained for travel by horses, located and designed to provide reasonable access in a manner causing the least effect on the local environment.
12. Improvement - any changes in or addition to land that materially affects the existing use, condition or appearance of the land or any vegetation on it. These include but are not limited to foot and horse trails, roads, jeep trails, State trucks trails, snowmobile trails, trail heads, picnic areas and campsites.
13. Lean-to - an open front shelter made of natural materials suitable for temporary or transient residence, constructed according to a standard Department of Environmental Conservation plan and located so as to provide shelter in a manner least intrusive on the surrounding environment.
14. Motor Vehicle - a device for transporting personnel, supplies or material that uses a motor or an engine of any type for propulsion and has wheels, tracks, skids, skis, air cushion or other contrivance for traveling on or adjacent to; air, land and water or through water. The term includes such vehicles as automobiles, trucks, jeeps, motorbikes, all-terrain vehicles, duffle carriers, snowcats, bulldozers and other earth moving equipment and motorboats, but does not include snowmobiles.
15. Motorboat - a device for transporting personnel or material that travels over, on or under the water and is propelled by a non-living power source on or within the device.
16. Motorized Equipment - machines not designed for transporting personnel, supplies or material, that use a motor, engine or other non-living power source to accomplish a task. The term includes such machines as chain saws, brush saws, rotary or other mowers, rock drills, cement mixers and generators.
17. Natural Materials - construction components drawn from the immediate project site or materials brought into the construction site that conform in size, shape and physical characteristics to those naturally present in the vicinity of the project site. Such materials include stone, logs and sawn and treated timber. Natural materials may be fastened or anchored by use of bolts, nails, spikes or similar means.
18. Non-conforming Use - any structure, improvement or human use that does not comply with the guidelines specified in the master plan for the land classification where it exists or would take place.
19. Primitive Tent Site - a designated tent site of an undeveloped character providing space for not more than 3 tents, which may have an associated pit privy and fire ring, designed to accommodate a maximum of 9 people on a temporary or transient basis and located so as to accommodate the need for shelter in a manner least obtrusive on the surrounding environment.
20. Ranger Stations or Ranger Cabins - enclosed buildings built or maintained by the Department of Environmental Conservation suitable for human habitation or occupied

seasonally or year-round by administrative personnel to help administer lands and public use under the jurisdiction of the department.

21. River - any section, portion, or tributary of a flowing body of water, including a river, stream, creek, run, kill, rill, branch or lake.
22. River Area - a river and its immediate surroundings, including river banks and the land on both sides of the river.
23. Road - an improved way designed for travel by motor vehicles and: either maintained by a state agency or a local government and open to the general public; or maintained by private persons or corporations primarily for private use but which may also be partly or completely open to the general public for all or a segment thereof; or maintained by the Department of Environmental Conservation and open to the public on a discretionary basis; or maintained by the Department of Environmental Conservation for administrative use only.
24. Snowmobile - motorized vehicle designed primarily to travel on snow or ice by means of skis, skids, tracks or other devices. It is specifically excluded from the definition of "motor vehicles" in Title 6NYCRR and the Vehicle and Traffic Law
25. Snowmobile Trail - a marked trail designed by the Department of Environmental Conservation on which snowmobiles are allowed to travel when it is covered by snow or ice.
26. State Truck Trail - an improved way maintained by the Department of Environmental Conservation for the principal purpose of facilitating administration of State lands or to allow access for firefighting equipment and not normally open to the public for use by motorized vehicles.
27. Structure - any object constructed, installed or placed on land to facilitate its use, including but not limited to bridges, buildings, ranger stations or ranger cabins, sheds, lean-tos, pit privies, picnic tables, horse barns, horse hitching posts and rails, fire towers, observer cabins, telephone and electric light lines, mobile homes, campers, trailers, signs, docks, dams and stream improvement structures.
28. Trail Head - a point of entrance to state land which may contain some or all the following: vehicle parking, trail signs and peripheral visitor registration structure.

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Appendix D – Wildlife

Breeding Bird Atlas Tables, State Wildlife Action Plan 2015 Predicted, Confirmed Species of Special Concern

Bird Breeding Species in Atlas Blocks: 5462A,5462B,5462D 5564A, 5364D, 5463C, 5364B, 5564D, 5564C, 5563A, 5363D, 5562A, 5363A, 5563C, 5463D, 5464A, 5563B, 5463B, 5463A, 5363B, 5362B, 5364C, 5564B, 5364A, 5664C, 5263B,5363C,5263D, 5464D, 5464C.		
Common Name	Scientific Name	NY Legal Status
American Black Duck	<i>Anas rubripes</i>	Game Species
Acadian Flycatcher	<i>Empidonax virescens</i>	Protected
Alder Flycatcher	<i>Empidonax alnorum</i>	Protected
American Crow	<i>Corvus brachyrhynchos</i>	Game Species
American Goldfinch	<i>Spinus tristis</i>	Protected
American Kestrel	<i>Falco sparverius</i>	Protected
American Redstart	<i>Setophaga ruticilla</i>	Protected
American Redstart	<i>Setophaga ruticilla</i>	Protected
American Redstart	<i>Setophaga ruticilla</i>	Protected
American Robin	<i>Turdus migratorius</i>	Protected
American Woodcock	<i>Scolopax minor</i>	Game Species
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Baltimore Oriole	<i>Icterus galbula</i>	Protected
Bank swallow	<i>Riparia riparia</i>	Protected
Barn Swallow	<i>Hirundo rustica</i>	Protected
Barred Owl	<i>Strix varia</i>	Protected
Belted Kingfisher	<i>Megaceryle alcyon</i>	Protected
Bicknell's Thrush	<i>Catharus bicknelli</i>	Protected-Special Concern
Black Vulture	<i>Coragyps atratus</i>	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	Protected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Protected
Blackburnian Warbler	<i>Dendroica fusca</i>	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	Protected
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	Protected
Blue Jay	<i>Cyanocitta cristata</i>	Protected
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Protected
Blue-headed Vireo	<i>Vireo solitaries</i>	Protected

Appendix D – Wildlife

Common Name	Scientific Name	NY Legal Status
Blue-winged Warbler	<i>Vermivora pinus</i>	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	Protected
Broad-winged Hawk	<i>Buteo platypterus</i>	Protected
Brown Creeper	<i>Certhia Americana</i>	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	Protected
Canada Goose	<i>Branta Canadensis</i>	Game Species
Canada Wren	<i>Wilsonia Canadensis</i>	Protected
Carolina Wren	<i>Thryothorus ludovicianus</i>	Protected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Protected
Chimney Swift	<i>Chaetura pelagica</i>	Protected
Chipping Sparrow	<i>Spizella passerine</i>	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Protected
Common Grackle	<i>Quiscalus quiscula</i>	Protected
Common Merganser	<i>Mergus merganser</i>	Game Species
Common Raven	<i>Corvus corax</i>	Protected
Common Raven	<i>Corvus corax</i>	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	Protected
Cooper's Hawk	<i>Accipiter cooperii</i>	Protected-Special Concern
Dark-eyed Junco	<i>Junco hyemalis</i>	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	Protected
Eastern Bluebird	<i>Sialia sialis</i>	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Protected
Eastern Meadowlark	<i>Sturnella magna</i>	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	Protected
Eastern Screech-Owl	<i>Megascops asio</i>	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	Protected
European Starling	<i>Sturnus vulgaris</i>	Unprotected
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Protected
Field Sparrow	<i>Spizella pusilla</i>	Protected
Fish Crow	<i>Corvus ossifragus</i>	Protected
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Protected-Special Concern
Gray Catbird	<i>Dumetella carolinensis</i>	Protected
Great Blue Heron	<i>Ardea Herodias</i>	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Protected
Great Horned Owl	<i>Bubo virginianus</i>	Protected

Common Name	Scientific Name	NY Legal Status
Green Heron	<i>Butorides virescens</i>	Protected
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	Protected
Hermit Thrush	<i>Catharus guttatus</i>	Protected
Hooded Merganser	<i>Lophodytes cucullatus</i>	Game Species
Hooded Warbler	<i>Wilsonia citrina</i>	Protected
House Finch	<i>Carpodacus mexicanus</i>	Protected
House Sparrow	<i>Passer domesticus</i>	Unprotected
House Wren	<i>Troglodytes aedon</i>	Protected
Indigo Bunting	<i>Passerina cyanea</i>	Protected
Killdeer	<i>Charadrius vociferous</i>	Protected
Least Flycatcher	<i>Empidonax minimus</i>	Protected
Louisiana Waterthrush	<i>Seiurus motacilla</i>	Protected
Magnolia Warbler	<i>Dendroica magnolia</i>	Protected
Mallard	<i>Anas platyrhynchos</i>	Game Species
Mourning Dove	<i>Zenaida macroura</i>	Protected
Mute Swan	<i>Cygnus olor</i>	Protected
Nashville Warbler	<i>Vermivora ruficapilla</i>	Protected
Northern Bobwhite	<i>Colinus virginianus</i>	Game Species
Northern Cardinal	<i>Cardinalis cardinalis</i>	Protected
Northern Flicker	<i>Colaptes auratus</i>	Protected
Northern Goshawk	<i>Accipiter gentilis</i>	Protected-Special Concern
Northern Mockingbird	<i>Mimus polyglottos</i>	Protected
Northern Parula	<i>Parula Americana</i>	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	Protected
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Protected
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Protected
Orchard Oriole	<i>Icterus spurius</i>	Protected
Osprey	<i>Pandion haliaetus</i>	Protected-Special Concern
Ovenbird	<i>Seiurus aurocapilla</i>	Protected
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Threatened
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Protected
Pine Warbler	<i>Dendroica pinus</i>	Protected
Prairie Warbler	<i>Dendroica discolor</i>	Protected
Purple Finch	<i>Carpodacus purpureus</i>	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	Protected
Red-breasted Nuthatch	<i>Sitta Canadensis</i>	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	Protected

Appendix D – Wildlife

Common Name	Scientific Name	NY Legal Status
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Protected-Special Concern
Red-shouldered Hawk	<i>Buteo lineatus</i>	Protected-Special Concern
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Protected
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Game Species
Rock Pigeon	<i>Columba livia</i>	Unprotected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Protected
Ruffed Grouse	<i>Bonasa umbellus</i>	Game Species
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	Protected
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Protected-Special Concern
Song Sparrow	<i>Melospiza melodia</i>	Protected
Spotted Sandpiper	<i>Actitis macularius</i>	Protected
Swainson's Thrush	<i>Catharus ustulatus</i>	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	Protected
Turkey Vulture	<i>Cathartes aura</i>	Protected
Veery	<i>Catharus fuscescens</i>	Protected
Vesper Sparrow	<i>Pooecetes gramineus</i>	Protected-Special Concern
Warbling Vireo	<i>Vireo gilvus</i>	Protected
Whip-poor-will	<i>Caprimulgus vociferous</i>	Protected-Special Concern
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Protected
White-eyed Vireo	<i>Vireo griseus</i>	Protected
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Protected
Wild Turkey	<i>Meleagris gallopavo</i>	Game Species
Willow Flycatcher	<i>Empidonax traillii</i>	Protected
Winter Wren	<i>Troglodytes troglodytes</i>	Protected
Wood Duck	<i>Aix sponsa</i>	Game Species
Wood Thrush	<i>Hylocichla mustelina</i>	Protected
Worm-eating Warbler	<i>Helmitheros vermivorum</i>	Protected
Yellow Warbler	<i>Dendroica petechial</i>	Protected
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Protected
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	Protected

Common Name	Scientific Name	NY Legal Status
Yellow-rumped Warbler	<i>Dendroica coronate</i>	Protected
Yellow-throated Vireo	<i>Vireo flavifrons</i>	Protected

Appendix D – Wildlife

Confirmed or Predicted Species of Special Concern by SWAP		
Common Species	Scientific Name	SCGN Number
A geometrid moth (Jack pine looper)	<i>Macaria marmorata</i>	4
A geometrid moth (sandplain euchlaena)	<i>Euchlaena madusaria</i>	4
A mayfly	<i>Acentrella barbarae</i>	4
A mayfly	<i>Procloeon vicinum</i>	4
A Noctuid Moth	<i>Phoberia ingenua</i>	4
A noctuid moth	<i>Apamea inordinata</i>	4
A noctuid moth (Pine Pinion Moth)	<i>Lithophane lepida lepida</i>	4
A noctuid moth (shadowy arches)	<i>Drasteria adumbrata</i>	4
A noctuid moth (switchgrass dart)	<i>Dichagyris acclivis</i>	4
A noctuid moth (waxed sallow)	<i>Chaetagnaea cerata</i>	3
A notodontid moth (prominent moth)	<i>Heterocampa varia</i>	4
A slug moth (pin-striped slug moth)	<i>Monoleuca semifascia</i>	4
A Stonefly	<i>Alloperla leonarda</i>	4
A Stonefly	<i>Isoperla gibbsae</i>	3
A Stonefly	<i>Isoperla myersi</i>	4
Acadian Swordgrass moth	<i>Xylena thoracica</i>	4
Alleghany woodrat	<i>Neotoma magister</i>	2
American bittern	<i>Botaurus lentiginosus</i>	3
American Black Duck	<i>Anas rubripes</i>	2
American kestrel	<i>Falco sparverius</i>	3
American Pygmy Shrew	<i>Sorex hoyi</i>	4
American three-toed Shrew	<i>Picoides tridactylus</i>	2
American woodcock	<i>Scolopax minor</i>	3
Appalachian Tiger Beetle	<i>Cicindela ancocisconensis</i>	2
Bald Eagle	<i>Haliaeetus leucocephalus</i>	3
Barn owl	<i>Tyto alba</i>	2
Barrens buckmoth (Inland &	<i>Hemileuca maia maia</i>	3
Barrens itame	<i>Speranza exonerata</i>	4
Bay-breasted warbler	<i>Setophaga castanea</i>	2
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>	3
Black-bordered lemon moth	<i>Marimatha nigrofimbria</i>	4
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	3
Blueberry gray	<i>Glena cognataria</i>	4
Blue-spotted salamander	<i>Ambystoma laterale</i>	1
Blue-winged teal	<i>Anas discors</i>	3
Blue-winged warbler	<i>Vermivora cyanoptera</i>	3
Bobolink	<i>Dolichonyx oryzivorus</i>	2

Common Species	Scientific Name	SCGN Number
Bog turtle	<i>Glyptemys muhlenbergii</i>	1
Brown thrasher	<i>Toxostoma rufum</i>	2
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	2
Canada warbler	<i>Cardellina canadensis</i>	2
Cerulean Warbler	<i>Setophaga cerulea</i>	3
Checkered white	<i>Pontia protodice</i>	3
Coastal barrens buckmoth	<i>Hemileuca maia maia</i>	3
Common goldeneye	<i>Bucephala clangula</i>	3
Common nighthawk	<i>Chordeiles minor</i>	2
Common ribbonsnake	<i>Thamnophis sauritus sauritus</i>	3
Devil crawfish	<i>Cambarus diogenes</i>	4
Dickcissel	<i>Spiza americana</i>	4
Eastern cricket frog	<i>Acris crepitans</i>	2
Eastern cricket frog	<i>Acris crepitans</i>	2
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	3
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	3
Eastern Fence Lizard	<i>Sceloporus undulatus</i>	3
Eastern hog-nosed snake	<i>Heterodon platirhinos</i>	2
Eastern long-tailed salamander	<i>Eurycea longicauda</i>	2
Eastern massasauga	<i>Sistrurus catenatus catenatus</i>	2
Eastern meadowlark	<i>Sturnella magna</i>	2
Eastern ratsnake	<i>Pantherophis alleghaniensis</i>	3
Eastern spadefoot	<i>Scaphiopus holbrookii</i>	3
Eastern spiny softshell	<i>Apalone spinifera spinifera</i>	2
Eastern tiger salamander	<i>Ambystoma tigrinum</i>	2
Eastern wormsnake	<i>Carphophis amoenus</i>	3
Four-toed salamander	<i>Hemidactylium scutatum</i>	2
Fowlers Toad	<i>Anaxyrus fowleri</i>	3
Frosted elfin	<i>Callophrys irus</i>	2
Frosted elfin	<i>Callophrys irus</i>	2
Gaspe Sallfly	<i>Utaperla gaspesiana</i>	4
Golden Eagle	<i>Aquila chrysaetos</i>	3
Golden-winged warbler	<i>Vermivora chrysoptera</i>	1
Gorgone checkerspot	<i>Chlosyne gorgone</i>	4
Grasshopper sparrow	<i>Ammodramus savannarum</i>	2
Green-faced clubtail	<i>Gomphus viridifrons</i>	2
Henslow's sparrow	<i>Ammodramus henslowii</i>	2

Appendix D – Wildlife

Common Species	Scientific Name	SCGN Number
Herodias/pine barrens underwing	<i>Catocala herodias</i>	3
Illinois Snowfly	<i>Allocaenia illinoensis</i>	3
Jefferson salamander	<i>Ambystoma jeffersonianum</i>	4
Jersey jair underwing	<i>Catocala jair</i>	3
Karner blue	<i>Plebejus melissa samuelis</i>	2
Kentucky Warbler	<i>Geothlypis formosus</i>	1
Lawrence sallfly	<i>Alloperla voinae</i>	4
Least weasel	<i>Mustela nivalis</i>	4
Little blue heron	<i>Egretta caerulea</i>	3
Loggerhead shrike	<i>Lanius ludovicianus</i>	2
Long-eared owl	<i>Asio otus</i>	3
Louisiana waterthrush	<i>Parkesia motacilla</i>	3
Marbled salamander	<i>Ambystoma opacum</i>	3
Mink frog	<i>Lithobates septentrionalis</i>	4
Mossy valvata (boreal turreted snail)	<i>Valvata sincera</i>	4
New England cottontail	<i>Sylvilagus transitionalis</i>	2
None	<i>Ameletus tarteri</i>	3
None	<i>Ameletus tertius</i>	4
None	<i>Baetis rusticans</i>	4
None	<i>Dannella provonshai</i>	3
None	<i>Epeorus punctatus</i>	3
None	<i>Epeorus suffusus</i>	3
None	<i>Eurylophella bicoloroides</i>	4
None	<i>Leucrocuta thetis</i>	4
None	<i>Nixe rusticalis</i>	4
None	<i>Plauditus gloveri</i>	4
None	<i>Procloeon mendax</i>	4
None	<i>Procloeon ozburni</i>	4
None	<i>Procloeon simile</i>	4
None	<i>Rhithrogena anomala</i>	4
None	<i>Siphonurus barbaroides</i>	3
None	<i>Siphonurus barbarus</i>	3
None	<i>Sparbarus maculatus</i>	4
North American least shrew	<i>Cryptotis parva</i>	4
Northern Barrens Tiger Beetle	<i>Cicindela patruela</i>	2
Northern black racer	<i>Coluber constrictor</i>	3
Northern bobwhite	<i>Colinus virginianus</i>	2
Northern Coal Skink	<i>Plestiodon anthracinus anthracinus</i>	3
Northern copperhead	<i>Agkistrodon contortrix</i>	3

Common Species	Scientific Name	SCGN Number
Northern goshawk	<i>Accipiter gentilis</i>	3
Northern harrier	<i>Circus cyaneus</i>	3
Northern oak hairstreak	<i>Satyrium favonius ontario</i>	2
Northern red salamander	<i>Pseudotriton ruber ruber</i>	4
Olive-sided flycatcher	<i>Contopus borealis</i>	2
Olympia marble	<i>Euchloe olympia</i>	4
One-Spotted Tiger Beetle	<i>Cicindela unipunctata</i>	4
Pale green pinion moth	<i>Lithophane viridipallens</i>	4
Peregrine falcon	<i>Falco peregrinus</i>	3
Persius duskywing	<i>Erynnis persius persius</i>	1
Pine barrens zanclognatha	<i>Zanclognatha martha</i>	4
Pink sallow	<i>Psectraglaea carnosa</i>	3
Prairie warbler	<i>Setophaga discolor</i>	3
Prothonotary warbler	<i>Protonotaria citrea</i>	1
Pygmy snaketail	<i>Ophiogomphus howei</i>	2
Queensnake	<i>Regina septemvittata</i>	2
Rapids clubtail	<i>Gomphus quadricolor</i>	3
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	2
Red-shouldered hawk	<i>Buteo lineatus</i>	3
Regal moth	<i>Citheronia regalis</i>	3
Ruffed grouse	<i>Bonasa umbellus</i>	3
Rusty blackbird	<i>Euphagus carolinus</i>	2
Scarlet tanager	<i>Piranga olivacea</i>	3
Scotia sallfly	<i>Alloperla vostoki</i>	4
Sedge wren	<i>Cistothorus platensis</i>	2
Septima's clubtail	<i>Gomphus septima</i>	2
Short-eared owl	<i>Asio flammeus</i>	2
Short-headed gartersnake	<i>Thamnophis brachystoma</i>	3
Skillet clubtail	<i>Gomphus ventricosus</i>	2
Small-footed myotis	<i>Myotis leibii</i>	3
Smooth greensnake	<i>Opheodrys vernalis</i>	3
Snowy egret	<i>Egretta thula</i>	3
Southern grizzled skipper	<i>Pyrgus wyandot</i>	2
Spine-crowned clubtail	<i>Gomphus abbreviatus</i>	2
Spiny Salmonfly	<i>Pteronarcys comstocki</i>	4
Spotted turtle	<i>Clemmys guttata</i>	2
Stinging rose caterpillar moth	<i>Parasa indetermina</i>	4
Tennessee Warbler	<i>Oreothlypis peregrina</i>	4
Timber rattlesnake	<i>Crotalus horridus</i>	2

Appendix D – Wildlife

Common Species	Scientific Name	SCGN Number
Tomah Mayfly	<i>Siphonisca aerodromia</i>	2
Upland sandpiper	<i>Bartramia longicauda</i>	2
Whip-poor-will	<i>Caprimulgus vociferus</i>	2
Wood thrush	<i>Hylocichla mustelina</i>	3
Wood turtle	<i>Glyptemys insculpta</i>	2
Woodland box turtle	<i>Terrapene carolina</i>	2
Worm-eating warbler	<i>Helmitheros vermivorum</i>	3
Yellow-breasted chat	<i>Icteria virens</i>	1

Appendix E – Catskill Park State Land Master Plan Guidelines for Wild Forest

Definition

A wild forest area is an area of Forest Preserve land whose character as a natural plant and animal community receives the same degree of protection under Article XIV of the Constitution as in areas classified as wilderness, but which differs from wilderness in that generally:

The physical characteristics of wild forest areas are capable of withstanding higher levels of recreational use;

Wild forest areas convey less of a sense of remoteness and provide fewer outstanding opportunities for solitude for visitors, and therefore;

Wild forest areas are managed to provide opportunities for a greater variety of recreational activities and a higher intensity of recreational use.

Basic Guidelines for Wild Forest Management and Use

In wild forest areas:

- No additions or expansion of existing nonconforming uses will be permitted, and
- Existing nonconforming uses will be phased out as rapidly as possible by the Department.
- No new nonconforming uses will be permitted.

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Appendix F – NYS Forestry Best Management Practices Guidelines

Log Decks and Landings: The following recommendations should be considered when planning, locating, and constructing landings and roads in and out.

1. Use existing landings if possible. Close existing landings next to streams and water bodies unless construction of new landings would cause greater harm to water quality than using existing landings.
2. Landings should be at least 200 feet from water bodies and wetlands.
3. If the landing must be closer than 200 feet to a water body or wetland, use straw bales, silt fencing, or both to prevent erosion.
4. Locate landings on frozen ground or firm, well drained soils with a slight slope, or on ground to promote efficient drainage. Landings may be crowned to allow for drainage.
5. Size all landings to the minimum necessary for the acreage to be harvested, yet with enough room for efficient equipment operation and product sorting and removal.
6. Locate residue piles such as slash, sawdust or chips away from drainages where runoff may wash residue into streams, lakes or wetlands.
7. Locate diversions such as water bars on the skid trail leading into the landing. Construct skid trails and roads to prevent water from flowing into the landing and ponding, where compaction from the machinery has occurred.
8. Place coarse rock or stone to shake mud off vehicles before entering public highways.
9. Remove all mud tracked onto public roads immediately.
10. During muddy conditions, use coarse gravel over geotextiles or rubber mats.
11. Check hoses and fittings regularly to prevent leaks of lubricants and hydraulic fluids. Repair all leaks immediately.
12. Have oil absorbent material on the landing in case of fluid spill or leak.
13. If the machinery is parked for an extended period of time, place a mat under the equipment to catch any slow leaks.
14. Remove all unnatural debris such as cans, papers, discarded tires, cables, chains and other junk on a daily basis.
15. Scatter woody debris uniformly to preserve the appearance of the site.
16. If necessary, soil should be stabilized by seeding and mulching at the end of the operation. (See Post-Harvest Wrap-up)

Appendix F – NYS Forestry Best Management Practices Guidelines

Forest Roads: The following recommendations should be considered when planning, locating and constructing forest access roads.

1. If necessary, consult a professional for guidance in designing and constructing forest roads.
2. Examine existing access routes to determine whether they are the best routes to use. Consider whether relocation would provide better long-term use.
3. Minimize total road mileage and ground disturbance. Required to facilitate an economical harvest.
4. Minimize the number of water crossings.
5. Identify appropriate stabilization, drainage and erosion control measures.
6. Locate roads to minimize the amount of cut and fill.
7. Locate roads away from streams, ponds, lakes, and wetlands whenever possible, and provide adequate filter strips.

Slope of land between road and water body	Recommended buffer width in feet (slope distance)
0-10	50
11-20	51-70
21-40	71-110
41-70	111-150

8. Avoid locating roads on unstable slopes subject to slumping or creeping.
9. Avoid locating roads with grades in excess of 10 percent. Plan routes to avoid these areas. On highly erodible soils, maximum grades of 5 percent are recommended.
10. Control the flow of surface water on roads by using appropriate road cross-section and water diversion structures within the roadbed itself.
11. Install cross drains and diversion ditches to avoid carrying water long distances in roadside ditches.
12. A 15" pipe culvert is the minimum recommended size for cross drainage. Smaller culverts can clog with debris and require frequent maintenance. Spacing of cross drainage is dependent upon slope:

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Road Grade (%)	Distance (Feet)	Road Grade (%)	Distance (Feet)
0-2	500-300	11-15	140-136
3-4	250-180	16-20	126-120
6-10	167-140	21+	100

13. Install culverts at grades 2 percent more than ditch grade and angled at least 30 degrees from perpendicular to the flow of water.
14. Size culverts and other drainage structures large enough to minimize impact on water flow and quality.
15. Avoid draining surface water from roads directly into streams ponds and wetlands. Instead, water should be drained into a filter strip consisting of a vegetated area.
16. If necessary, build sediment traps into ditches to catch debris as it travels down the ditch.
17. Place any excavated material in a manner that will not impede water flow or will not potentially increase sedimentation of surface water.
18. Deposit excess material in stable locations away from streams, ponds, and wetlands.
19. Avoid placing excavated material in filter strips.
20. Shape in-slopes and backslopes to promote revegetation and soil stabilization.
21. Slopes of 1:1 or flatter are preferred if terrain permits.
22. Compact fill material to reduce entry of water, increase load capacity and minimize settling.
23. Provide adequate drainage for road grades during construction to minimize erosion of unconsolidated materials.
24. Install drainage structures as construction proceeds.
25. Avoid locating roads with sustained grades in excess of 10 percent. On highly erodible soils, maximum sustained grades of 5 percent are recommended.
26. Minimize down-road flow and ponding by constructing new roads with a slight grade (1 or 2 percent). Install broad based dips and waterbars if grades are greater.
27. Crown the road surfaces and excavate ditches where necessary.

28. Compact fill firmly around culverts, paying special attention to the sides and lower portion. Cover the top of culverts with fill to a depth of one-half the pipe diameter of 12 inches, whichever is greater.
29. Use riprap or large boulders to stabilize culvert inlets and outlets to reduce bank and channel erosion and sedimentation.
30. Provide temporary cross-drainage structures such as water bars, during construction, where needed to drain water off road surfaces.
31. Install siltation barriers, such as silt fences and straw bales, during construction in sites where roads and water have close contact for long periods.
32. Vegetative cover is recommended along all roadsides.
33. To prevent erosion before vegetation takes hold, mulch with hay, straw, bark or native vegetation. Hay mulch should be applied at a rate of 60 bales/acre.
34. Inspect and repair erosion control measures on a regular basis to ensure they remain functional.
35. Avoid crossing wetlands if possible. All federal, state, and local permits must be secured if a wetland is classified and has to be crossed.
36. Minimize road mileage if a wetland is to be crossed.
37. Determine the type and depth of wetland sub-soils to ensure proper design and construction.
38. Minimize road widths.
39. Design approach to wetlands so that surface runoff carrying potential sediment is diverted before entering the wetland.
40. Plan to remove temporary fills and structures to the extent practical when use of wetland road is complete.
41. Provide cross-drainage by employing one or both of the following techniques:
 - Use construction methods that allow free water to flow throughout the entire road bed.
 - Place culverts or other cross-drain structures at each end of each wetland crossing at intermediate low points.
42. Space culverts or other cross-drainage structures at maximum 300-foot intervals to ensure adequate drainage throughout the wetland road.
43. When constructing roads in a wetland, construct all road embankments with clean fill or other suitable material.
44. When constructing roads in a wetland, create ditches near wetland crossings to intercept surface and subsurface water to, through, and away from culverts.
45. Avoid having ditches that will result in the drainage of the wetland.
46. Employ sediment control techniques such as straw bales and silt fencing to prevent movement to open water when placing fill during construction.

47. Anchor temporary structures at one end to allow the structures to move aside during high water flows.
48. During winter operations, construct temporary stream crossing where practical. Examples include ice bridges, timber bridges, log materials, and rubber mats.
49. During winter operations, construct stream crossings to prevent water from backing up.
50. During winter operations, install all temporary structures that could block waterflow in such a manner that they can easily be removed prior to breakup.

Skid Trails: The following recommendations should be considered when planning, locating, and constructing skid trails.

1. Use existing trails if they provide the best long-term access. Relocate existing trails if access and environmental impact can be improved.
2. Consider the topography in the location of skid roads and avoid steep slopes whenever possible.
3. Where possible, keep skid trail grades less than 15 percent. Where steep grades are unavoidable, break the grade, install drainage structures, and use soil-stabilization practices where needed to minimize runoff and erosion.
4. Grades greater than 15 percent should not exceed 300 feet in length.
5. Layout skid trails to use poorly formed, low-value trees as “bumper trees” to reduce residual stand damage.
6. Every effort should be made to preserve advanced regeneration.
7. Minimize debarking and other damage to residual trees.
8. Watch the weather forecast and plan ahead for severe storms. Most sediment enters a stream following severe storms. Water bars and other diversion methods are the best way to keep sediment-laden water from entering streams at crossings. Construct water turnouts and water bars as necessary.
9. All woods roads and skid trails should be repaired, smoothed and seeded after logging, and left in a stable condition to resist erosion.

Stream Crossings: The following recommendations should be considered when planning, and constructing stream crossings.

1. Use stream crossings only when necessary.
2. Keep the number of stream crossings to a minimum.
3. Cross streams by the most direct route.
4. Find crossing sites that have low, stable banks, a firm stream bottom, minimal surface runoff and gentle slopes along the approaches whenever possible.
5. Stabilize the soil around all culverts and bridges immediately after installation.

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6. Design, construct and maintain stream crossings to avoid disrupting the migration or movement of fish and other aquatic life. Bridges or culverts that retain the natural stream bottom and slope are preferred for this reason.
7. Install stream crossings using materials that are clean, non-erodible, and non-toxic to aquatic life.
8. Install stream crossing structures at right angles to the stream channel.
9. Minimize channel changes and the amount of excavation or fill needed at the crossing by selecting locations where the water channel is straight and unobstructed.
10. Culverts and bridges that are too small can plug up with debris and result in the road washing out or in flooding upstream. Size openings for anticipated water flow by using the following 5 step procedure.
 - Measure stream width from high water mark to high water mark.
 - Measure the depth of the stream from the high-water mark to the stream bed (Measure in several places to determine average depth).
 - Multiply the width by the average depth to determine the square foot cross section of the waterway.
 - For roads that will be used and maintained after the harvest, multiply the total by 2.5 (10-year storm interval). For roads that will be infrequently maintained, multiply the total by 3.5 (25-year storm interval)
 - The total square feet determine the opening size of your bridge.

Stream Width	Depth	Culvert Diameter (Maintained Road)	Culvert Diameter (Unmaintained Road)
18"	6,9, or 12	16, 23, 26	22, 27, 31
24"	6-12	21-30	25-36
30"	6-12	24-34	28-40
36"	6-12	26-37	31-44
48"	6-12	30-43	36-51
60"	12,18,24	48,60,68	57,70,80

For intermittent streams it is often difficult to define a stream channel and take cross section measurements. In this situation, estimate how many uphill acres drain into that point and then use the following table to determine culvert size.

Area (acres)	Pipe Size (inches)	Area (acres)	Pipe Size (inches)
10	18	75	30
20	20	100	34
30	24	150	38
40	26	200	42
50	28		

11. Divert road drainage into undisturbed vegetation, preferably outside the stream management zone so that drainage does not directly enter the stream.
12. Select pipe culverts long enough (at least a foot) so that road fill does not extend beyond the ends of the culvert.

Stream Crossing Construction and Maintenance:

1. Limit construction activity in the water to periods of low or normal flow.
2. Keep use of equipment in the stream to a minimum.
3. Construct a bridge or place fill directly over a culvert to prevent surface road runoff from draining onto the crossing structure and into the stream.
4. Install culverts so there is no change in the stream bottom elevation. Culverts should not cause damming or pooling.
5. Firmly compact fill material around culverts, particularly around the bottom half. Cover the top of the culvert with fill depth to a depth of one-half of the pipe diameter or at least 12 inches, whichever is greater, to prevent crushing.
6. Use riprap around the inlet of the culverts to prevent water from eroding and undercutting the culvert. For permanent installations, use filter fabric under the riprap. In addition, consider using flared-end culvert sections for outfall.
7. Use soil stabilization practices on exposed soil at stream crossings. Use seed and mulch and install temporary sediment control structures such as straw bales or silt fences immediately following construction to minimize erosion into streams. Maintain these practices until the soil is permanently stabilized.

8. Stabilize approaches to bridge, culvert, and ford crossings with aggregate or other suitable material to reduce sediment entering the stream.
9. Anchor temporary structures on one end with a cable or other device so they do not float away during high water. Install them so they can be easily removed when no longer used, regardless of the season.
10. Keep culverts and bridges clear of debris so that water can pass unimpeded at all times. This is especially important in areas where beavers are present.
11. On un-maintained roads, it is recommended that first consideration be given to using temporary crossing devices that can be removed.
 - Temporary Bridges: Portable bridges are recommended for un-maintained roads or skid trails. They are easily installed and are a cost-effective alternative to pipe culverts and other permanent structures.
 - Fords: Fords may be an option for crossing dry stream beds or where fording would cause minimal water quality impacts. Fords should be located where stream banks are low. Steams should have a firm rock or gravel base otherwise stabilizing material such as reinforced concrete planks, crushed rock, riprap or rubber mats on the stream beds.

Post Harvest Wrap-up:

1. All unnatural debris such as cans, paper, discarded tires, metal parts, and other junk must be removed immediately.
2. Exposed soils prone to erosion should be stabilized and if necessary, seeded and mulched at the end of the operation.
3. Many erosive areas can be stabilized with seedlings of appropriate grasses and legumes. Species selection varies with soil type, drainage class, and degree of shading. Most seedlings should be immediately mulched with hay or straw at 2 tons per acre (about 2.5 – 40-pound bales per 1000 square feet) In forest land erosion control, straw or hay are the preferred mulches. These may require the use of mulch netting to be held on steep slopes (over 30 percent).
4. Landings should be left free of excess woody debris.
5. Traffic barriers should be placed where appropriate to prevent off-road vehicles from disturbing recently stabilized areas. Barriers should be visible and well-marked, and they should not present a safety hazard.
6. Fill in ruts, and install water bars and erosion barriers to prevent or minimize erosion and sedimentation from roads, skid trails, and landings.
7. Restore watercourses to approximate the natural condition by removing temporary drainage structures and stabilizing the soil along the banks.

8. Inspect erosion control measures periodically and maintain or remove as needed.

Hazardous Materials: The proper storage, handling, and use of hazardous materials is critical to the protection of water quality before, during, and after timber harvesting operations. The following recommendations should be followed when using any hazardous material on the timber harvest operation.

1. Products should be only when necessary to meet objectives and only per the product's label.
2. Less hazardous products or procedures should be considered whenever possible.
3. Equipment should be maintained and stored away from any water bodies.
4. Applications should not be made when wind or expected runoff conditions could cause drift or contamination.
5. Plans for handling spills should be developed during the planning of the harvest.
6. Pesticides and fertilizers should be at proper times and per their labels.
7. Restricted pesticides should only be applied by certified applicators.
8. Buffer strips around water bodies should be identified for applicators.
9. Waste oil, hydraulic fluid, and other hazardous materials should be collected and transported off-site for proper disposal.
10. Maintain a spill containment and cleanup kit appropriate for the equipment being used. At a minimum, kits should contain: plugs and clamps to control hydraulic line breaks, a container to catch leaking fluids, a shovel, and absorbent material such as sawdust or clay granules to clean leaked fluids.
11. All federal, state and local rules and regulations should be followed regarding the use, transport, storage, spillage and disposal of these materials, their containers, and their wash water.

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Appendix G – Soils Series Descriptions

Arnot Series: (ARD, ARF) The Arnot series consists of shallow, somewhat excessively to moderately well drained soils formed in loamy till. Bedrock is at depths of to 10 to 20 inches. Slope ranges from 0 to 70 percent. Mean annual temperature is 47 degrees F, and mean annual precipitation is 38 inches.

Atherton Series: (At) The Atherton series consists of deep, poorly drained and very poorly drained soils formed in water-sorted materials. They are nearly level soils on outwash plains, terraces and kame-kettle landforms. Saturated hydraulic conductivity is moderately high or high in the mineral solum and in the substratum. Slope ranges from 0 through 3 percent. The mean annual temperature is about 49 degrees F, and the mean annual precipitation is about 40 inches.

Bath Series: BnC, BOD, The Bath series consists of very deep, well drained soils formed in till. They are nearly level to steep soils on glaciated uplands. A fragipan is at a depth of 66 to 97 cm (26 to 38 inches) below the soil surface. Slope ranges from 0 to 60 percent. Mean annual temperature is about 8 degrees C (46 degrees F) and mean annual precipitation is about 1080 mm (42 inches).

Castile Series: CgB The Castile series consists of very deep, moderately well drained soils formed in gravelly outwash deposits. They are nearly level to sloping soils on outwash plains, valley trains, kames, and eskers. Saturated hydraulic conductivity is moderately high to high in the mineral solum and high to very high in the substratum. Slope ranges from 0 through 15 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 39 inches.

Chenango Series: CnB The Chenango series consists of very deep, well and somewhat excessively drained soils formed in water-sorted material on outwash plains, kames, eskers, terraces, and alluvial fans. Slope ranges from 0 to 60 percent. Mean annual temperature is 47 degrees F, and mean annual precipitation is 36 inches.

Haven Series: The Haven series consists of very deep, well drained soils formed in loamy over sandy and gravelly outwash. They are nearly level through moderately sloping soils on outwash plains, valley trains, terraces, and water-sorted moraine deposits. Saturated hydraulic conductivity is moderately high or high in the mineral solum and very high in the substratum. Slope ranges from 0 through 15 percent. Mean

Appendix G – Soils Series Descriptions

annual temperature is 50 degrees F. (10 degrees C.), and mean annual precipitation is 47 inches (1194 millimeters).

Hoosic Series: HgA: The Hoosic series consists of very deep, somewhat excessively drained soils formed in glacial outwash. They are nearly level to very steep soils on outwash plains, terraces, kames, eskers, and moraines. Slope ranges from 0 to 60 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 38 inches.

Lackawana Series: LCD, LCF, LEE: The Lackawana series consists of very deep, well drained soils on uplands. They formed in till derived from reddish sandstone, siltstone, and shale. A dense fragipan is present starting at a depth of 43 to 91 cm (17 to 36 in) below the soil surface. Slope ranges from 0 to 55 percent. Mean annual temperature is about 8 degrees C (46 degrees F) and mean annual precipitation is about 1080 mm (42.5 in).

Lamson Series: Lm: The Lamson series consists of very deep, poorly drained and very poorly drained soils formed in glacio-fluvial, glacio-lacustrine and deltaic deposits. They are level and nearly level soils in low areas on glacial lake plains. Slope ranges from 0 to 3 percent but is mostly less than 2 percent. Saturated hydraulic conductivity is moderately high through high in the mineral soil. Mean annual air temperature is 49 degrees F. and mean annual precipitation is 37 inches.

Lordstown Series: LOC: The Lordstown series consists of moderately deep, well drained soils formed till and cryoturbated material derived from siltstone and sandstone on bedrock controlled landforms of glaciated dissected plateaus. They are nearly level to very steep soils on hillsides and hilltops in glaciated bedrock controlled uplands. Slope ranges from 0 to 90 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 39 inches.

Lyons Series: LY: The Lyons series consists of very deep, poorly and very poorly drained soils on upland till plains in depressions and low areas in the landscape. They are occasionally in areas of seeps on gently sloping landscapes. They formed in calcareous till derived from limestone, calcareous shale and sandstone. Slope ranges from 0 to 5 percent. The mean annual temperature is 48 degrees F. and mean annual precipitation is 38 inches.

Menlo Series: Mn, MO: The Menlo series consists of very poorly drained loamy soils formed in subglacial till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level soils in depressions and drainageways of till covered plains and hills. Slope ranges from 0 to 3 percent. Saturated hydraulic

conductivity is moderately low to high in the solum and low to moderately high in the substratum. Mean annual temperature is about 50 degrees F. and mean annual precipitation is about 47 inches.

Middlebury: Mr The Middlebury series consists of very deep, moderately well drained nearly level soils formed in recent alluvium. These soils are on flood plains. Permeability is moderate in the surface layer, subsoil and upper part of the substratum, and rapid or moderately rapid in the lower part of the substratum. Slope ranges from 0 to 3 percent. Mean annual temperature is 49 degrees F. and mean annual precipitation is 36 inches.

Morris Series: MTB: The Morris series consists of very deep, somewhat poorly drained soils formed in till from red sandstone, siltstone, and shale. They have a dense fragipan layer from 25 to 56 cm (10 to 22 in) that restricts root penetration and water movement. Slopes range from 0 to 25 percent. Saturated hydraulic conductivity is moderately high or high above the fragipan and is low or moderately low in the fragipan and substratum. Mean annual precipitation is about 8 degrees C (46 degrees F) and mean annual temperature is about 1080 mm (42.5 in).

Nassau Series: NBF: The Nassau series consists of shallow, somewhat excessively drained soils formed in till. They are nearly level to very steep soils on bedrock controlled glacially modified landforms. Bedrock is at a depth of 10 to 20 inches. Slope ranges from 0 to 70 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 40 inches.

Red Hook Series: Re: The Red Hook series consists of very deep, somewhat poorly drained soils formed in Wisconsinan age glaciofluvial deposits on outwash plains and terraces, stream terraces, and moraines. Saturated hydraulic conductivity is moderately high through high in the mineral solum and substratum. Slope ranges from 0 through 8 percent. The mean annual temperature is about 49 degrees F. and the mean annual precipitation is about 37 inches.

Scriba Series: SdB, SEB: The Scriba series consists of very deep, somewhat poorly drained soils formed in loamy glacial till. These soils are on till plains and concave areas between drumlins. They have a dense fragipan layer that restricts root penetration and water movement. Slope ranges from 0 to 15 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 38 inches.

Tuller: MTB: The Tuller series consists of shallow, somewhat poorly drained soils that formed in thin deposits of till over acid sandstone, siltstone or shale bedrock. These soils are in depressional areas of flatter hilltops and benched sideslopes of dissected

Appendix G – Soils Series Descriptions

uplands. Depth to bedrock is 10 to 20 inches. Slope ranges from 0 to 8 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 39 inches.

Valois Series: VAB, VAD: The Valois series consists of very deep, well drained soils on nearly level to steep lateral moraines along lower valley sides. They formed in till dominated by sandstone, siltstone, or shale. Slope ranges from 0 to 60 percent. Mean annual temperature is 48 degrees F. and mean annual precipitation is 38 inches.

Wellsboro Series: WLB, WOB: The Wellsboro series consists of very deep moderately well and somewhat poorly drained soils formed in till derived from red sandstone, siltstone, and shale. Slope ranges from 0 to 50 percent. Permeability is moderate in the surface and upper subsoil layers and slow or very slow in the lower subsoil and substratum. Mean annual temperature is 48 degrees F and mean annual precipitation is 41 inches.

Appendix H – Classification of Waters

All waters of the state are provided a class and standard designation based on existing or expected best usage of each water or waterway segment.

- The classification AA or A is assigned to waters used as a source of drinking water.
- Classification B indicates a best usage for swimming and other contact recreation, but not for drinking water.
- Classification C is for waters supporting fisheries and suitable for non - contact activities.
- The lowest classification and standard is D.

Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning (TS). Special requirements apply to sustain these waters that support these valuable and sensitive fisheries resources.

Small ponds and lakes with a surface area of 10 acres or less, located within the course of a stream, are part of a stream and are subject to regulation under the stream protection category of Protection of Waters. To determine the classification and standard of given watercourse, contact the Department of Environmental Conservation regional office responsible for the area in which the watercourse is located. Certain waters of the state are protected based on their classification. Streams and small water bodies located in the course of a stream that are designated as C(T) or higher (i.e., C(TS), B, or A) are collectively referred to as "protected streams," and are subject to the stream protection provisions of the Protection of Waters regulations.

The Environmental Resource Mapper (ERM), a web based interactive mapping application developed by DEC, can be used to identify protected streams based on their classification. ERM can also be used to create simple maps that can be submitted as part of the Protection of Waters Permit Application process.

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Appendix I – Discussion of Alternatives for Blue Hole Access

Background

Increased visitation to the Peekamoose Valley Riparian Corridor and the lack of a designated trail from a parking area to the Blue Hole has resulted in people walking along County Route 42 to access the Blue Hole. The Department has considered several trail and parking proposals to provide a safer route for the public to travel to the popular swimming area. To address the public safety hazard the following management alternatives have been considered:

Alternatives

Alternative 1 (preferred alternative)

Construct a new parking lot south of County Route 42 and east of Bear Hole Brook large enough for 30-40 cars to accommodate most Blue Hole users on an average day. Connect the parking area to the Blue Hole through construction of a 1,500-foot accessible trail. The established lot will include two parking spaces that meet accessibility standards.

Construction of a new parking area in this location will eliminate the need to construct and maintain bridges that would be required if alternative 2 or alternative 3 was selected. Alternative 2 and Alternative 3 would require bridge construction over Bear Hole Brook. Alternative 2 also would require the construction of a second bridge 200-feet in length on a very steep and unstable slope on a narrow strip of land between the highway and Rondout Creek.

Alternative 1 will require County Route 42 to be shifted north approximately 20 feet for approximately 200 feet in the area closer to the Blue Hole that precludes trail construction between the highway and Rondout Creek. Once the road is shifted north, the Department will use a portion of the footprint of the current highway to establish the accessible trail to the Blue Hole.

Alternative 1 eliminates the need to construct and maintain two bridges and minimizes future maintenance costs while providing safer access to the Blue Hole.

Estimated cost of Alternative 1: \$400,000

Alternative 2

A 2,700-foot accessible-trail would be constructed from the 12-car existing parking area south of County Route 42 and to the Blue Hole. This accessible trail would require construction of several foot bridges and boardwalks for a total of 400 feet of bridging. One-foot bridge would span Bear Hole Brook. The location of the other bridge is in a 200-foot section where the terrain involves traversing a very steep unstable slope on a narrow strip of land between the highway and Rondout Creek. Alternative 2 is the least cost-effective option. Installation of the footings for these bridges will require significant drilling in the bedrock of the Rondout Creek and will cost approximately \$500,000. The Department will also have to allocate funds to maintain these bridges over the course of the future to ensure that they meet safety standards. Alternative 2 will require significantly more Department resources than Alternative 1. The cost of bridge construction and allocation of money for future bridge maintenance makes Alternative 2 less cost effective than Alternative 1.

Estimated cost of Alternative 2: \$1,000,000

Alternative 3

Construct a 2,750-foot trail on the north side of County Route 42. from the 12-car parking area on the North side of County Route 42 to the Blue Hole. This potential foot trail route has been assessed for accessibility and it has been determined that it would be cost prohibitive for the Department to make a trail on the North side of the road accessible. Alternative 3 would require two road crossings and construction of one 50-foot bridge over Bear Hole brook that would use the existing abutments on the north side of the road bridge. The existing abutments on the bridge would be utilized to facilitate construction and installation of the bridge. Visitors using the trail will need to cross the road at a blind turn to access the Blue Hole.

Alternative 3 requires construction of one bridge so it is more cost effective than Alternative 2 but it requires that visitors cross County Route 42 twice to access the Blue Hole so it does not adequately address the current public safety concerns. Alternative 3 is also not the preferred alternative because the proposed trail would not meet accessibility standards.

Estimated cost of Alternative 3: \$250,000

Alternative 4 Maintain Status Quo/ No Action

The historical use of the area will remain unchanged and visitors will continue to walk along the road to access the Blue Hole. This option poses many public safety concerns. The No Action Alternative is not the preferred alternative because the threat to public safety will persist if people continue to walk on County Route 42 to access the Blue Hole.

Estimated Cost of Alternative 4: \$0

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Appendix J – Blue Hole Day Use Permit System Responsiveness Summary

Assessment of Public Comment for the day use permitting system for visitors to the Blue Hole.

The Department provided a 60-day public comment period from March 29th thru May 28th, 2018 and received 185 written comments in response to the proposed no-cost permitting system for visitors to the Blue Hole. Out of 185 comments, 122 of the comments voiced support for a permit system, 11 comments were opposed to a permit system, and 52 comments were ambiguous in terms of support or opposition towards the permit system. Comments were reviewed, categorized, and summarized. A responsiveness summary was then prepared.

* * *

Comment: I support the no-cost, day-use permit system at blue hole.

Response: We appreciate support for this proposal and will reevaluate at the end of the season.

Comment: Will permits be issued online or at a physical location?

Response: Permits will only be issued online through the Reserve America Website at Reserveamerica.com.

Comment: When will a permit be required to visit the Blue Hole?

Response: A permit will be required to visit the Blue Hole on weekends and holidays between May 15th and October 15th of each year. The permit system will take effect upon publication in the State Register.

Comment: How long in advance of a date can the Blue Hole permit be requested?

Response: The permit can be obtained up to one week in advance but must be obtained more than 24 hours in advance. Weather is a deciding factor for many visitors to the Blue Hole. By limiting how far in advance permits can be acquired, we hope to

Appendix J – Blue Hole Day Use Permit System Responsiveness Summary

reduce the likelihood that some people may get a permit but then not use it. We will evaluate this restriction at the end of the season.

Comment: Will you have someone on the site checking for permits and will there be a sign there telling people where they can get the permit?

Response: Forest Rangers and other law enforcement will be checking permits. Signs are in place with instructions on how to apply for permits. Blue Hole Stewards will provide information, including how to obtain a permit, throughout the summer. Permits will only be available in advance, on line.

Comment: Please install check in booths like the ones at DEC paid campgrounds.

Response: The need for check in booths was considered. Due to various unofficial access points and various logistical constraints, check in booths are not being implemented at this time. The need for check in booths will be reevaluated as necessary.

Comment: Ulster county residents should be exempt from the permits but still be held to all rules and regulations. I would also like the DEC to consider that locals (surrounding townships) are offered permits prior to offering them to the public. No local family should be stopped from going on a weekend because of people who do not live in the area.

Response: Currently all visitors including residents will need a permit to access the Blue Hole on weekends and holidays between May 15th and October 15th. Part of the management decision for not having a permit requirement on weekdays is to allow residents access to the area without a permit.

Comment: I would also like to see each permit come with a "rule sheet" for each person to sign. They should be aware that it is unlawful to litter, etc. It is heartbreaking to see that many people leave their dirty diapers, etc. there.

Response: Application for the permit includes an acknowledgement checklist that highlights the rules and special regulations.

Comment: There is a movement today in the northeast to preserve the wild brook trout and his domain. Just think how truly fortunate we are to have native brook trout. It should not only be maintained but cherished. Please consider reversing the decision to issue permits that will only negatively stress the river and its fish. You have the right to deny public access for swimming on this precious water and you have a duty to protect the brook trout environment and preserve the legacy of those that have come before.

Response: The permit system is designed to limit the number of visitors to the Blue Hole on holidays and weekends to reduce the impact on the land and fisheries in the

Appendix J – Blue Hole Day Use Permit System Responsiveness Summary

area. We will evaluate the effectiveness of the permit system at the end of the season and make changes as necessary to protect natural resources.

Comment: Charge a fee for parking and charge a fee for camping. Most campers we have spoken to would be more than willing to pay a fee like Beaverkill or Monguap Pond, especially if clean bathrooms were part of the package. If a fee was charged for parking, like Sam's Point, most likely it would simplify the method of controlling the number of cars permitted to park – when it is filled up – no more spaces will be available until someone leaves, which does happen very frequently over a weekend.

Response: In comparison to a staffed, State Campground which provide a variety of facilities, including bathrooms, the Blue Hole and the Peekamoose Valley Riparian Corridor are part of an area classified as “Wild Forest” where no significant facilities are provided. The Sundown Wild Forest has a long history of free primitive camping within the Peekamoose Valley. Campsites in the Peekamoose Valley Riparian Corridor are currently limited to 36 designated sites.

Comment: There should be no day passes issued, but enforcement of the rules. Parking in designated parking areas and carry in carry out laws should be enforced. DEC should have put up large signs with the number of fines you will pay if in violation. Writing a few large tickets would have hit the internet and people would be more respectable to the rules.

Response: DEC has tried to address the overuse issues at the Blue Hole with education and enforcement, including implementation of special regulations and a Leave No Trace stewardship program last year. While we saw some improvement, the total number of users exceeded the area's carrying capacity. Law enforcement will continue to ensure that rules and regulations are followed including enforcement of parking violations and littering. NYSDEC is working with other agencies including State Police, New York City Department of Environmental Protection, and Ulster County to assist with law enforcement in the valley.

Comment: 240 people is still an excessive amount of people. During summertime, a weekday permit system should also be considered as the entire area welcomes many tourists during the week days as well. It is my opinion that permitting up to 240 people per day is still more than what the area and the swimming hole can accommodate

Response: The Department will assess the need to adjust the number of permits issued daily. Part of the management decision for not having a permit requirement on weekdays is to allow residents access to the area without a permit. If numbers of

Appendix J – Blue Hole Day Use Permit System Responsiveness Summary

visitors on weekdays increase, we will assess the need for weekday permit requirements.

Comment: How many daily visitors are there currently during peak periods?

Response: Reports indicate that 500-700 people per day have visited the Blue Hole during peak periods.

Comment: I think it's a good idea to try limiting use of the Blue Hole and other overused and abused places thru a permit system. Also, placing large signs the first year or two at closest Thruway exits and the north and south ends of Peekamoose Road and other approach roads so you can minimize potential confrontations at the site. It's going to take quite a learning curve on the part of the public as this is the first attempt at limiting use on the Forest Preserve.

Response: DEC is involved in public outreach designed at informing visitors to the Blue Hole of the permit system in advance. Signs are currently in place within the Peekamoose Valley Riparian Corridor informing visitors that a permit system will be in place by June 30th, 2018. Large electronic signs will be in place on either end of Peekamoose Road to inform visitors of the permit requirement. Blue Hole Stewards, which began working at the Blue Hole on Memorial Day weekend, are informing the public of the new day use permit requirement. In addition, the Department has undertaken outreach on several websites that promote the Blue Hole and have met with stakeholders and elected officials. We will post information on the Department's webpage and issue a press release to inform visitors.

Comment: Thank you for your efforts to protect the Blue Hole. The last few years I have volunteered on cleanup efforts of the Blue Hole. I don't think issuing permits is the solution. The solution is education. Use social media to promote LNT. Instead of having someone issuing permits, have a strong stewardship program educating visitors. The permit program is going to keep out not only responsible hikers who enjoy the Blue Hole after hiking Peekamoose, last minute relative visits, local, and many nature lovers. This is our park, let's protected not restricted.

Response: DEC has tried to address the overuse issues at the Blue Hole with education and enforcement, including implementation of special regulations and a pilot Leave No Trace stewardship program last year. While we saw some improvement, the total number of users exceeded the area's carrying capacity. A season-long stewardship program will be implemented this year (Memorial Day weekend thru Columbus Day weekend), and stewards will be in place to help educate the public during

Appendix J – Blue Hole Day Use Permit System Responsivemess Summary

holidays and weekends as well as some weekdays throughout the summer. However, our experience over the last several years suggests that we also need to limit the number of users to protect natural resources.

Appendix J – Blue Hole Day Use Permit System Responsivemess Summary

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Appendix K – Public Comment Responsiveness Summary to the UMP

I. HIKING TRAILS

COMMENT: We approve construction of a new lean-to in the upper Norway spruce plantation on the Ashokan High Point Trail. The DEC's first re-route proposal for the Ashokan High Point Loop trail re-route, to bring the hiker back to the proposed lean-to area, seems preferable, and it may be shorter in length. Both re-routes require substantial switch-backing, which the previous trail lacked.

RESPONSE: Construction of the lean-to will be included in the final unit management plan. A single conceptual trail re-route for the Ashokan High Point loop has been included in the final plan. This route reflects a combination of the two re-routes that were proposed in the Draft Unit Management Plan.

COMMENT: Lundy Road is a dead-end road with state land on both sides, with virtually no traffic. The road is a pleasure to walk along a creek. While getting trails off roads is ideal, attention to the specific character of a road with a case by case approach is best; it also helps volunteer or DEC groups prioritize and triage trail building needs. In this case, the road may be the best place for this section of the Long Path.

RESPONSE: Many hikers advocated for, and supported, the re-route of the Long Path from Lundy Road to a new trail through the Vernooey Kill State Forest and Sundown Wild Forest. DEC has committed to removing the Long Path from roadways wherever possible. The proposal for the Long Path re-route through Vernooey Kill State Forest and Sundown Wild Forest has been included in the final plan.

COMMENT: We're glad to see that the LP section from Bangle Hill to County Route 42 will be re-routed/switch-backed. We note interesting forest on the east side of this section of trail, where some re-routing would be feasible and desirable.

RESPONSE: This proposal for a reroute of the long path near county route 42 will be included in the final plan. We will include routes incorporating the forest on the east side

Appendix K – Public Comment Responsiveness Summary to the UMP

of the current trail.

COMMENT: DEC should consider an enlarged parking lot at the trail head by Dymond Road and Greenville road. There is no parking on Town of Denning roads as per town of Denning Local Law No 1. of 2017. This will become a huge issue. It is relatively flat where the existing parking lot is so this should not be a big issue to remedy.

RESPONSE: DEC has reviewed the request for enlargement of the informal parking area by Dymond Road and Greenville Road. We agree that this parking area should be enlarged, and your proposal will be included in the final plan.

COMMENT: An opportunity exists to consider a trail to the peak of “Little Rocky” and then Spencer Road approaching from Haver Road. This route has the potential to not only satisfy (and assist) those seeking to reach Little Rocky but also to become another easily established trail that would connect with the Long Path at its intersection with Spencer Road. The end of Haver road connects with an old woods road that reaches far back into what is commonly referred to as Bessemer Hollow and terminates at a stream. There is a wonderful opportunity here for the DEC to restore this is a former woods road to its former status and construct a nice parking area at the terminus near the stream for both hikers and hunters. This could be the “jump-off location” which would then provide ready access to a nearby old mule trail that weaves its way up the mountain. At its terminus it could be extended in the direction of Little Rocky. Once on top, one finds that it is flat and not very wide. Soon one can descend down a fairly gentle slope in the general direction of Spencer road where woods roads are encountered that provide several possibilities for connections to public land.

RESPONSE: DEC staff reviewed the proposal for a trail connection from Haver Road to Spencer Road. Upon review, we have committed to keeping the area near Mombaccus Mountain and Big Rosy Bone Knob trail-less as proposed in the Draft Unit Management Plan. The areas near the peak of Little Rocky, and at the height of land in this area, border private property. In addition, much of the terrain in this area is extremely steep with multiple stream drainages.

We have reviewed the proposal for the restoration of the former woods road that enters State land at the end of Haver Road. We have determined that restoration of the woods road would require extensive construction and upkeep in order to keep the road passable by vehicles. This proposal will not be included in the final plan. DEC has included the proposal for a 2-3 car parking area at the end of Haver Road in the final plan.

COMMENT: ADK supports the CP3 policy. However, we do not support motorized Universal Access Trails which undermine the CP3 program by destroying the goal of the program which is uncommon access for people with disabilities who may be seeking “solitude, connection to nature, undisturbed wildlife habitat, and inclusion with fellow sportspeople.” DEC should create areas and trails that take into consideration the different mobility abilities and accessibility needs of individuals and families, but these should be accomplished through non- motorized means.

RESPONSE: DEC strives to accommodate persons with disabilities in all projects where possible. We are currently proposing a number of non-motorized accessible projects in this plan including a 1500’ accessible path to the Blue Hole. The Department will carefully weigh options in order to provide the minimal amount of negative impact on the ecosystem while offering accessible recreation activities. DEC prohibits motorized vehicles, other than snowmobiles when trails are covered with ice or snow, within the Sundown Wild Forest and Vernooy Kill State Forest.

COMMENT: I do not understand how NYSDEC will prevent trespass onto adjoining landowners’ properties from the trails proposed within this plan.

RESPONSE: The Department attempts to mitigate potential trespass issues when designing trail systems on State lands. Whenever possible we will maintain a buffer of at least 100 feet from private property. While the Department will work in coordination with adjoining property owners to discourage trespass onto private properties, it is the responsibility of the landowner to properly mark property boundaries. DEC will work with landowners to identify areas where we can work together to better inform public land users to be considerate of adjoining private properties.

COMMENT: In July 2010, the Wawarsing Town Board formally requested in a letter to DEC that as DEC completes the trails planning process for the Unit Management Plan of the Vernooy Kill Forest, it (DEC) considers planning for potential future recreational trail linkages between the Forest and Lippman Park and Colony Farm. That same month, a NY/NJ Trails Conference map was sent to DEC of a proposed trail between Colony Farm and Vernooy Kill, created by scouting the route with a GPS (attached below). This trail could then connect to the proposed Rogue Harbor to Lundy Road Trail already in the plan. * (below) The DEC/ OPRHP NYS Open Space Plan recommends that the DOCCS farmlands are appropriate for trails and agritourism. The UMP should also respect the wishes of the Town of Wawarsing by specifically saying in the plan, in writing, that a trail linking Colony Farm to Vernooy Kill State Forest will be built as soon

as possible. The proposed trail should be included in the map of proposed trails in the UMP.

RESPONSE: The Department supports a trail connection from Colony Farm to Vernooey Kill State Forest and will develop a trail connection once public access is allowed or permitted on the Colony Farm property. DEC support for a future trail connection to Colony Farm is stated in the final text of this plan, the construction of this proposed trail connection is contingent on a landowner willing to allow public access to the property and a commitment for a long term agreement to secure a route for the trail.

II. MOUNTAIN BIKE TRAILS

COMMENT: I have concerns about the new mountain bike trail and parking lot the NYSDEC plans to build in Vernooey Kill State Forest. If they were to build this parking lot, NYSDEC would destroy much of the timber rattlesnake habitat. Furthermore, these snakes are on the threatened species list of New York state, and the state has laws protecting the timber rattlesnakes. I do not understand why the NYSDEC plans to ruin their habitat even though this snake is on the threatened species list

RESPONSE: The Department developed this plan to ensure protection for eastern timber rattlesnakes and the critical habitat this property provides. Trails and parking lots proposed are sited to avoid critical habitat and minimize potential conflicts between recreational users and timber rattlesnakes.

COMMENT: DEC should include additional mountain biking trails and parking for access to trails. The omission of a detailed consideration of single-track trails for mountain biking in this UMP needs to be corrected. If multiuse trails cause potential user conflicts, such as on the route of the Long Path, we encourage DEC to design and permit construction of additional single use trails along complementary routes to decrease such conflicts while allowing maximum recreation use to all constituents. Towns are re-establishing themselves by building mountain biking trails. We need to boost the economy in this area and this is a healthy way to do it. Destination mountain bike areas revitalize economies and have important health impacts.

RESPONSE: DEC reviewed mountain bike specific trail proposals that were provided by the mountain bike community shortly after the Draft Unit Management Plan was released. As a result of the review, DEC has incorporated proposals for a limited

Appendix K – Public Comment Responsiveness Summary to the UMP

amount of mountain bike trails located in the Vernooy Kill State Forest in the final unit management plan. DEC must consider threatened species in the area, environmental impact, and user conflict when planning and implementing trail networks. The Department developed this plan to ensure protection for eastern timber rattlesnakes and the critical habitat this property provides.

COMMENT: DEC should work with the renegades to build trails from Lippman Park into Vernooy Kill State Forest.

RESPONSE: DEC has reviewed the proposal to connect existing trails at Lippman Park to proposed trails within the Vernooy Kill State Forest and will include this trail connection in the final unit management plan document. DEC will continue to partner with any groups that wish to give back to the Vernooy Kill State Forest and Sundown Wild Forest through stewardship activities. Each year thousands of volunteer hours are devoted to trail work and education and outreach across Forest Preserve land.

COMMENT: E-bikes or pedal assist bikes should be allowed.

RESPONSE: Motorized bikes, including e-bikes and pedal assist bikes, are not currently allowed on or off trail on lands managed by DEC.

COMMENT: We endorse the mountain biking activities proposed for the 136-acre in-holding known as the Malloy property in the Peekamoose Valley, acquired in 2015.

RESPONSE: We have reviewed this proposal but will not include mountain bike specific trails for this area in the final plan due to site and access constraints.

COMMENT: We support the construction of a large parking area, capable of handling 20 vehicles with trailers, at the site of the current gravel pit located near the bridge off of Cutler Road.

RESPONSE: This proposal is included in the final unit management plan.

III. BLUE HOLE AND THE PEEKAMOOSE VALLEY

COMMENT: How would these proposals regarding the Blue Hole impact the parking spaces at the Peekamoose Trailhead on Route 42 for access to Peekamoose Mountain? Doesn't having a bigger parking lot mean more people, more noise and more crowd management on behalf of Forest rangers.

RESPONSE: The proposal for a Blue Hole parking area may alleviate the congestion at the Peekamoose Trailhead on Route 42 as well as the rest of the parking areas along the Route 42 corridor. The proposed parking area was designed with the intention of accommodating most Blue Hole visitors on an average day of visitation in order to alleviate pressure on the parking areas that allow access to hiking trails and campsite parking. Currently, a health and safety issue exists as many visitors to the Blue Hole are parking and then walking a distance through the narrow roadway.

The proposed parking area should make crowd management less difficult due to Blue Hole visitors being condensed in one area with a direct route to the Blue Hole instead of being dispersed amongst the parking areas along the entirety of the 3 mile Peekamoose Valley Riparian Corridor upon arrival. We have included the proposal for the 30-40 car parking area and accessible trail to the Blue Hole in the final unit management plan.

COMMENT: ADK supports the proposed infrastructure additions to the Peekamoose Blue Hole area that are outlined in the UMP. These proposed projects, specifically the parking area near the "Blue Hole" and the construction of a 1,500-foot trail for the purpose of connecting the parking area to the "Blue Hole," are necessary for the safety of the Blue Hole visitors. Given that the DEC has implemented a permit system at the Blue Hole, which increases the expectation for a safe public facility experience, DEC must take reasonable steps to provide parking capacity that corresponds to the permits issued and that provides visitors with a safe trail from the parking area to the Blue hole, as opposed to the current situation which forces visitors to walk on the narrow roadway

RESPONSE: DEC has included construction of the parking area and trail in the final unit management plan.

COMMENT: We support the formalization of new regulations for the Peekamoose Valley Riparian Corridor, including the no-cost day-use permitting system requiring visitors to obtain a permit to access the Blue Hole. The permit system, combined with other measures, proved effective in helping to protect the resource, it needs to be

improved to account for permit holders who are no-shows. We encourage the DEC to continue to improve the permitting system by issuing more permits in anticipation of only partial usage or providing for day-of-use permits at a local site, such as the Maurice D. Hinchey Catskill Interpretive (Visitors) Center. DEC should also consider allowing permit slots that have not been reserved by 8am on any permitted day to be available on-site for visitors who arrive without a reservation.

RESPONSE: Currently, the Department does not plan on offering permits for the Blue Hole outside of Reserve America website. We believe the current system of a singular portal for permits offers all visitors the same opportunity to apply for and receive a permit. In order to avoid confusion, and out of fairness to visitors, we will continue to offer permits for the Blue Hole only through the Reserve America website.

We do plan on increasing the amount of permits issued from 40 to 50 per day on a trial basis, on days when permits are necessary, in recognition that in 2018 more than half the permits that were issued were not used.

COMMENT: I would encourage DEC to extend the permitting system for the Blue Hole to weekdays. Since the access pass system was implemented during weekends, a large amount of people are coming during the week, when Ranger presence is lower.

RESPONSE: The permit requirement is a restriction that limits the freedom of visitors, one that we want to minimize to those periods when alternatives don't accomplish our goals of resource protection and user experience. Part of the management decision for not requiring a permit on weekdays is to allow local residents access to the area without a permit. We will monitor mid-week use and will give consideration to expanding the permit system to weekdays should that prove necessary. However, we do not plan on implementing a permit system on weekdays at this time.

COMMENT: Add adopt a natural resources signs in the Vernooy and Peekamoose Blue Hole they are positive signs. People will see them and they will respect the area.

RESPONSE: We are more than happy to work with our volunteer groups in order to provide recognition of Volunteer Stewardship activities where appropriate. Although we will not place these types of signs directly in the Blue Hole, we can place stewardship signs in DEC kiosks.

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COMMENT: Due to lack of cell service in the Peekamoose Valley a possible solution to an emergency situation would be to build a small shed type building that has electric and phone service in it. The electric and phone lines already run to the trailer field. This could be a life-saving fix to get emergency 911 assistance. Need to have better communication infrastructure at the Blue Hole for public safety purposes.

RESPONSE: DEC is working with town and law enforcement officials and the phone service provider to investigate the possibility of providing emergency phone service. We have added this proposal to the final plan.

COMMENT: I would like to address an issue with the lower field dumpster. There needs to be a sign on the dumpster that shows how to open the lid. I have seen people trying to figure out how to open it.

RESPONSE: DEC has committed to additional and improved signage throughout the Peekamoose Riparian Corridor that will include signs about how to open and close the bear-proof dumpsters.

COMMENT: I would like to see wooden out houses at every Peekamoose Valley campsite. The Hudson River Special Management Area in the Lake George Wild Forest has wooden out houses at every site. I have seen many tissues along the trails at Peekamoose campsites because there are not enough out houses. The wooden out houses works very well.

RESPONSE: Wooden pit privies have been tried in the past at the Peekamoose primitive camp site locations and did not work out. They were often filled with garbage, lit on fire, and had the potential for inappropriate effects on the Rondout. There are currently 7 seasonal, rented portable toilets between the upper, lower, middle, and trailer field and 9 in total in the Peekamoose Riparian Corridor. DEC will continue to provide seasonal, rented portable toilets throughout the corridor.

COMMENT: Add the campground along Peekamoose road to the list of campgrounds operated by NYSDEC. Staff it, maintain it, and enforce the same rules, just as any other campground in the state. At least have a fee or reservation system. I have witnessed first-hand the many problems with that campground, hippie village, drug and alcohol abuse, tree cutting, garbage dumping, sewage holding tanks dumped into the creek and shooting. Too many people are coming here to “party”, leaving trash, throwing food and bottles into the creek and making loud noise.

RESPONSE: DEC strives to keep primitive camping on State lands free for the People of the State of New York, as well as all visitors to the Catskill Forest Preserve. The campsites in the Peekamoose Valley have a long history of no cost camping use. The area is classified as “Wild Forest” and would need to be re-classified as “Intensive Use” in order to staff, maintain, and provide the facilities that a State Campground requires. We do not currently plan to reclassify this area nor do we plan on implementing a fee or reservation system for the campsites at this time.

Often times the Peekamoose sites are referred to as campgrounds, however, they are managed to be primitive campsites in a Wild Forest setting. They are good sites for campers that want to take the intermediate step between camping at staffed campgrounds and the full out backwoods primitive experience. Forest Ranger staff will continue to work with local law enforcement in order to curtail illegal activities at the Peekamoose primitive campsites.

IV. SNOWMOBILE TRAILS

COMMENT: Is there a local club that will maintain the snowmobile trails?

RESPONSE: No one has approached the Department yet. We would be willing to enter into a volunteer stewardship agreement with a local club, should they be interested.

COMMENT: How wide will the snowmobile trails be? What’s the speed limit?

RESPONSE: Trails specifically built for snowmobile use range in width between 8-12 feet, with 12 feet being the maximum width to provide an adequate line of sight around curves. Most snowmobile trails have a maximum speed limit of 55mph and Public Forest Access Roads open to snowmobiling have a speed limit of 25mph. On all snowmobile trails, snowmobilers may not operate at an imprudent speed.

COMMENT: The Sullivan County Trail Association snowmobile club maintains and grooms the Denman Mt. snowmobile trail. The trail sign in register should be placed at the kiosk in the trail head parking lot not along-side the trail on the north side. I feel the state should also provide one portable toilet at trail head parking lot on Denman Mt for the use of Hikers, Equestrians, and Snowmobilers. I also suggest that the DEC should open the Cummings Rd extension where it crosses state land and connects to Bungalow Brook Rd near the snowmobile trail. In your management plan objectives on

page 108 it states to “utilize the road system to provide public access to recreational opportunities and admin access, and to provide for adequate maintenance of former all-season roads for non-motorized recreation trails and to provide public motorized use of designated in the unit to accommodate access for recreational opportunities”.

According to the Town of Neversink Chapter 37. Snowmobile operation on roads. 37-2 Bungalow Brook Rd, Cummings Rd, and Erts Rd are still listed as snowmobile roads. By opening up, the section of state land where the road crosses will allow for the club better access to maintain and groom the trail system on Denman MT. This trail on Denman Mt is considered a closed loop trail which leads to nowhere. To open the road already in place will also allow for the public another access to the trail from other areas. There is a 50 ft right of way already in place for most of the Cummings Rd extension. The owner of the private land which abuts state land where the access would be has given written permission to cross his land and would like to open his private lands from more trails in the future.

RESPONSE: DEC will place the trail register box near the kiosk at the Denman Mountain Trailhead. The Department will consider portable toilets at this location based on the amount of use the trail receives, however, portable toilets are difficult to service during the winter months on the steep roads in this area. We are willing to consider trail connections to improve public access to the unit, but formal agreements or easements with private landowners must be in place before trail connections are established. The Department welcomes new partnerships with willing landowners.

V. BRIDGES

COMMENT: There is a plan to remove a bridge off of Spencer Road, do you plan to replace it?

RESPONSE: There is no proposal in the plan to replace it. It is currently not crossable, hazardous to the public, and was placed on Forest Preserve illegally. It is not along a roadway, but in the forest and had allowed for illegal vehicle trespass. Foot traffic in this area does not need the bridge for access. The plan to remove the remains of this bridge will be in the final version of the unit management plan.

COMMENT: Roads and bridges managed by DEC have deteriorated over time. Haver road is an example. Sluice pipes are all gone and DEC let conditions get worse. Hunting community is aging 50 years old on average and these roads are important because

hunters are aging. I encourage DEC to work with the town to repair roads and bridges, so people can use them.

RESPONSE: The Department continues to manage the resources allocated for trail and road construction and maintenance based on priorities established through a Department planning process. Every effort is made to address conditions for each area, but staff must prioritize their resources based on the level of need for each facility under its management. For Town or County roads and bridges that are outside of the scope of DEC management, the Department will work with local governments to ensure safe and reliable access to State lands.

VI. REAL PROPERTY

COMMENT: Per prior 1996 UMP draft agreement, superseding 2 June 1921 deeds, and resulting 1997 re-survey correctly reflect property lines pertaining to the Northwest corner of our property meeting NYS property in the middle of South Hollow Brook. We understand all 2018 UMP Sundown Vernooy draft maps presently reflect this area incorrectly.

RESPONSE: The Department has recognized that there was an error in the DEC Lands GIS Layer that misrepresented Department ownership in the vicinity of the private land parcel mentioned in the comment. Real property staff and GIS specialists have worked together to correct the error and a new map that properly represents Department land ownership on South Hollow Brook Road has been included in the final plan.

COMMENT: The DEC is trying to advertise that people have access to state property where we have a cabin at the end of the road. There is no way to access the property without getting through our property. There is no existing basis of public access rights from our 78 South Hollow Road property to NYS lands. We will continue to respect DEC necessary access and public requesting access, across our private property. The draft puts us down the same conversation that we had in 1996 regarding south hollow road. The ranger comes here often and often times he uses the road to come to our property. If any rangers drive up that road, they know now that they can't drive up that road. To us it's a fire road, it's a safety hazard. It is not viable for public access. Perhaps you can use the money to expand the Kanape parking area instead of placing boulders on the road.

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RESPONSE: Proposals in the Draft Unit Management Plan did include placement of boulders on State Forest Preserve Land in order to curtail motor vehicle trespass into Forest Preserve land. After consideration and review, DEC has decided not to place boulders beyond the first camp site in South Hollow. The Department will not promote public access or motor vehicle access through private property, however, it is the Department’s stance that the public has the right to access State land from South Hollow Road.

COMMENT: We strongly disagree with UMP draft verbiage referring to “allowing recreationalist/ campers to drive as far as the first designated camp site” across the significantly unmaintained, unsafe (including an open river) existing fire road, in regard to accessing the South Hollow Valley campsites

RESPONSE: The verbiage “allowing recreationalist/ campers to drive as far as the first designated camp site” from the final version of the unit management plan was removed. Real property has closely examined the access rights with regard to this access. The Department maintains that the public has the right to use this historical road to access Forest Preserve lands. However, the Department also agrees that given the current condition of the road that motor vehicles should be discouraged other than for emergency or administrative purposes.

COMMENT: We decline, as does our adjoining neighbor, consideration for public access, parking, signage and or camping policy guidance, on our properties. This includes the potential use of our properties old logging road in an effort to extend a large loop descending from High Point Mountain into the south Hollow Brook Valley.

RESPONSE: This was not a proposal in this unit management plan at this location, but we accept your comment and will consider it when planning future management actions.

VII. LAND ACQUISITION

COMMENT: The town of Denning is already 63% State owned. Roughly 7% DEP owned. As far as sustainability for the growth of the town any more land acquisitions by the State would decimate our tax base, making for a lack of sustainability.

RESPONSE: DEC pays taxes on all State-owned Forest Preserve lands. The purpose of land acquisition is to create a viable wild forest unit based on current public land holdings. Acquisition will be limited and conservative. Any acquisition project not

specifically identified in the 2016 Open Space Plan can be rejected by a Town within 90 days of notification by DEC.

VIII. CARBON SEQUESTRATION

COMMENT: Allow old growth forest to develop. Carbon sequestration should be considered a forest product with economic benefit for the purposes of management.

RESPONSE: The Article 14 of the NYS Constitution states that “The lands of the state, now owned or acquired hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed...” The forests on Sundown Wild Forest will revert to old growth forest over time. The Department recognizes the significance of carbon sequestration.

IX. INVASIVE SPECIES

COMMENT: Implement Early Detection and Rapid Response for Invasive Species.

RESPONSE: The Department has an Early Detection and Rapid Response protocol for aquatic and terrestrial invasive species that ensures that such management activities do not alter the “forever wild” character of the Forest Preserve. This protocol is intended to harmonize the Constitution’s “forever wild” provisions with the Master Plan’s overriding directive to manage Forest Preserve lands for their protection and preservation. They have been developed pursuant to, and are consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the State Environmental Quality and Review Act (SEQRA), the Master Plan and all other applicable rules regulations policies and procedures.

COMMENT: Consider the use of bio-controls to address the threat of Hemlock Woolly Adelgid.

RESPONSE: The Department recognizes that biological controls can be an important part of integrated pest management approaches. DEC will support scientific research,

work with our partners, provide educational information, and enforce existing policies that protect Forest Preserve vegetation.

X. STAFFING

COMMENT: From a union perspective there is a need to acknowledge the staffing deficiency that the forest rangers are facing. Who has the primary responsibility to enforce this plan? It's the forest rangers. Almost every other weekend that we are supposed to have off- we are required to work overtime at the Blue Hole. Mountain bike injuries are more serious than hiking injuries. Expanded biking opportunities will further tax the already limited ranger resources. Two more forest ranger staff would be ideal. There is a real need to increase the forest ranger staff. DEC should spend money on hiring more NYS Forest Rangers rather than building trails and parking areas on Vernooy Kill State Forest.

RESPONSE: Noted. The UMP is not the correct mechanism for addressing the Department's permanent staffing needs.

XI. FOREST MANAGEMENT (VERNOOY KILL STATE FOREST)

COMMENT: DEC should create a buffer around the (Long Path) trail that is protected from logging. The Long Path and a buffer around the trail must be protected by a Special Management Zone (SMZ) of at least 200 feet in width along the length of the trail in areas not otherwise protected from logging.

RESPONSE: DEC buffers all designated recreational trails to ensure tops and slash are at least 25 feet from either side of trails. A 200-foot-wide buffer is unnecessary and would severely limit forest management on State Forest Lands.

COMMENT: Vernooy Kill State Forest should be managed for Late Successional Forests with the goal of old growth habitat. We encourage DEC to increase the acreage designated for management as late successional stage forest.

RESPONSE: DEC manages State Forest Lands for Timber production, diverse forest cover types and successional stages that promote ecological biodiversity. While this doesn't preclude managing for late successional forests, it is not the sole focus of DEC

State Forest Lands outside of the Forest Preserve.

XII. MINING (VERNOOY KILL STATE FOREST):

COMMENT: Protect Forest Ecosystems and Comply with the NYS State Constitution by Prohibiting Drilling and Mining. The Vernooy Kill State Forest is in a Forest Preserve County, which affords these lands protection under Article XIV of the New York State Constitution. The Department of Environmental Conservation (DEC) must state this clearly in the UMP and explain the protection that this affords this Unit and remove Objective MR I of Table 21 (page 226).

RESPONSE: There are no proposed actions within the Vernooy Kill State Forest for mineral exploration. Objective MR I of Table 21 is included in all Unit Management Plans that cover State Forest Lands outside of the Catskill and Adirondack Forest Preserve. Vernooy Kill State Forest is classified as a State Reforestation area and while it falls outside of the Catskill Park, it is within a forest preserve County (Ulster) and is subject to Article XIV of the New York State Constitution in that these lands shall not be leased, sold or exchanged, or be taken by any corporation, public or private (Article XIV, Section 3.1).

XIII. TARGET SHOOTING (VERNOOY KILL STATE FOREST)

COMMENT: The shooting range on Cutler Road shouldn't be shut down for the proposed parking lot and trail located on Cutler Road in Vernooy Kill State Forest.

RESPONSE: There are no formally recognized recreational shooting ranges on DEC State Forest lands and the Department may close specific locations or properties to target shooting due to natural resource impacts, over use and safety considerations. In this case the Department has concluded that informal target shooting in this location will conflict with our goal of improving public access to Vernooy Kill State Forest, and thus the Department will prohibit this activity in the immediate area prior to development of the parking lot and trail. Target shooting will still be allowed on the rest of Vernooy Kill State Forest outside of the Cutler road parking area.

COMMENT: The Department cannot shut down the, “shooting range” without it being specifically mentioned within the Unit Management Plan.

RESPONSE: The Department may prohibit target shooting on specific State Forest Lands or locations on as needed basis, under ECL Part 190.8 (ab), “Unless legally engaged in the act of hunting, no person shall discharge firearms on State lands posted or designated as closed to target shooting”.

XIV. OTHER MANAGEMENT ACTIONS

COMMENT: The DEC should extend the public comment deadline to December 3rd to give more people time to comment on the sundown wild forest draft plan.

RESPONSE: The DEC has considered this comment and determined the duration of 30 days was a reasonable timeframe for the public to provide comments.

COMMENT: I have reviewed the UMP and commend NYSDEC Region 3 for a task well done. As an avid angler and hiker of the Sundown Wild Forest, I support the UMP.

RESPONSE: Noted. The Department appreciates your support.

COMMENT: The Town of Wawarsing realizes that an important part of this area in the Catskills is that it connects to the Shawangunk’s. Connectivity exists in the Rondout valley to the Catskills. There is a need to look at the ecological connectivity between mountain ranges.

RESPONSE: DEC agrees that the connectivity and ecological corridors between mountain ranges are important issue. By maintaining State land as forested, DEC helps preserve forested land and its ecological value preventing habitat fragmentation and development. The Shawangunk Ridge Biodiversity Partnership (SRBP)—an association of groups that includes the Trail Conference, Open Space Institute, The Nature Conservancy, Basha Kill Area Association, Mohonk Preserve, Friends of the Shawangunks, and others, in 2009 launched a series of meetings focused on protecting and enhancing ecological connectivity between the Catskill and Shawangunk Mountains. The group seeks to build on the decades-long effort by the Trail Conference and Open Space Institute to create protected trail corridors from the Catskills to the Delaware National Recreation Area via the Shawangunk Ridge. DEC works to support

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the SRBP and improve connectivity through land acquisition programs and management that will provide ecological corridors.